



Ministry of Health & Family Welfare  
Government of India

75  
Azadi Ka  
Amrit Mahotsav

# Report on Tobacco Control in India 2022



Editors: L. Swasticharan | Monika Arora | Praveen Sinha | Cecily S. Ray | Vineet Gill Munish | Radhika Shrivastav



# **Report on Tobacco Control in India 2022**

## **Editors**

L. Swasticharan  
Monika Arora  
Praveen Sinha  
Cecily S. Ray  
Vineet Gill Munish  
Radhika Shrivastav

## **Report on Tobacco Control in India 2022, Volume 2**

ISBN: 978-93-5773-998-6

Ministry of Health and Family Welfare, Government of India, Nirman Bhawan, Maulana Azad Road  
New Delhi 110011, India

Suggested Citation: *Swasticharan L, Arora M, Sinha P, Ray CS, Munish VG and Shrivastav R, Editors. Report on Tobacco Control in India 2022 (Vol 2). Ministry of Health and Family Welfare, Government of India.*

Disclaimer: The views expressed in this report are not necessarily those of the Ministry of Health and Family Welfare, Government of India, who commissioned the report as well as of the World Health Organization who provided technical guidance.





डॉ. मनसुख मांडविया  
DR. MANSUKH MANDAVIYA



मंत्री  
स्वास्थ्य एवं परिवार कल्याण  
व रसायन एवं उर्वरक  
भारत सरकार

Minister  
Health & Family Welfare  
and Chemicals & Fertilizers  
Government of India

### Message

The release of the Report on Tobacco Control in India (2022) is an important landmark. Since the release of the first report in 2004, notable progress has been made in the field of tobacco control, at the national level and in all States and Union Territories.

Due to the effective enforcement of the two major pillars of the Tobacco control program in India, the Cigarettes and Other Tobacco Products Act (COTPA) and the National Tobacco Control Programme (NTCP), has made India one of the global leaders in tobacco control. The enforcement of the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019 has also reiterated India's strong commitment and pre-emptive decision to protect its citizens, particularly young people, from the hazards of new and emerging nicotine products.

In the National Health Policy 2017, an ambitious target of 30% relative reduction in tobacco use by 2025 has been set. The State Governments and UT Administrations are being encouraged to undertake suitable measures, to ensure further reduction in prevalence of tobacco use to achieve the targets set under the National Health Policy and Sustainable Development Goals (SDGs). India's response to the tobacco epidemic addresses tobacco both as a public health and developmental issue. This report is a valuable resource for stakeholders to understand how multiple forms of smoking and Smokeless tobacco products are regulated with the aim of protecting the citizens of India from the health, economic, social, and environmental consequences of tobacco use.

Cont.../-





-2-

The COVID-19 pandemic has highlighted tobacco use as one of the major risk factors for severe infection. As the country emerges out of the pandemic, collective action on tobacco control is important to yield successful outcomes. The recommendations of this report provide a roadmap towards a Tobacco-Free Future Generation and Tobacco-Free India. I hope it will motivate all tobacco control stakeholders to further strengthen their efforts to promote the health and welfare of all citizens of the country.

(Dr. Mansukh Mandaviya)







डॉ. भारती प्रविण पवार  
Dr. Bharati Pravin Pawar



स्वास्थ्य एवं परिवार कल्याण राज्य मंत्री  
भारत सरकार

MINISTER OF STATE FOR  
HEALTH & FAMILY WELFARE  
GOVERNMENT OF INDIA



#### MESSAGE

The progress made by India in tobacco control, particularly over the past two decades is extremely encouraging. The second round of the Global Adult Tobacco Survey (GATS) (2016–2017) showed a 17% relative reduction in tobacco use as compared to the first round of GATS (2009–2010). For this downward trajectory in the prevalence of tobacco use to continue, all key stakeholders must work closely with the Central and State Governments to scale-up tobacco control efforts.

The Report on Tobacco Control in India (2022) is a rich compendium of how collective tobacco control efforts in the country have progressed and what have been the lessons learnt to inform future action. The report clearly identifies key priorities to further strengthen tobacco control efforts, which are critical for curbing the burden of tobacco-induced Non-Communicable Diseases (NCDs), as well as for achieving the Sustainable Development Goals (SDGs).

The Government of India, under the visionary guidance of Hon'ble Prime Minister Shri Narendra Modi ji, accords high priority to tobacco control and is committed to ensuring that evidence-based measures and strategies to effectively implement the National Tobacco Control Programme (NTCP) in the country.

Under Hon'ble Prime Minister's leadership, the collective efforts of all stakeholders will go a long way in ensuring that a robust and comprehensive response to the burden of tobacco use is implemented across the country. Such a comprehensive strategy is essential to protect present and future generations from the perils of tobacco addiction and assist tobacco users to quit this deadly habit.

Choose Life, Not Tobacco!

सर्वे भवन्तु सुखिनः। सर्वे सन्तु निरामयाः।  
(अर्थात् सभी सुखी हों, सभी रोगमुक्त रहें।)

  
(Dr. Bharati Pravin Pawar)

**“दो गज की दूरी, मास्क है जरूरी”**







राजेश भूषण, आईएएस  
सचिव

**RAJESH BHUSHAN, IAS**  
**SECRETARY**



भारत सरकार  
स्वास्थ्य एवं परिवार कल्याण विभाग  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय

Government of India  
Department of Health and Family Welfare  
Ministry of Health and Family Welfare

### Message

India bears a significant burden of 13 lakh preventable deaths, every year, due to tobacco use. Tobacco use in any form, smoking, smokeless and even novel products such as electronic cigarettes, is a serious health hazard. It depletes and deprives families, communities and the nation, of valuable financial and environmental resources.

The Government of India has implemented many landmark policies and programmatic measures towards robust tobacco control action. The Cigarettes and Other Tobacco Products Act (COTPA), implemented in 2003, has provided the legal framework to put in place strong policies to protect citizens from tobacco addiction. The National Tobacco Control Programme (NTCP), launched in 2007–2008, has been instrumental in capacity building of key stakeholders, rolling out health promotion campaigns, including school health programmes, monitoring of tobacco control laws and scaling-up tobacco cessation services. These efforts have resulted in a 17% relative reduction in tobacco use from 2009–2010 to 2016–2017, as revealed in two rounds of the Global Adult Tobacco Survey (GATS). According to the Global Youth Tobacco Survey (GYTS), current tobacco use among young adolescents (13–15 years), in 2019, is 42% lesser than 2010. To further reduce the prevalence of tobacco use among the Indian population, there is a need to further intensify coordinated multi-sectoral and multi-stakeholder action. Integrating tobacco control into the Government's National Multi-Sectoral Action Plan for NCD Prevention and Control, the Ayushman Bharat Programme and the Sustainable Development agenda, are landmark actions to prioritize tobacco control in the country.

The COVID-19 pandemic underscored the urgent need to advance tobacco control, within the overall ambit of Non-communicable Diseases (NCD) prevention and control. In addition, the Government undertook important measures to warn people about the dangers of tobacco use and its linkages with severe COVID-19 infection.

The *Report on Tobacco Control in India (2022)* traces the laudable journey of the Indian tobacco control movement and the contributions of all stakeholders in advancing research, capacity building, legislation, litigation, community mobilization, mass media campaigns and multi-sectoral action. This is a landmark resource which will serve as a record of India's leadership in tobacco control at the sub-national, national, regional and global levels.

I congratulate all those who have worked hard to develop this report and I am confident that the learning documented in this report will guide our collective vision for a Tobacco-Free India.

**(RAJESH BHUSHAN)**

16-12-2022







प्रो.(डॉ.) अतुल गोयल

Prof. (Dr.) ATUL GOEL

MD (Med.)

स्वास्थ्य सेवा महानिदेशक

DIRECTOR GENERAL OF HEALTH SERVICES



सत्यमेव जयते

भारत सरकार  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय

स्वास्थ्य सेवा महानिदेशालय

Government of India

Ministry of Health & Family Welfare

Directorate General of Health Services

### MESSAGE

Tobacco use in any form is a risk factor for a variety of serious Non-Communicable Diseases (NCDs) such as cancer (oropharyngeal, lung, gastrointestinal and urinary bladder), chronic respiratory diseases, hypertension and heart disease. It is also a threat to environmental health.

Addictive nature of tobacco due to nicotine makes tobacco addiction a serious condition, difficult if not impossible to quit. Therefore, it is best to avoid tobacco use, in all forms. Recently, risk hazards have been outlined even for Bidi rollers by the WHO.

As per the Global Adult Tobacco Survey (GATS-2), there are an estimated 27 crore tobacco users in India. The Global Youth Tobacco Survey (GYTS-4) records that 8.5% of school-going Indian adolescents, aged 13–15 years, are current tobacco users. India is the second largest producer and consumer of tobacco products in the world. There is a serious need of genuine efforts to reduce the consumption of tobacco in our country.

Since 2003, the Indian tobacco control movement has advanced. Several evidence-based interventions have been introduced pan-India through the Indian Tobacco Control Law (COTPA) and the National Tobacco Control Programme (NTCP).

Several concrete measures have been spearheaded by serial Central Governments, State Governments, and other stakeholders. In recent years, some important developments include promulgation of a pan-India ban on electronic cigarettes; establishment of national and regional tobacco quit lines; launch of m-cessation services; introduction of comprehensive guidelines for tobacco-free educational institutions; and setting-up of National Tobacco Testing Laboratories.

There is a continuous need to augment tobacco control efforts across the country, in every State, Union Territory and District, through engagement across sectors.

I am pleased to note that the Report on Tobacco Control in India (2022) has been developed to document India's progress in tobacco control. While the report provides important lessons learnt through years of dedicated efforts of several partners, it also provides a roadmap for further advancing important interventions to arrest the crippling burden of tobacco use on our health systems. All Indians must act in unison towards the goal of a healthy and Tobacco-Free nation.

(ATUL GOEL)







वी. हेकाली झिमोमी, भा.प्र.से.  
अपर सचिव

V. Hekali Zhimomi, IAS  
Additional Secretary



भारत सरकार  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
निर्माण भवन, नई दिल्ली - 110011  
Government of India  
Ministry of Health & Family Welfare  
Nirman Bhawan, New Delhi - 110011



### Message

Use of smoking and smokeless tobacco products and e-cigarettes is a serious threat to human health and development. It translates into a heavy burden of deaths and diseases caused due to this deadly addiction. Tobacco use imposes a heavy economic burden on the health system as well as catastrophic out-of-pocket expenditure on those who undergo advanced medical treatment for tobacco-induced diseases such as cardiovascular diseases, cancers and other life-threatening diseases.

As per WHO study titled "Economic Costs of Diseases and Deaths Attributable to Tobacco Use in India, 2017-18", has estimated that the economic burden of diseases and deaths attributable to tobacco use alone in 2017-18 in India was as high as Rs. 1.77 lakh crores, amounting to 1% of GDP. Therefore, tobacco use is not just a public health issue. A comprehensive tobacco control response demands a 'Whole-of-Government' and 'Whole-of-Society' approach, through coordinated and synergistic action of all ministries, departments and civil society organizations and all stakeholders.

In the last two decades, substantial progress has been made in Indian tobacco control. It is the time to further amplify and accelerate multi-pronged efforts to address the threat of new and emerging novel tobacco products. Tobacco control must be transformed into a citizen- and community-led mass movement to achieve the goal of a healthy and prosperous nation.

As India celebrates the 75<sup>th</sup> Anniversary of Independence through the "Azadi Ka Amrit Mahotsav", it is time to recommit ourselves to the vision of a Tobacco-Free Future Generation.

  
(V. HEKALI ZHIMOMI)



# Message •

Tobacco kills over 8 million people every year globally. Tobacco use is a key risk factor for major groups of noncommunicable diseases (NCDs), such as cardiovascular diseases, cancers, respiratory diseases and diabetes. In India, tobacco use results in 1.35 million deaths each year. Deaths and diseases due to tobacco use deprive the Indian economy of an estimated INR 1773.4 million annually, which is over 1% of the GDP.

Since the enactment of 'The Tobacco Control Act of India' in 2003, the Government of India has taken several strong and bold policy initiatives. These include the launch of the National Tobacco Control Programme, public awareness campaigns, setting up of tobacco-cessation quitlines, implementation of large graphic health pack warnings, prohibition of certain packaged chewing tobacco products, setting up dedicated tobacco surveillance mechanisms, prohibition of e-cigarette, establishment of tobacco testing laboratories, among others. These actions have resulted in reducing the adult (15+years) tobacco use by 17% between 2009-2010 and 2016-2017 (Global Adult Tobacco Survey-2 India 2016-17). This decline is a testimony to the positive impact of strong policy initiatives and strategic partnerships with stakeholders, including civil society organisations and communities.

The Report on Tobacco Control in India is a product of the untiring efforts of the editors, their research teams and the valuable contributions of over 70 experts. The report captures two decades of efforts made by various stakeholders, including the Government of India, civil society organizations, researchers and the many unnamed champions committed to saving lives through tobacco control. This publication, I am confident, will fulfil its purpose of raising awareness among policymakers, experts, public health champions and the community about the widespread health and economic devastation caused by tobacco use. The recommendations of this report provide new pathways for tobacco control in India, serve as a guidebook for other countries and strengthen India's position as a global leader of public health.



**Dr Roderico H. Ofrin**

WHO Representative to India



# Preface.

The first volume of the Report on Tobacco Control in India was released in 2004. At that time, India was at a crucial stage in streamlining and accelerating multi-pronged action on tobacco control. Over nearly two decades, India has made laudable progress and is recognized as one of the regional and global leaders in tobacco control.

Since 2004, several important milestones have been achieved towards tobacco control in India, including the enforcement of the Cigarettes and Other Tobacco Products Act (COTPA), ratification of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), the implementation of the National Tobacco Control Programme (NTCP) and the ban on gutkha/ smokeless tobacco and electronic nicotine delivery systems (ENDS) etc. This second volume of the Report on Tobacco Control in India 2022 is a comprehensive documentation of this remarkable journey that is a testament to the collaborative action of the Government of India, State Governments, academia, researchers, civil society, youth advocates and media.

I express my sincere gratitude to the Hon'ble Union Minister for Health and Family Welfare, Government of India and the Hon'ble Minister of State for Health and Family Welfare, Government of India, for their steadfast leadership and commitment to tobacco control. I also record my appreciation for the Secretary, Director General Health Services, and the Additional Secretary for their guidance throughout the development of this report. I am grateful to the World Health Organization for supporting the drafting of this report.

The Editorial Committee has been integrally involved in the conceptualization, development and finalization process, without whom, it would not have been possible to develop this landmark report. I congratulate HRIDAY for leading the development of this report as the technical secretariat. Additionally, contributions made by the team from the Public Health Foundation of India are highly commendable.

This report encompasses the technical expertise and experience of over 100 authors and peer reviewers from across the country, representing a wide gamut of stakeholders. The content of the report is rich with national, sub-national and grassroots initiatives on tobacco control. The recommendations provide key strategies to realize the vision of a 'Tobacco-Free India' and 'Tobacco-Free Future Generation'.

I am hopeful that this report, like the first edition, will be a go-to ready reckoner for anyone and everyone interested in getting oriented to tobacco control in India and implementing evidence-based strategies to curb the tobacco menace.

Let us all recommit ourselves to the vision of a 'Tobacco-Free India'!

**Dr L. Swasticharan**

Additional Deputy Director General  
Director (Emergency Medical Relief)  
Directorate General Health Services  
Ministry of Health and Family Welfare  
Government of India





# Acknowledgements •

## Editorial Committee

### **K. SRINATH REDDY**

Founder (Past) President and Distinguished Professor  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **PRAKASH C. GUPTA**

Director  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **L. SWASTICHARAN**

Additional Deputy Director General  
Director (Emergency Medical Relief)  
Directorate General Health Services  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **PULKESH KUMAR**

Deputy Secretary  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **R.S. DHALIWAL**

Scientist-G and Head  
Division of Non Communicable Diseases (NCDs)  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **POONAM KHATTAR**

Former Acting Head  
Department of Communication  
National Institute of Health and Family Welfare (NIHFW)  
New Delhi, India

### **PRATIMA MURTHY**

Director and Senior Professor of Psychiatry  
National Institute of Mental Health and  
Neuro Sciences (NIMHANS)  
Bengaluru, Karnataka, India

### **PANKAJ CHATURVEDI**

Professor  
Department of Head Neck Cancer Surgery  
Deputy Director  
Centre for Cancer Epidemiology  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **CECILY S. RAY**

Associate  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **STUTI S. BHARGAVA**

Scientist-D (Medical)  
Division of Non Communicable Diseases (NCDs)  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **VINEET GILL MUNISH**

National Professional Officer  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **PRAVEEN SINHA**

National Professional Officer (Tobacco Control)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **MONIKA ARORA**

Executive Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India  
Vice President (Research and Health Promotion)  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **RADHIKA SHRIVASTAV**

Senior Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **POOJA GUPTA**

National Consultant  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **DEEPIKA BAHL**

Senior Research Associate  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India



# Project Teams.

## Editors

### **L. SWASTICHARAN**

Additional Deputy Director General  
Director (Emergency Medical Relief)  
Directorate General Health Services  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **MONIKA ARORA**

Executive Director  
Health Related Information Dissemination  
Amongst Youth (HRIDAY)  
New Delhi, India  
Vice President (Research and Health Promotion)  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **PRAVEEN SINHA**

National Professional Officer (Tobacco Control)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **CECILY S. RAY**

Associate  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **VINEET GILL MUNISH**

National Professional Officer  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **RADHIKA SHRIVASTAV**

Senior Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

## **Coordinators at Public Health Foundation of India (PHFI) and HRIDAY**

Deepika Bahl, Senior Research Associate, PHFI  
Ranjana Sharma, Project Officer, PHFI  
Mansi Chopra, Senior Research Scientist, HRIDAY

## **Coordinator at the Ministry of Health and Family Welfare (MoHFW), Government of India (GoI)**

Pooja Gupta, National Consultant, National Tobacco Control Programme (NTCP), MoHFW, GoI

## **Technical Editors:**

Byword Editorial Consultants, New Delhi, India  
Dinesh Sinha  
Chandana Banerjee  
Medha Dubey

## **Supported by:**

World Health Organization Country Office for India and Commonwealth Foundation

## **Designed by:**

VOYCE



# Contributors

## Authors

### **RANSI ANN ABRAHAM**

Scientist  
Cardiac Biochemistry  
All India Institute of Medical Sciences (AIIMS)  
New Delhi, India

### **MIRA B. AGHI**

Behavioral Scientist  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **CYRIL ALEXANDER**

Executive Director  
Mary Anne Charity Trust (MACT)  
Chennai, Tamil Nadu, India

### **KASHISH ANEJA**

Consultant  
O'Neill Institute for National and Global Health Law  
Georgetown University  
Advocate, Supreme Court of India  
New Delhi, India

### **MONIKA ARORA**

Executive Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India  
Vice President (Research and Health Promotion)  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **DEEPIKA BAHL**

Senior Research Associate  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **SHALINI BASSI**

Senior Research Scientist  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **STUTI S. BHARGAVA**

Scientist-D (Medical)  
Division of Non Communicable Diseases (NCDs)  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **UPENDRA BHOJANI**

Director  
India Alliance (DBT/Wellcome Trust) Intermediate  
Fellow  
Institute of Public Health (IPH)  
Bengaluru, Karnataka, India

### **SANDHYA BHULLAR**

Former Director  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India, (GoI)  
New Delhi, India

### **TSHERING BHUTIA**

Vice President  
Preventive Health and Nutrition  
Salaam Bombay Foundation  
Mumbai, Maharashtra, India

### **JOY KUMAR CHAKMA**

Scientist-E and Programme Officer  
Head, Central Procurement Cell  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **PRABHAT CHAND**

Professor of Psychiatry  
National Institute of Mental Health and  
Neuro Sciences (NIMHANS)  
Bengaluru, Karnataka, India

### **PANKAJ CHATURVEDI**

Professor  
Department of Head Neck Cancer Surgery  
Deputy Director  
Centre for Cancer Epidemiology  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **VIDUSHI CHATURVEDI**

Former Director  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **GOPAL CHAUHAN**

State Programme/Nodal Officer  
Non Communicable Disease Prevention and Control  
National Health Mission  
Directorate of Health Services  
Government of Himachal Pradesh  
Shimla, Himachal Pradesh, India

### **H.M. CHAWLA**

Former National Advisor  
National Tobacco Testing Laboratories  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **MANSI CHOPRA**

Senior Research Scientist  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **AASTHA CHUGH**

Research Scientist  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **R.S. DHALIWAL**

Scientist-G and Head  
Division of Non Communicable Diseases (NCDs)  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **OPINDER PREET KAUR GILL**

Project Director - Tobacco Control  
Generation Saviour Association  
S.A.S. Nagar  
Mohali, Punjab, India

### **SONU GOEL**

Professor of Health Management  
School of Public Health  
Post Graduate Institute of Medical Education and  
Research (PGIMER)  
Chandigarh, India

### **MARK GOODCHILD**

Economist  
Department of Health Promotion  
World Health Organization (WHO)  
Geneva, Switzerland

### **JYOTSNA GOVIL**

Chairman, Delhi Branch  
Indian Cancer Society  
New Delhi, India

### **POOJA GUPTA**

National Consultant  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **PRAKASH C. GUPTA**

Director  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **RAKESH GUPTA**

President  
Rajasthan Cancer Foundation  
Jaipur, Rajasthan, India

### **RAKESH GUPTA**

President and Director of Public Health  
Strategic Institute for Public Health Education and  
Research (SIPHER)  
Chandigarh, India

### **RUBY GUPTA**

Research Scientist  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **PRAGATI B. HEBBAR**

Faculty, DBT/Wellcome Trust, India Alliance Fellow  
Institute of Public Health (IPH)  
Bengaluru, Karnataka, India

### **SAJU V. ITTY**

Executive Director  
Kerala Voluntary Health Services (KVHS)  
Kottayam, Kerala, India

### **KAMLESH KUMAR JAIN**

Professor of Community Medicine  
State Nodal Officer  
National Tobacco Control Programme (NTCP)  
Directorate of Health Services  
Government of Chhattisgarh  
Raipur, Chhattisgarh, India



### **NEHA JAIN**

Research Fellow  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **RIJO M. JOHN**

Associate Professor  
Rajagiri College of Social Sciences  
Ernakulam, Kerala, India

### **PRADEEP JOSHI**

National Professional Officer (NCD)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **SITANSHU SEKHAR KAR**

Professor and Head  
Preventive and Social Medicine  
Jawaharlal Institute of Postgraduate Medical  
Education and Research (JIPMER)  
Puducherry, India

### **PRACHI KATHURIA**

Deputy Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **NIRLEP KAUR**

Former State Nodal Officer  
National Tobacco Control Programme (NTCP)  
Government of Punjab  
Chandigarh, India

### **RADHIKA KHAJURIA**

Senior Policy Advisor, India  
Campaign for Tobacco-Free Kids  
New Delhi, India

### **POONAM KHATTAR**

Former Acting Head  
Department of Communication  
National Institute of Health and Family Welfare (NIHFW)  
New Delhi, India

### **NARENDER KUMAR**

Principal Consultant National Policy  
Campaign for Tobacco-Free Kids  
New Delhi, India

### **PULKESH KUMAR**

Deputy Secretary  
National Tobacco Control Programme (NTCP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **RAJ KUMAR**

Director  
Vallabhbhai Patel Chest Institute  
University of Delhi  
New Delhi, India

### **PRANAY LAL**

Senior Technical Advisor  
The Union South-East Asia (The Union)  
New Delhi, India

### **VAISHAKHI MALLIK**

Associate Director-South Asia  
Policy Advocacy and Communication  
Vital Strategies  
New Delhi, India

### **SELVARAJ MARKANDAN**

Deputy Director Medical, Karnataka  
State Anti-Tobacco Cell Health  
Government of Karnataka  
Bengaluru, Karnataka, India

### **BINOY MATHEW**

Programme Manager  
Communication and Advocacy  
Voluntary Health Association of India (VHA)  
New Delhi, India

### **MANU RAJ MATHUR**

Additional Professor and Head  
Health Policy  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **VIJAY PRAKASH MATHUR**

Professor and Head  
Division of Pedodontics and Preventive Dentistry  
All India Institute of Medical Sciences (AIIMS)  
New Delhi, India

### **RAVI MEHROTRA**

Founder  
Centre for Health Innovation and Policy (CHIP)  
Foundation  
Noida, Uttar Pradesh, India

### **DEEPAK MISHRA**

Executive Director  
Socio-Economic and Educational Development  
Society (SEEDS)  
Patna, Bihar, India

### **GAURAVI MISHRA**

Professor and Physician  
Department of Preventive Oncology  
Centre for Cancer Epidemiology  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **VIKRANT MOHANTY**

Professor and Head of Department  
Department of Public Health Dentistry  
Maulana Azad Institute of Dental Sciences (MAIDS)  
New Delhi, India

### **NIRMALYA MUKHERJEE**

Director and Head, Tobacco Control  
Manbhum Ananda Ashram Nityananda Trust (MANT)  
Kolkata, West Bengal, India

### **BHAVNA B. MUKHOPADHYAY**

Chief Executive  
Voluntary Health Association of India (VHA)  
New Delhi, India

### **VINEET GILL MUNISH**

National Professional Officer  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **PRATIMA MURTHY**

Director and Senior Professor of Psychiatry  
National Institute of Mental Health and  
Neuro Sciences (NIMHANS)  
Bengaluru, Karnataka, India

### **ABHIJIT NADKARNI**

Associate Professor  
London School of Hygiene and  
Tropical Medicine, United Kingdom  
Co-Director, Addictions Research Group  
Sangath, Goa, India

### **NAYANATARA S. NAYAK**

Professor, Centre for Multi-Disciplinary Development  
Research  
Dharwad, Karnataka, India

### **GAURANG P. NAZAR**

Director: Research  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **NALIN SINGH NEGI**

Associate Director-Research  
Vital Strategies  
New Delhi, India

### **JASPREET KAUR PAL**

Principal Consultant, South Asia Communications  
Campaign for Tobacco-Free Kids  
New Delhi, India

### **MANISH PANT**

Communication Manager  
Policy, Advocacy and Communication  
Vital Strategies  
New Delhi, India

### **SULABHA PARASUAMAN**

Independent Consultant  
Retired Professor  
International Institute for Population Sciences (IIPS)  
Mumbai, Maharashtra, India

### **LALIT PATHAK**

Department of Health and Family Welfare  
State Tobacco Control Cell  
Government of Jharkhand  
Ranchi, Jharkhand, India

### **MANGESH S. PEDNEKAR**

Director  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **ANITA PETER**

Executive Director  
Cancer Patients Aid Association  
Mumbai, Maharashtra, India

### **SHARMILA PIMPLE**

Professor and Physician  
Department of Preventive Oncology  
Centre for Cancer Epidemiology  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **ANKITA PIPLANI**

Consultant  
National Oral Health Programme (NOHP)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **NIDHI SEJPAL POURANIK**

Senior Technical Advisor – Tobacco Control  
The Union South-East Asia (The Union)  
New Delhi, India

### **NATARAJAN RAMALINGAM**

Registrar, Head and Neck Oncosurgery  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **TINA RAWAL**

Research Scientist  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **CECILY S. RAY**

Associate  
Healis Sekhsaria Institute for Public Health  
Mumbai, Maharashtra, India

### **K. SRINATH REDDY**

Founder (Past) President and Distinguished Professor  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **SARIT K. ROUT**

Additional Professor  
Indian Institute of Public Health Bhubaneswar (IIPHB)  
Public Health Foundation of India (PHFI)  
Bhubaneswar, Odisha, India

### **SANJAY SETH**

Trustee and Head of Tobacco Control  
Sambandh Health Foundation  
Gurugram, Haryana, India

### **NITIKA SHARMA**

Research Associate  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **VIKAS SHEEL**

Former Additional Secretary and  
Mission Director  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (Gol)  
New Delhi, India

### **RADHIKA SHRIVASTAV**

Senior Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **NARENDRA SINGH**

State Consultant  
National Tobacco Control Programme (NTCP)  
Government of Rajasthan  
Jaipur, Rajasthan, India

### **PURVA SINGH**

National Consultant (NCD)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **RAMAN MOHAN SINGH**

Director  
Central Drugs Testing Laboratory (CDTL)  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (Gol)  
Mumbai, Maharashtra, India

### **RANA J. SINGH**

Deputy Regional Director  
The Union South-East Asia (The Union)  
New Delhi, India

### **RANJIT SINGH**

Legal Consultant  
Supreme Court of India  
New Delhi, India

### **SHALINI SINGH**

Director and Scientist-G  
National Institute of Cancer Prevention and Research  
(NICPR)  
Indian Council of Medical Research (ICMR)  
Noida, Uttar Pradesh, India

### **DHIRENDRA NARAIN SINHA**

Chair  
School of Preventive Oncology  
Patna, Bihar, India

### **MUKESH KUMAR SINHA**

Executive Director  
Madhya Pradesh Voluntary Health Association  
Indore, Madhya Pradesh, India

### **PRAVEEN SINHA**

National Professional Officer (Tobacco Control)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **B.N. SUBODH**

Professor  
Department of Psychiatry  
Post Graduate Institute of Medical Education and  
Research (PGIMER)  
Chandigarh, India

### **PREETI SUDAN**

Former Secretary  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)  
New Delhi, India

### **T. SUNDARARAMAN**

Adjunct Faculty  
School of Public Health  
Jawaharlal Institute of Postgraduate Medical  
Education and Research (JIPMER)  
Puducherry, India

### **L. SWASTICHARAN**

Additional Deputy Director General  
Director (Emergency Medical Relief)  
Directorate General Health Services  
Ministry of Health and Family Welfare (MoHFW)  
Government of India (GoI)

### **HARSHAD THAKUR**

Professor  
Centre for Public Health  
School of Health Systems Studies  
Tata Institute of Social Sciences (TISS)  
Mumbai, Maharashtra, India

### **SATISH TRIPATHI**

State Consultant  
National Tobacco Control Programme (NTCP)  
Government of Uttar Pradesh  
Lucknow, Uttar Pradesh, India

### **E. VIDHUBALA**

Director  
Fenivi Research Solutions  
Chennai, Tamil Nadu, India

### **AMIT YADAV**

Senior Technical Adviser  
The Union South-East Asia (The Union)  
New Delhi, India

# Contributors

## Peer Reviewers

### **MONIKA ARORA**

Executive Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India  
Vice President (Research and Health Promotion)  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **DEEPIKA BAHL**

Senior Research Associate  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **SHALINI BASSI**

Senior Research Scientist  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **SOUMYADEEP BHAUMIK**

Co-Head  
Meta-research and Evidence Synthesis Unit  
George Institute for Global Health  
New Delhi, India

### **UPENDRA BHOJANI**

Director  
India Alliance (DBT/Wellcome Trust)  
Intermediate Fellow  
Institute of Public Health (IPH)  
Bengaluru, Karnataka, India

### **PANKAJ CHATURVEDI**

Professor  
Department of Head Neck Cancer Surgery  
Deputy Director  
Centre for Cancer Epidemiology  
Tata Memorial Centre  
Mumbai, Maharashtra, India

### **GOPAL CHAUHAN**

State Programme/Nodal Officer  
Non Communicable Disease Prevention and Control  
National Health Mission  
Directorate of Health Services  
Government of Himachal Pradesh  
Shimla, Himachal Pradesh, India

### **MANSI CHOPRA**

Senior Research Scientist  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **R.S. DHALIWAL**

Scientist-G and Head  
Division of Non Communicable Diseases (NCDs)  
Indian Council of Medical Research (ICMR)  
New Delhi, India

### **SUNEELA GARG**

Chair, PAC NIHF  
Director, Prof HAG  
Head, Community Medicine  
Maulana Azad Medical College (MAMC)  
New Delhi, India

### **SONU GOEL**

Professor of Health Management  
School of Public Health  
Post Graduate Institute of Medical Education and  
Research (PGIMER)  
Chandigarh, India

### **ANUP KARAN**

Additional Professor  
Indian Institute of Public Health Delhi (IIPHD)  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **JAGDISH KAUR**

Regional Adviser (Tobacco Free Initiative)  
World Health Organization Regional Office for South-  
East Asia (WHO SEARO)  
New Delhi, India

### **POONAM KHATTAR**

Former Acting Head  
Department of Communication  
National Institute of Health and Family Welfare (NIHF)  
New Delhi, India

### **MURALIDHAR M. KULKARNI**

Associate Professor  
Department of Community Medicine  
Kasturba Medical College  
Manipal Academy of Higher Education  
Manipal, Karnataka, India

### **MANU RAJ MATHUR**

Additional Professor and Head  
Health Policy  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **BHAVNA B. MUKHOPADHYAY**

Chief Executive  
Voluntary Health Association of India (VHA)  
New Delhi, India

### **PRATIMA MURTHY**

Director and Senior Professor of Psychiatry  
National Institute of Mental Health and  
Neuro Sciences (NIMHANS)  
Bengaluru, Karnataka, India

### **ASHISH PANDEY**

Deputy Director  
International Union Against Tuberculosis and Lung  
Disease (The Union)  
New York, United States of America

### **VINAYAK M. PRASAD**

Unit Head, No Tobacco Unit (Tobacco Free Initiative)  
World Health Organization (WHO)  
Geneva, Switzerland

### **TINA RAWAL**

Research Scientist  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **K. SRINATH REDDY**

Founder (Past) President and Distinguished Professor  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **KRITHIGA SHRIDHAR**

Senior Research Scientist  
Adjunct Associate Professor  
Public Health Foundation of India (PHFI)  
Gurugram, Haryana, India

### **RADHIKA SHRIVASTAV**

Senior Director  
Health Related Information Dissemination Amongst  
Youth (HRIDAY)  
New Delhi, India

### **RANJIT SINGH**

Legal Consultant  
Supreme Court of India  
New Delhi, India

### **PRAVEEN SINHA**

National Professional Officer (Tobacco Control)  
World Health Organization (WHO) Country Office for India  
New Delhi, India

### **AMIT YADAV**

Senior Technical Advisor  
The Union South-East Asia (The Union)  
New Delhi, India



# Abbreviations and Acronyms

<b>ACTIVITY</b>	Advancing Cessation of Tobacco in Vulnerable Indian Tobacco Consuming Youth
<b>AFTC</b>	Alliance for Tobacco Control
<b>AIIMS</b>	All India Institute of Medical Sciences
<b>aSAH</b>	aneurysmal subarachnoid haemorrhage
<b>ASHA</b>	Accredited Social Health Activist
<b>BDC</b>	Block Development Committee
<b>BDO</b>	Block Development Officer
<b>CDC</b>	Centers for Diseases Control and Prevention
<b>CDP</b>	Crop Diversification Programme
<b>CDTL</b>	Central Drugs Testing Laboratory
<b>COPD</b>	Chronic Obstructive Pulmonary Disease
<b>CoSL</b>	Committee on Subordinate Legislation
<b>COTPA</b>	Cigarettes and Other Tobacco Products Act
<b>COVID-19</b>	Coronavirus Disease
<b>CPAA</b>	Cancer Patients Aid Association
<b>CSO</b>	Civil Society Organization
<b>CSR</b>	Corporate Social Responsibility
<b>CTFK</b>	Campaign for Tobacco-Free Kids
<b>CTRI</b>	Central Tobacco Research Institute
<b>CVD</b>	Cardiovascular Disease
<b>DALY</b>	Disability-adjusted Life Year
<b>DAY-NRLM</b>	Deen Dayal Antyodaya National Rural Livelihood Mission
<b>DIET</b>	Dry Ice Expanded Tobacco
<b>DIO</b>	District Information Officer
<b>DSA</b>	Designated Smoking Area
<b>DTCC</b>	District Tobacco Control Cell
<b>ECHO</b>	Extension for Community Healthcare Outcomes
<b>ENDS</b>	Electronic Nicotine Delivery System
<b>ENNDs</b>	Electronic Non-nicotine Delivery System
<b>ETS</b>	Environmental Tobacco Smoke
<b>EVALI</b>	E-cigarette or Vaping-associated Lung Injury
<b>FAIFA</b>	Federation of All India Farmer Associations
<b>FCTC</b>	Framework Convention on Tobacco Control
<b>FCV</b>	Flue-cured Virginia
<b>FEV</b>	Forced Expiratory Volume
<b>FSFW</b>	Foundation for a Smoke-Free World
<b>FSSA</b>	Food Safety and Standards Act
<b>FSSAI</b>	Food Safety and Standards Authority of India
<b>FSSR</b>	Food Safety and Standards Regulations
<b>GATS</b>	Global Adult Tobacco Survey

<b>GBD</b>	Global Burden of Disease (study)
<b>GDM</b>	Gestational Diabetes Mellitus
<b>GDP</b>	Gross Domestic Product
<b>GoI</b>	Government of India
<b>GoM</b>	Group of Ministers
<b>GSA</b>	Generation Saviour Association
<b>GSR</b>	General Statutory Rules
<b>GST</b>	Goods and Services Tax
<b>GTS</b>	Green Tobacco Sickness
<b>GVA</b>	Gross Value Added
<b>GYTS</b>	Global Youth Tobacco Survey
<b>HPV</b>	Human Papillomavirus
<b>HRIDAY</b>	Health Related Information Dissemination Amongst Youth
<b>HWC</b>	Health And Wellness Centre
<b>HWL</b>	Health Warning Label
<b>ICAR</b>	Indian Council of Agricultural Research
<b>ICMR</b>	Indian Council of Medical Research
<b>IEC</b>	Information, Education And Communication
<b>IEV</b>	Internet Electronic Cigarette Vendor
<b>IIPH</b>	Indian Institute of Public Health
<b>IIPS</b>	International Institute for Population Sciences
<b>IMA</b>	Indian Medical Association
<b>IMDP</b>	International Management Development Programme
<b>IPH</b>	Institute of Public Health
<b>IVR</b>	Interactive Voice Response
<b>JHSPH</b>	Johns Hopkins Bloomberg School of Public Health
<b>JIPMER</b>	Jawaharlal Institute of Postgraduate Medical Education and Research
<b>KH-SLT</b>	Global Knowledge Hub on Smokeless Tobacco
<b>KVHS</b>	Kerala Voluntary Health Services
<b>LBW</b>	Low Birth Weight
<b>MAIDS</b>	Maulana Azad Institute of Dental Sciences
<b>MACT</b>	Mary Anne Charity Trust
<b>MANT</b>	Manbhum Ananda Ashram Nityananda Trust
<b>MEIS</b>	Merchandise Exports from India Scheme
<b>MERS</b>	Middle East respiratory syndrome
<b>MNREGA</b>	Mahatma Gandhi National Rural Employment Guarantee Act
<b>MoHFW</b>	Ministry of Health and Family Welfare
<b>MoLE</b>	Ministry of Labour and Employment
<b>MPH</b>	Masters of Public Health
<b>MPVHA</b>	Madhya Pradesh Voluntary Health Association
<b>MYTRI</b>	Mobilizing Youth for Tobacco Related Initiatives in India
<b>NCBI</b>	National Centre for Biotechnology Information
<b>NCCD</b>	National Calamity Contingent Duty
<b>NCD</b>	Non-communicable Disease

<b>NCTOH</b>	National Conference on Tobacco or Health
<b>NDMA</b>	National Disaster Management Authority
<b>NFHS</b>	National Family Health Survey
<b>NGO</b>	Non-governmental Organization
<b>NHM</b>	National Health Mission
<b>NHP</b>	National Health Policy
<b>NICPR</b>	National Institute of Cancer Prevention and Research
<b>NIHFW</b>	National Institute of Health and Family Welfare
<b>NIMHANS</b>	National Institute of Mental Health and Neuro Sciences
<b>NMHP</b>	National Mental Health Programme
<b>NMT21C</b>	No More Tobacco in the 21st Century
<b>NNMS</b>	National Non-communicable Disease Monitoring Survey
<b>NOHP</b>	National Oral Health Programme
<b>NPCC</b>	National Programme Coordination Committee
<b>NPCDCS</b>	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke
<b>NRHM</b>	National Rural Health Mission
<b>NRT</b>	Nicotine Replacement Therapy
<b>NSS</b>	National Sample Survey
<b>NTCC</b>	National Tobacco Control Cell
<b>NTCP</b>	National Tobacco Control Programme
<b>NTEP</b>	National Tuberculosis Eradication Programme
<b>NTQLS</b>	National Tobacco Quitline Service
<b>NTTL</b>	National Tobacco Testing Laboratory
<b>OPMD</b>	Oral Potentially Malignant Disorder
<b>OSF</b>	Oral Submucous Fibrosis
<b>OTT</b>	Over-the-top (media platform)
<b>PAF</b>	Population-attributable Fraction
<b>PECA</b>	Prohibition of Electronic Cigarettes Act
<b>PFA</b>	Prevention of Food Adulteration
<b>PGIMER</b>	Post Graduate Institute of Medical Education and Research
<b>PHFI</b>	Public Health Foundation of India
<b>PHW</b>	Pictorial Health Warning
<b>PIL</b>	Public Interest Litigation
<b>PIP</b>	Programme Implementation Plan
<b>PMI</b>	Philip Morris International
<b>PM-JAY</b>	Pradhan Mantri Jan Arogya Yojana
<b>PoS</b>	Point of Sale
<b>PSA</b>	Public Service Announcement
<b>RCTC</b>	Resource Centre for Tobacco Control
<b>RIP</b>	Relative Income Price
<b>RNTCP</b>	Revised National Tuberculosis Control Programme
<b>SARS</b>	Severe Acute Respiratory Syndrome
<b>SCENIHR</b>	Scientific Committee for Emerging and Newly Identified Health Risks

<b>SCTIMST</b>	Sree Chitra Tirunal Institute for Medical Sciences and Technology
<b>SDGs</b>	Sustainable Development Goals
<b>SDM</b>	Sub-Divisional Magistrate
<b>SEATCA</b>	Southeast Asia Tobacco Control Alliance
<b>SEEDS</b>	Socio-Economic and Educational Development Society
<b>SES</b>	Socio-economic Status
<b>SEZ</b>	Special Economic Zone
<b>SHS</b>	Second-hand Smoke
<b>SIPHER</b>	Strategic Institute for Public Health Education and Research
<b>SLT</b>	Smokeless Tobacco
<b>SMS</b>	Short Message Service
<b>SNO</b>	State Nodal Officer
<b>SNS</b>	Social Networking Site
<b>STCC</b>	State Tobacco Control Cell
<b>STEPS</b>	Strengthening of Tobacco control Efforts through innovative Partnerships and Strategies
<b>TAPS</b>	Tobacco Advertising, Promotion And Sponsorship
<b>TB</b>	Tuberculosis
<b>TCC</b>	Tobacco Cessation Clinic/Centre/Cell
<b>TII</b>	Tobacco Industry Interference
<b>TISS</b>	Tata Institute of Social Sciences
<b>TNP</b>	Transdermal Nicotine Patch
<b>TobReg</b>	WHO Study Group on Tobacco Product Regulation
<b>ToFEI</b>	Tobacco-free Educational Institution
<b>ToT</b>	Training of Trainers
<b>TpackSS</b>	Tobacco Pack Surveillance System
<b>TRIPS</b>	Trade-Related Aspects of Intellectual Property Rights
<b>TVL</b>	Tobacco Vendor Licensing
<b>UHC</b>	Universal Health Coverage
<b>UNDAF</b>	United Nations Development Action Framework
<b>UNDP</b>	United Nations Development Programme
<b>VAT</b>	Value-added Tax
<b>VHAI</b>	Voluntary Health Association of India
<b>VOTV</b>	Voice of Tobacco Victims
<b>WHO</b>	World Health Organization
<b>WNTD</b>	World No Tobacco Day
<b>WTO</b>	World Trade Organization

# Table of Contents •

Preface	i
Acknowledgements	iii
Project Team	v
Contributors (Authors and Peer Reviewers)	vii
Abbreviations and Acronyms	xv
<b>1. Introduction</b>	<b>1</b>
<b>2. Tobacco control in India: A multisectoral response (2004–2022)</b>	<b>7</b>
<b>3. Tobacco use in India: Practices, patterns, prevalence and trends</b>	<b>21</b>
<b>4. Health consequences of tobacco and nicotine use</b>	<b>33</b>
4.0: Introduction	35
4.1: All-cause mortality and tobacco use in India	39
4.2: Tobacco and cancer	41
4.3: Tobacco and risk of cardiovascular and metabolic diseases	51
4.4: Tobacco smoking and lung disease	53
4.5: Tobacco smoking and pulmonary tuberculosis	55
4.6: Tobacco and reproductive outcomes	59
4.7: Tobacco-induced oral diseases	61
4.8: Green tobacco sickness	64
4.9: Health effects of electronic nicotine delivery systems	65
4.10: Tobacco, alcohol, drugs: Interlinkages	67
4.11: Research gaps in health effects of tobacco in India	69
<b>5. Economics of tobacco control in India</b>	<b>81</b>
<b>6. Ecological and environmental effects of tobacco use</b>	<b>93</b>
<b>7. Progress in tobacco control: The Indian experience</b>	<b>103</b>
7.1: Tobacco industry interference	105
7.2: Tobacco cessation in India	112
7.3: Progress in tobacco control for smokeless tobacco	123
7.4: Progress in tobacco control for <i>bidis</i>	136

7.5: Alternative livelihoods for <i>bidi</i> rollers and tobacco farmers	144
7.6: Legal challenges	154
7.7: National Tobacco Testing Laboratories	159
7.8: Electronic nicotine delivery systems	166
7.9: Public perceptions of tobacco and nicotine products	173
<b>8. Progress in tobacco control: What works?</b>	<b>179</b>
8.1: National Tobacco Control Programme	181
8.2: Smoke-free movement	186
8.3: Regulating tobacco advertising promotion and sponsorship	192
8.4: Pictorial health warnings	200
8.5: Public education and stakeholder sensitization	209
<b>9. Tobacco control: What is needed?</b>	<b>227</b>
9.1: Bridging gaps between WHO Framework Convention on Tobacco Control and Cigarettes and Other Tobacco Products Act	229
9.2: Tobacco control, non-communicable diseases and Sustainable Development Goals	237
<b>10. Tobacco control: What is possible? A vision for 2040 and beyond</b>	<b>245</b>
10.1: National Tobacco Control Policy: India	247
10.2: Capacity building for tobacco control	255
10.3: Implementing bans on electronic nicotine delivery systems	261
10.4: Positioning tobacco control in response to public health emergencies	265
10.5: Tobacco vendor licensing	273
10.6: Tobacco-Free Future Generation	280
<b>11. Recommendations and the way forward</b>	<b>291</b>





---

# Introduction

---

**Monika Arora, Cecily S. Ray**



This report is a continuation of the Report on Tobacco Control in India released in 2004,<sup>1</sup> which focused on the history of tobacco, provided scientific evidence on adverse consequences of tobacco use, and listed all national efforts to prevent and control tobacco use.

Though India remains a global leader in introducing and implementing robust tobacco control measures, tobacco continues to be a major public health threat in the country. As per the Global Adult Tobacco Survey (GATS), 2016–2017,<sup>2</sup> overall tobacco use was 28.6% (21.2% in urban and 32.5% in rural areas), which is a 17.3% relative reduction from 34.6% reported in 2009–2010.<sup>3</sup> Tobacco use has declined not only among adults but also among adolescents. According to the Global Youth Tobacco Survey (GYTS), current tobacco use among young adolescents (13–15 years) in 2019 was 8.4%<sup>4</sup> and in the previous round (2010), it was 14.6%<sup>5</sup> – a decline of 42.5%.<sup>4</sup> However, the data highlight that tobacco use is still unacceptably high among adolescents and adults in India.

Tobacco use brings losses through related diseases and deaths to many users, their families and society at large. The three main diseases caused by tobacco use are cancer, coronary artery disease and chronic obstructive lung disease.<sup>6</sup> The Global Burden of Disease (GBD) Study estimated that there were over 1.2 million (12 lakh) deaths due to smoking and second-hand smoke (SHS) in India in 2019,<sup>7</sup> and more recently WHO has estimated that 1.35 million (13.5 lakh) deaths occur every year due to tobacco use overall in India.<sup>6</sup> Research on the adverse effects of tobacco use on health and the environment has reaffirmed the dire need for strengthening and broadening tobacco control as both a multisectoral and a whole-of-society issue in India. Tobacco use leads not only to the loss of lives but imposes a heavy environmental, social and economic burden.<sup>8</sup> The estimated cost of tobacco use attributed to diseases and deaths in India for the year 2017–2018, among persons aged 35 years and older, is an enormous INR 1,77,341 crore (US\$ 27.5 billion).<sup>6</sup>

Environmental burdens of tobacco are numerous. Deforestation for growing and curing tobacco has been adding carbon dioxide to the atmosphere, which is a risk factor for climate change. The use of trees for making paper for cigarettes contributes to deforestation.<sup>8,9</sup> Butts of cigarettes and *bidis* and wrappers of smokeless tobacco (SLT) products are thrown on the roads; they get washed into the drains, rivers and seas causing seawater pollution, and adversely affect marine life. Spitting associated with SLT use results in unsanitary and ugly public spaces. These unhygienic practices are in contravention to COVID-appropriate behaviours. Thus, addressing SLT use and smoking should be a priority for India to achieve the vision of *Swachh Bharat Mission*.

Since 2003, the Government of India (GoI) has taken many policy initiatives and programmatic interventions for tobacco control. India's tobacco control law<sup>10</sup> bans smoking in public places, tobacco advertising (except at the point of sale, on-pack and in-pack), tobacco advertising promotions and sponsorships, sale of tobacco to and by minors, and requires text and pictorial warnings on all forms of tobacco product packages. It also requires the setting up of National Tobacco Testing Laboratories (NTTLs) and the implementation of the National Tobacco Control Programme (NTCP). Other laws cover the ban on *gutkha* and/or SLT and on all forms of electronic nicotine delivery systems (ENDS).<sup>11</sup> In alignment with the WHO Framework Convention on Tobacco Control (FCTC), tobacco products have been placed in the highest tax slab of 28%,<sup>12</sup> but recent evidence underscores the need to further raise tobacco taxes in India to achieve health benefits for the public.<sup>13</sup> One national and three regional tobacco quitlines have been set up,<sup>14</sup> m-cessation services were launched by the GoI in 2016<sup>15</sup> and comprehensive guidelines for tobacco-free educational institution (ToFEI) were released in 2019.<sup>16</sup> India is the only country to enforce stringent and effective rules for tobacco-free films and television, which have demonstrated

a lowering in exposure of tobacco use in Indian films.<sup>17</sup> However, with the advent of new media and streaming platforms, these rules are being extensively violated and require urgent regulation through a high-level intersectoral committee. Another noteworthy policy intervention is the recent code of conduct for officials of health departments and health institutes to prevent tobacco industry interference (TII) in public health policies.<sup>18</sup> During the COVID-19 pandemic, the Ministry of Health and Family Welfare (MoHFW), GoI issued an advisory and warned people to refrain from spitting in public places to avoid the risk of coronavirus transmission. Thus, a ban on spitting was announced under the Disaster Management Act.<sup>19</sup> The MoHFW along with WHO also warned people about severe COVID-related outcomes among tobacco users versus non-users.<sup>20,21</sup>

Apart from the Cigarettes and Other Tobacco Products Act, 2003 (COTPA), several activities of the NTCP align with the provisions of the FCTC and contribute to community engagement and wider awareness of tobacco and its adverse consequences at the population level through mass media. Cessation clinics are integrated within the health system through the NTCP and their outreach is expanded through convergence with other health programmes such as the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS), Revised National Tuberculosis Control Programme (RNTCP), National Oral Health Programme (NOHP), National Multisectoral Action Plan for Prevention and Control of Common Non-communicable Diseases (2017–2022) and with Ayushman Bharat. Though the government has been proactive in enforcing COTPA and implementing the NTCP, civil society organizations (CSOs) and Alliance for Tobacco Control (AFTC), a national coalition of non-governmental organizations (NGOs) active in tobacco control have played a key role in strengthening enforcement of the COTPA and NTCP through monitoring, evaluation, research, sensitization, training and stakeholder engagement.

Tobacco control is vital for attaining Sustainable Development Goals (SDGs). Among the 17 SDGs, those with close relevance to tobacco control are: SDG1 (No poverty); SDG2 (Zero hunger); SDG3 (Good health and well-being); SDG3.4 (reduce by one-third premature mortality from NCDs); SDG4 (Quality education), SDG5 (Gender equality), SDG8 (Decent work and economic growth); SDG10 (Reduced inequality); SDG11 (Sustainable cities and safe communities); SDG12 (Sustainable consumption and production); SDG13 (Climate action); SDG14 (Life Below Water) SDG15 (Life on land) SDG16 (Peace, justice and strong institution) SDG6 (Clean water and sanitation); SDG17 (Partnerships for sustainable development).<sup>22</sup> For SDG3, tobacco control is the most effective strategy for reducing the burden of NCDs.<sup>23</sup>

Despite the above efforts, several new issues in tobacco control in India require amendments to the COTPA for further strengthening enforcement of current laws to protect minors and move towards a 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040.

## Purpose and objective of the report

The purpose of this report, similar to that of the 2004 report, is to provide a comprehensive overview of the tobacco problem in India, from public health challenges to policy responses. The objective of this report is to provide an update since 2004 on the nature and magnitude of the tobacco problem, on the scientific knowledge about the health effects of tobacco use, on the economics of tobacco and highlighting new challenges posed by new emerging tobacco products/nicotine products/flavoured tobacco products.

## Structure of the report

The report chronologically explains the progress in tobacco control and documents the implementation of policies and their outcomes as well as offers recommendations for future

progress. The report is organized into eleven chapters. Following a brief introduction in Chapter 1, Chapter 2 highlights the multisectoral approach adopted by various stakeholders in strengthening tobacco control efforts in India. Chapter 3 describes patterns, practices, prevalence and trends of current tobacco use in India. Chapter 4 and its sub-chapters inform readers about the evidence since 2004 from Indian studies on cancer, vascular diseases, lung diseases, pulmonary tuberculosis, reproductive health outcomes, oral diseases, green tobacco sickness and mortality attributed to tobacco use in India. It also provides information on the adverse effects of ENDS, and the interactions of tobacco with alcohol, areca nut, cannabis and opium. Chapter 5 details various economic aspects related to the cultivation, employment and revenue generation of tobacco as a product as well as the economic burden of tobacco in India. Chapter 6 describes the ecological and environmental effects of tobacco use. Chapter 7 and its sub-chapters provide a detailed account of the progress in tobacco control since 2004 in terms of the implementation of policies and programmes relevant to addressing TII, tobacco cessation, the ban on *gutkha* and/or SLT, the prohibition of ENDS, national testing laboratories, alternative livelihoods for *bidi* rollers as well as public perceptions of tobacco products. It also discusses the legal challenges encountered in developing and enforcing policies. Chapter 8 and its sub-chapters describe the process of implementing tobacco control policies in India, with reference to the NTCP, the smoke-free

movement, regulating tobacco advertisement, promotion and sponsorship, pictorial health warnings, media campaigns and approaches to specific policies. Chapter 9 and its sub-chapters delineate gaps to be bridged between the FCTC and COTPA and describe the connections between tobacco control, NCD control and reaching the SDGs. Chapter 10 and its sub-chapters prioritize activities, interventions, research and programmes for strengthening tobacco control in India and provide a vision for 2040. The National Tobacco Control Policy discussed in sub-chapter 10.1 is intended to serve as a roadmap for a 'Tobacco-Free India' and incorporates key principles, strategic thrust areas, including measures for reduction of demand and supply for tobacco and a plan for phasing out tobacco cultivation to attain the mission of Tobacco Endgame. Other sub-chapters provide details on building capacity for tobacco control at the national, sub-national and regional levels, the situation on the ground in India in implementing the ban on ENDS following the promulgation of the Prohibition of Electronic Cigarettes Act (PECA). It also discusses the tobacco control measures undertaken during the COVID-19 pandemic at the national and sub-national levels and the importance of vendor licensing as an effective tool to ensure that tobacco retailers comply with all tobacco control laws and meaningful engagement of youth in tobacco control initiatives. Finally, Chapter 11 lists the recommendations and proposes the way forward to build a 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040.

## REFERENCES

1. Reddy KS, Gupta PC. Report on Tobacco Control in India. New Delhi: Ministry of Health and Family Welfare, Government of India; 2004. Available from: [https://main.mohfw.gov.in/sites/default/files/4898484716Report on Tobacco Control in India.pdf](https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf), accessed 12 April 2022.
2. GATS-2 Global Adult Tobacco Survey Fact Sheet India 2016–17. Available from: [https://www.tobaccofreekids.org/assets/global/pdfs/en/GATS\\_India\\_2016-17\\_FactSheet.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/GATS_India_2016-17_FactSheet.pdf), accessed 22 August 2022.
3. Tata Institute of Social Sciences (TISS), Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey-2 India 2016–17. Mumbai: TISS; 2018. Available from: <https://tiss.edu/view/6/mumbai-campus/school-of-health-systems-studies/global-adult-tobacco-survey-2-india-2016-17/outcomespublications-3/>, accessed 13 April 2022.
4. Ministry of Health and Family Welfare, Government of India, International Institute of Population Sciences. GYTS-4 Global Youth Tobacco Survey- Fact Sheet

- India. Mumbai: IIPS; 2021. Available from: [https://ntcp.nhp.gov.in/assets/document/National\\_Fact\\_Sheet\\_of\\_fourth\\_round\\_of\\_Global\\_Youth\\_Tobacco\\_Survey\\_GYTS-4.pdf](https://ntcp.nhp.gov.in/assets/document/National_Fact_Sheet_of_fourth_round_of_Global_Youth_Tobacco_Survey_GYTS-4.pdf), accessed 13 April 2022.
5. World Health Organization. Global Youth Tobacco Survey (GYTS), India Fact Sheet 2009. 2010. Available from: [https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/india/india-gyts-2009-factsheet-\(ages-13-15\)--tag508.pdf?sfvrsn=970fc165\\_1&download=true](https://cdn.who.int/media/docs/default-source/ncds/ncd-surveillance/data-reporting/india/india-gyts-2009-factsheet-(ages-13-15)--tag508.pdf?sfvrsn=970fc165_1&download=true), accessed 13 April 2022.
6. Tobacco in India. World Health Organization; 2022. Available from: <https://www.who.int/india/health-topics/tobacco>, accessed 13 April 2022.
7. Global Burden of Disease (GBD) 2016. Institute for Health Metrics and Evaluation (IHME), University of Washington. 2016. Available from: <https://www.healthdata.org/india>, accessed 13 April 2022.
8. Truth Initiative. How tobacco products harms the environment from their manufacture to consumption. Washington D.C.; 2018. Available from: <https://truthinitiative.org/research-resources/harmful-effects-tobacco/how-tobacco-products-harm-environment-their-manufacture>, accessed 13 April 2022.
9. World Health Organization. Tobacco and its environmental impact: an overview. Geneva; 2017. Available from: <https://apps.who.int/iris/bitstream/handle/10665/255574/9789241512497-eng.pdf>, accessed 13 April 2022.
10. National Health Mission (NHM). COTPA 2003 and Rules made thereunder. Ministry of Health and Family Welfare, Government of India; 2022. Available from: <https://nhm.gov.in/index4.php?lang=1&level=0&linkid=459&lid=692>, accessed 13 April 2022.
11. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019 NO. 42 OF 2019. The Gazette of India Extraordinary, No. 42 OF 2019. Ministry of Law and Justice (Legislative Department), New Delhi; 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement\)-Act-2019.pdf](https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement)-Act-2019.pdf), accessed 22 August 2022.
12. John RM, Dauchy E, Goodchild M. Estimated impact of the GST on tobacco products in India. *Tob Control*. 2019;28(5):506–12. doi: 10.1136/tobaccocontrol-2018-054479.
13. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res*. 2021;23(2):294–301. <https://doi.org/10.1093/ntr/ntaa154>.
14. Gupta R, Pednekar MS, Kumar R, Goel S. Tobacco cessation in India-Current status, challenges, barriers and solutions. *Indian J Tuberc*. 2021;68S:S80–S85. doi: 10.1016/j.ijtb.2021.08.027.
15. National Tobacco Control Programme. National Tobacco Quitline Services (NTQLS) - 1800 112 356 (toll-free). Available from: [https://ntcp.nhp.gov.in/national\\_tobacco\\_quit\\_line\\_services](https://ntcp.nhp.gov.in/national_tobacco_quit_line_services), accessed 13 April 2022.
16. Guidelines for Tobacco Free Educational Institution (Revised). Ministry of Health and Family Welfare, Government of India. Available from: <https://ntcp.nhp.gov.in/assets/document/TEFI-Guidelines.pdf>, accessed 22 August 2022.
17. Nazar GP, Arora M, Sharma N, Shrivastava S, Rawal T, Chugh A, et al. Changes in tobacco depictions after implementation of tobacco-free film and TV rules in Bollywood films in India: a trend analysis. *Tob Control*. 2021. doi: 10.1136/tobaccocontrol-2021-056629.
18. Ministry of Health and Family Welfare, Government of India. Code of Conduct for Public Officials to comply with WHO FCTC Article 5.3 (to protect public health policies from tobacco industry interference) - reg, 2020. Available from: [https://dchpune.bharativedyapeeth.edu/media/pdfs/Public\\_Notice\\_issued\\_by\\_DCI\\_020920.pdf](https://dchpune.bharativedyapeeth.edu/media/pdfs/Public_Notice_issued_by_DCI_020920.pdf), accessed 13 April 2022.
19. Consolidated Revised Guidelines on the measures to be taken by Ministries, Departments of Government of India, State, UT/ Governments and State/ UT authorities for containment of COVID-19 in country. Available from: [https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines\\_compressed%20%283%29.pdf](https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines_compressed%20%283%29.pdf), accessed 13 April 2022.
20. World Health Organization. WHO statement: Tobacco use and COVID-19. 2020. Available from: <https://www.who.int/news/item/11-05-2020-who-statement-tobacco-use-and-covid-19>, accessed 13 April 2022.
21. Ministry of Health and Family Welfare. COVID-19 pandemic and tobacco use in India. New Delhi: Government of India; 2020. Available from: <https://www.mohfw.gov.in/pdf/COVID19PandemicandTobaccoUseinIndia.pdf>, accessed 13 April 2022.
22. United Nations. Do you know all 17 SDGs? Sustainable Development Goals. UNDP. Available from: <https://sdgs.un.org/goals>, accessed 13 April 2022.
23. The Lancet Public Health. The power of a treaty. The Lancet Public Health. 2017;2(4):e157. DOI: [https://doi.org/10.1016/S2468-2667\(17\)30053-1](https://doi.org/10.1016/S2468-2667(17)30053-1).





---

# Tobacco control in India: A multisectoral response (2004–2022)

---

**K. Srinath Reddy, Monika Arora, Vidushi Chaturvedi, L. Swasticharan, Vineet Gill Munish,  
Nitika Sharma, Prachi Kathuria**



## Tobacco – a multisectoral issue

Tobacco use impoverishes lakhs of individuals in India annually and increases socioeconomic disparities among people.<sup>1</sup> Therefore, tobacco is a major threat to achieving not only the Sustainable Development Goal for health (SDG3) but for overall development. Tobacco use contributes to poverty by diverting household spending from other essential needs to consumption of tobacco products.<sup>2</sup> The use of pesticides during tobacco farming contributes to water pollution in the country.<sup>3</sup> The plastic used for packaging of smokeless tobacco (SLT) products contributes to water pollution and clogging of the drainage system. Nearly 68,000 hectares of forests were lost due to tobacco cultivation in India between 1962 and 2002 – an average of 1700 hectare annually.<sup>4</sup> Tobacco is a major cause of deforestation not only for trees being cut for cultivating tobacco but 114 lakh metric tonnes of wood required for curing.<sup>5</sup>

The enormous costs imposed on the nation's healthcare system due to tobacco use could potentially stress the public healthcare system and strain the economy.<sup>6</sup> The tobacco-attributable disease burden places financial strain on the government budgets for health and development as well as on individual household budgets; thus posing a major threat to achieve SDG1.<sup>7</sup> The greater use of fertilizers and pesticides for cultivating tobacco degrades the quality of soil and results in barren land and consequently, is a roadblock for achieving sustainable agriculture (SDG2) in India. Tobacco cultivation contributes to desertification and soil erosion as it is planted as a monocrop, exposing topsoil to wind and water. Thus, tobacco is described as “the most erosive crop”.<sup>4</sup> Tobacco is a key risk factor for causing non-communicable diseases (NCDs) (cardiovascular diseases, chronic respiratory diseases, cancer and diabetes), which account for approximately 66% of total deaths in India.<sup>8</sup> Counteracting the burden of tobacco-related diseases is essential to achieve SDG3 in India. Tobacco farming and production leads to less opportunities to pursue

education for families and their children involved in tobacco farming and *bidi* rolling, and poses challenges for achievement of SDG4 in India.<sup>9</sup>

## Progress in tobacco control since 2004

The Parliament of India enacted a comprehensive tobacco control legislation, i.e. the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA),<sup>10</sup> which came into force in 2004. The COTPA prohibits smoking in public places and indoor workplaces (Section 4); it prohibits tobacco advertising, promotions and sponsorships (Section 5); it prohibits sale of tobacco products to and by persons below 18 years of age (Section 6a) and within 100 yards of all educational institutions (Section 6b); and makes it obligatory to display pictorial health warnings (Section 7).

India also ratified the World Health Organization's Framework Convention on Tobacco Control (WHO FCTC) in 2004. In 2007–2008, the National Tobacco Control Programme (NTCP)<sup>11</sup> was introduced to complement the law. India has recorded a number of firsts by banning certain SLT products (e.g. *gutkha*) in all states and Union Territories of India, regulating tobacco imagery in films and television programmes, etc. In 2019, the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act was passed. One of the most important achievements in tobacco control has been the implementation of 85% pictorial health warnings (PHWs) on both sides of tobacco product packages under COTPA, since April 2016.<sup>12</sup> From September 2018, tobacco packs in India displayed new rotated 85% PHWs with the National Tobacco Control Quitline number (1800-11-2356).<sup>11</sup> On the tobacco taxation front, the Government of India (GoI) introduced a new taxation system in 2017, where 5% Goods and Services Tax (GST) is levied on raw tobacco and

28% GST is levied on all tobacco products. An additional Compensation Cess which is levied only on cigarette and SLT. A study predicted that the statutory GST rate of 28% plus compensation cess will increase the price of cigarettes, *bidi* and SLT by 0.18%, 8.8% and 6%, respectively, and, as a result, it will reduce the weighted average consumption by 0.3%, 10% and 6% and increase tax revenue by 0.17%, 35% and 4.7%, respectively. However, GST provisions exempt industries with an annual turnover below INR 40 lakh and a significant part of *bidi* industry being under the informal sector continues to remain outside the tax net. Although, tobacco products have been placed in the “sin goods” category, the impact of taxes under the GST, as a tobacco control strategy, has become a research priority for the country.

With this progress in tobacco control, there are identified implementation gaps and industry-attributable challenges that require multisectoral

interventions for achieving full compliance with the COTPA 2003 and the WHO FCTC. Just a multisectoral approach would not suffice; tobacco control requires a whole-of-society approach as current challenges revolve around strengthening enforcement of tobacco control laws at the national and sub-national levels, which require partnership with enforcement agencies, civil society organizations (CSOs) and the community at large. There is a constant need for enhancing awareness about the multiple adverse health, environmental, development and socioeconomic consequences of tobacco use.<sup>14</sup> Tobacco has been highlighted in the National Multisectoral Action Plan for Prevention and Control of Common Non-Communicable Diseases (2017–2022). The target specified for tobacco is a 30% relative reduction in the current tobacco use by 2025. Table 2.1 provides the key roles specified for each ministry in the area of tobacco control.<sup>15</sup>

**Table 2.1: Role of key ministries in tobacco control**

S. No.	Name of department/ministry	Policy option
1	Department of Revenue, Ministry of Finance	<ul style="list-style-type: none"> <li>Under the Goods and Services Tax (GST) – all tobacco products to be kept in the highest slab (of 28% at present)</li> <li>High cess be imposed on all tobacco products (the cess can be indexed to inflation and affordability)</li> </ul>
2	Department of School Education and Literacy, Ministry of Education	<ul style="list-style-type: none"> <li>Implement Tobacco-Free School guidelines developed by the MoHFW</li> <li>Display of health-promoting messages in educational institutions</li> </ul>
3	NITI Aayog	<ul style="list-style-type: none"> <li>Prioritize NCDs in strategic planning agenda of other departments/ministries via integrated governance under Health in All Policies, i.e. to prioritize and promote health and equity in all the policies (including policies related to education, transport, taxation, finance, environment and agriculture, etc.)</li> <li>Encourage partnerships among key stakeholders including state governments to implement multisectoral actions to achieve the NCD targets under SDGs</li> </ul>

S. No.	Name of department/ministry	Policy option
4	Ministry of Information and Broadcasting	<ul style="list-style-type: none"> <li>Amend regulations related to tobacco advertisement under the Programme Advertising Code under Cable Television Network Rules, 1994 and the Norms of Journalist Conduct, 2010 (formed under Press Council Act, 1978) to prohibit all forms of advertisement (direct and indirect) including brand-sharing and brand-stretching</li> <li>Advocacy with the media and the entertainment industry to allocate free airtime and space for health promotion particularly for NCD risk factors, may be part of corporate social responsibility or through Prasar Bharti (Broadcasting Corporation of India) Act, 1990 under Section 12 Sub-Section</li> <li>Advocacy and stakeholding with the Advertising Standards Council of India for restricting exposure of tobacco</li> <li>Enforcement of tobacco-free films and television policies under the COTPA 2003</li> <li>Allocate adequate funds for health-promotion activities/ events by various media units to create mass awareness</li> </ul>
5	Department of Commerce, Ministry of Commerce and Industry	<ul style="list-style-type: none"> <li>Revise the mandate of the Tobacco Board to include support and promote of alternative crops to tobacco via the Tobacco Board Act, 1975 (promotional benefits for tobacco products/crops may be phased out and benefits can be extended to promote economically viable alternative crops)</li> <li>Implement policies to regulate trade of demerit goods under bilateral/multilateral trade agreements with focus on future agreements</li> <li>The Foreign Trade Policy, 2015–2020 may be amended to include tobacco and ultra-processed food in the ineligible category for the Merchandise Exports from India Scheme (MEIS)</li> </ul>
6	Department of Industry Policy and Promotion, Ministry of Commerce and Industry	<ul style="list-style-type: none"> <li>Restrict use of trademarks of demerit goods (tobacco) for other products to prevent surrogate advertisement under Section 9 (Absolute grounds for refusal registration) of the Trademark Act, 1999</li> <li>Include all sorts of trading, technology transfer of tobacco products in the prohibited sectors of Consolidated FDI Policy, 2017</li> <li>Provision of health-promoting facilities in industrial corridors, as part of the mandatory components under such schemes, a Section on plans to promote healthy lifestyle such as dedicated spaces for parks, health centre, health clubs, etc.</li> </ul>
7	Department of Financial Services, Ministry of Finance	<ul style="list-style-type: none"> <li>Discourage investment by insurance companies in industries manufacturing demerit goods such as tobacco, under Section 14 of the Insurance Regulatory and Development Authority Act, 1999 and under sections 27, 27A, 27B, 27C and 27D of the Insurance Laws (Amendment) Bill, 2015. The department may take necessary steps to increase awareness among insurance companies</li> </ul>

S. No.	Name of department/ministry	Policy option
8	Ministry of Women and Child Development	<ul style="list-style-type: none"> <li>• Create awareness on ill-effects of tobacco and alcohol among women, adolescent girls through the SABLA programme for adolescent girls, ICDS and similar schemes</li> </ul>
9	Ministry of Labour and Employment	<ul style="list-style-type: none"> <li>• Generate awareness about the ill-effects of tobacco products and provide alternative livelihood options to <i>bidi</i> rollers under The Beedi Workers Welfare Fund Act, 1976 (Section 4 of the Act)</li> <li>• Link the workers through targeted interventions with the schemes of the Department of Rural Development for Alternative Employment under the Deen Dayal Antyodaya National Rural Livelihood Mission (DAY-NRLM) and the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA)</li> <li>• Protect child workers involved in <i>bidi</i> cottage industries through the National Child Labour Policy and develop a policy to prohibit <i>bidi</i> rolling at home</li> </ul>
10	Department of Rural Development, Ministry of Rural Development	<ul style="list-style-type: none"> <li>• Provide alternative livelihood options to <i>bidi</i> rollers through targeted intervention schemes under DAY-NRLM and MNREGA</li> </ul>
11	Ministry of Social Justice and Empowerment	<ul style="list-style-type: none"> <li>• Raise awareness with focus on marginalized populations about the harms of alcohol and substance abuse</li> <li>• Strengthen the Central Sector Scheme of Prevention of Alcoholism and Substance Abuse to rehabilitate victims of alcoholism and substance abuse</li> </ul>
12	Department of Sports, Ministry of Youth Affairs and Sports	<ul style="list-style-type: none"> <li>• Issue directives to all sports bodies/federations/associations to prohibit direct and indirect advertisement of tobacco during sports events and in their premises under the National Sports Development Code of India, 2011</li> <li>• Develop guidelines/regulations to prohibit sponsorship of sports events/teams/athletes by companies producing products that have negative health externalities (tobacco, alcohol, unhealthy food items, etc.)</li> </ul>
13	Ministry of AYUSH	<ul style="list-style-type: none"> <li>• Use of AYUSH doctors and other staff for health-promotion activities</li> </ul>
14	Ministry of Railways	<ul style="list-style-type: none"> <li>• Strictly implement ban on consumption and sale of tobacco products in trains and at railway stations</li> </ul>
15	Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution	<ul style="list-style-type: none"> <li>• Review misleading advertisements to consumers related to tobacco, products and take actions including referring as appropriate</li> </ul>
16	Department of Home, Ministry of Home Affairs	<ul style="list-style-type: none"> <li>• Involve the police force in enforcement of the ban on sale and distribution of <i>gutkha</i> and related tobacco products under the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulations, 2011</li> </ul>
17	Department of Higher Education, Ministry of Education	<ul style="list-style-type: none"> <li>• Implement Tobacco-Free School guidelines developed by the MoHFW in institutes of higher education</li> </ul>
18	Ministry of Road Transport and Highways	<ul style="list-style-type: none"> <li>• Use spaces along national highways for health-promoting messages</li> </ul>



S. No.	Name of department/ministry	Policy option
19	Ministry of Telecommunication	<ul style="list-style-type: none"> <li>• Advocacy with different telecom operators to provide free short message service (SMS)/interactive voice response (IVR) services to disseminate health-promoting messages</li> <li>• Promote caller tunes related to healthy lifestyle choices</li> </ul>
20	Ministry of Electronics and Information Technology	<ul style="list-style-type: none"> <li>• Support in implementing mHealth and eHealth interventions through various digital initiatives</li> <li>• Enact and enforce laws to prohibit advertisement, promotion and sale of tobacco to minors through internet-based platform (Information and Technology Act, 2000)</li> </ul>
21	Ministry of Parliamentary Affairs	<ul style="list-style-type: none"> <li>• Include NCD-related matters in Youth Parliament competitions/meetings held at the state/Union Territory levels</li> <li>• Support in organizing sensitization workshop for Members of Parliament</li> </ul>
22	Ministry of Tribal Affairs	<ul style="list-style-type: none"> <li>• Withdraw support to the activity of “<i>tendu</i> leaf plucking” and provide support for “<i>tendu</i> leaf pluckers” to gradually move to methods of alternative forest produce/alternate livelihoods</li> <li>• Identify pockets of high-risk areas which are prone to NCD (pockets with high consumption of tobacco) and share the data with the MoHFW for implementing necessary interventions</li> </ul>
23	Department of Economic Affairs, Ministry of Finance	<ul style="list-style-type: none"> <li>• Foreign Investment Promotion Board to channellize funds/grants in health-promoting areas/institutions</li> </ul>
24	Department of Legal Affairs, Ministry of Law and Justice	<ul style="list-style-type: none"> <li>• Support in defending legal challenges in implementing the COTPA (2003) and regulations issued under the Food Safety and Standard Authority of India (FSSAI)</li> </ul>
25	Legislative Department, Ministry of Law and Justice	<ul style="list-style-type: none"> <li>• Strengthening of tobacco control laws to make them compliant with the FCTC</li> </ul>

Source: National Multisectoral Action Plan for Prevention and Control of Common Non-communicable Diseases (2017–2022)

The second round of the Global Adult Tobacco Survey – GATS-2 (2016–2017)<sup>16</sup> revealed that the prevalence of tobacco use has decreased by six percentage points from 34.6% in GATS-1 (2009–2010) to 28.6%. GATS-2 showed a relative reduction of 17% in the prevalence of current tobacco use since GATS-1. The prevalence of tobacco use among minors (15–17 years) has also decreased from 10% in GATS-1 to 4% in GATS-2, with a relative reduction of 54%. In spite of this, India continues to be the world’s second largest consumer and producer of tobacco,<sup>17</sup> indicating that much effort is needed for tobacco control, particularly

targeted at the younger age group. This chapter identifies the areas of multisectoral work needed to strengthen tobacco control in India and how tobacco control can be integrated into several existing and future programmes and schemes.

## Multisectoral committees related to tobacco control

India has continuously been playing an eminent role in global tobacco control and has implemented strong, evidence-based policy measures as well as programmatic interventions. The enforcement of the COTPA in 2004 involved several implementation challenges and

underpinned the need to engage with other non-health ministries and stakeholders for tobacco control in India. Various committees have been constituted at the national level:

- In 2005, the Task Force on Tobacco Control was set up by the MoHFW, GoI to strengthen the enforcement of the tobacco control legislation in India.
- A Screening Committee was set up by the MoHFW, GoI to handle any complaints related to the advertising ban of tobacco products in India under COTPA.

## National Tobacco Control Programme – at the national, state and district levels

During the 11th Five Year Plan, the GoI piloted the National Tobacco Control Programme (NTCP) in 2007–2008 in 21 states and 42 districts. The programme aimed to curb the tobacco menace in the country by creating awareness, reducing production of tobacco, and implementing effectively the provisions of the COTPA.<sup>11</sup> The NTCP has a three-tier structure: (i) National Tobacco Control Cell (NTCC) at the Central level; (ii) State Tobacco Control Cells (STCCs) at the state level; and (iii) District Tobacco Control Cells (DTCCs) at the district level. The NTCC creates public awareness via mass campaigns, and mainstreams the components of the programme with the framework of the National Health Mission (NHM). It also builds capacity and has established testing laboratories as mandated by the COTPA. The monitoring and evaluation surveillance of tobacco (GATS and GYTS) are also a component of the NTCC. At the state level, the NTCP has dedicated human resources for effective

implementation and monitoring of tobacco control laws. The STCCs generate awareness about tobacco control in collaboration with non-governmental organizations (NGOs), Nehru Yuva Kendra Sangathan, National Service Scheme, National Cadet Corps, Self Help Groups (SHGs), etc. They coordinate with other departments such as Agriculture, Social Welfare, Rural Development, Labour and other stakeholders for developing sustainable alternative crops and livelihoods for tobacco growers/workers and *bidi* rollers. They engage with the Department of Revenue, Ministry of Finance for the progressive increase in tobacco tax (GST) and with the Department of Education for preventing the youth from initiating the use of tobacco products. At the district level, the DTCCs build capacity and engages with health workers, social workers, NGOs and school teachers for effective tobacco control. The DTCCs carry out local information, education and communication (IEC) activities, sets up tobacco cessation centres and monitors tobacco laws at the district level.<sup>11,18</sup>

- Between 2008 and 2009, one national and five regional workshops were organized to sensitize around 2000 government personnel and civil society groups about the provisions of the COTPA and tobacco control strategies.
- The Ministry of Labour implemented a pilot project to train women *bidi* rollers for vocational activities to provide them with an alternative source of livelihood.<sup>19</sup>

As a result of the support from the judiciary and the Union Cabinet, India now has several departments and ministries, working collaboratively in tobacco control at the national and sub-national levels. Table 2.2 highlights a multisectoral approach within the NTCP.

**Table 2.2: Multisectoral approach under the National Tobacco Control Programme**

<b>Tobacco control cell</b>	<b>Human resource</b>	<b>Departments involved</b>
National Tobacco Control Cell	<ul style="list-style-type: none"><li>• Additional Secretary and Mission Director</li><li>• Deputy Secretary</li><li>• Additional Deputy Director General</li><li>• Under Secretary</li><li>• Section Officer</li><li>• Consultants</li></ul>	<ul style="list-style-type: none"><li>• Ministry of Health and Family Welfare</li></ul>
State Tobacco Control Cell	<ul style="list-style-type: none"><li>• State nodal officer</li><li>• State consultant (NTCP)</li><li>• Legal consultant</li></ul>	<ul style="list-style-type: none"><li>• Principal Secretary/Secretary (Health) or Mission Director NHM as Member Secretary</li><li>• Principal Secretary (Home) or the nominee</li><li>• Principal Secretary (School/Higher Education) or the nominee</li><li>• Principal Secretary/Secretary (Finance) or his nominee</li><li>• Principal Secretary/Secretary (Rural Development)</li><li>• Secretary Labour/Labour Commissioner or the nominee</li><li>• Secretary Transport/Transport Commissioner or the nominee</li><li>• Representative from the Department of Railways</li><li>• Secretary Agriculture or the nominee</li><li>• Secretary Public Relations/Information or the nominee</li><li>• Civil society organizations (CSOs) working on health/tobacco control or the nominee</li><li>• Collector/District Magistrate from one/two districts or the nominee</li><li>• Secretary (Law) or the nominee</li><li>• Secretary (Panchayati Raj) or the nominee</li></ul>
District Tobacco Control Cell	<ul style="list-style-type: none"><li>• District nodal officer</li><li>• District Consultant (NTCP)</li><li>• Social worker + psychologist/Counsellor</li></ul>	<ul style="list-style-type: none"><li>• Chief Medical Officer – Member Secretary</li><li>• Superintendent of Police</li><li>• District Education officer</li><li>• Sales Tax Officer</li><li>• District Information Officer (DIO)</li><li>• Block Development Officer (BDO)/Sub-Divisional Magistrate (SDM) of select blocks and two Block Development Committee (BDC) members on rotation basis</li><li>• Municipal Health Officer</li><li>• Principals of select school/ colleges</li><li>• District Labour Officer</li><li>• Agriculture Extension Officers</li><li>• CSOs working on health/tobacco control for livelihood for <i>bidi</i> workers</li><li>• Representative from the Department of Food and Drug Administration</li></ul>

## Multisectoral action on Article 5.3 of WHO FCTC

The tobacco industry has always been a roadblock in implementing tobacco control policies. However, since 2015, several states in India have incorporated FCTC Article 5.3

notifications in their state laws. Between 2015 and 2019, 14 states/Union territories in India, after consultations with different state departments have incorporated the 5.3 notification in their jurisdictions. Table 2.3 gives the details of state notifications and the respective ministries involved. Further, the GoI also implemented

**Table 2.3: Ministries involved in FCTC Article 5.3 notifications in different Indian states/ Union Territories<sup>21</sup>**

S. No.	States/Union Territories (year)	Ministries involved
1	Punjab (2015)	Department of Revenue of the Ministry of Finance, Department of Food and Drugs Administration, Department of Information and Public relation, Department of Health and Family Welfare
2	West Bengal (2016)	Department of Health and Family Welfare, Department of Police, Department of Foods and Supply, Department of Agriculture, Department of Railways and Transport, Department of Education
3	Mizoram (2016)	Health and Family Welfare Department, Taxation Department, Food Safety, Legal Metrology Department, Law and Judicial, Home Department, CID Crime Department
4	Bihar (2016)	Health and Family Welfare Department, Department of Information, Police Department
5	Tamil Nadu (2017)	Health and Family Welfare, Department of Public Health and Family Medicine, Tax and Registration, Finance, Law, Food Safety and Drugs, Information Department and Municipal Corporation
6	Himachal Pradesh (2017)	Police Department, Health Services, Dental Health Services, Health Safety and Regulation, Drugs Controller Department, Food and Drug Administration, Printing and Stationery
7	Jammu and Kashmir (2017)	Finance Department, Information Department, Health and Family Welfare Department
8	Maharashtra (2017)	Crime Department, Health and Family Welfare Department, Information Department
9	Jharkhand (2018)	Crime Department, Health and Family Welfare Department, Information Department
10	Karnataka (2019)	Health and Family Welfare, Home Department, Finance Department, Information and Public Relation, Commerce Department, and Medical Education Department
11	Kerala (2019)	Health and Family Welfare Department, Law and Self Government, Revenue Department, Education, Information and Public Relations Departments
12	Uttar Pradesh (2019)	Health and Family Welfare, Home Department, Agriculture Department, Information Department
13	Meghalaya (2019)	Commerce Department, Legal Metrology, Home Department, Food Safety, Police Department, Information and Public Relations, Taxation Department
14	Puducherry (2021)	Department of Health and Family Welfare, Department of Law and Justice, Department of Home Affairs, Department of Information and Publicity, Department of Industry and Commerce, Department of Education, Department of Local Administration, Department of Revenue, Department of Labour and Commerce, Commissioner of Food Safety, State Health Society

the code of conduct guidelines to comply with Article 5.3 notification, on 6 July 2021, which prohibit public officials to interact with tobacco industry representatives.<sup>20</sup>

## **New issues in tobacco control to be addressed via a multisectoral approach**

- a. Advertising and promotion of tobacco through new media: Contrary to Section 5 of the COTPA, tobacco imagery and brand placement are high in the series available on on-demand streaming platforms in India.<sup>22</sup> There is a need to strictly monitor the streaming platforms in India by forming a multisectoral monitoring group including government and civil society partnership. The tobacco imagery on these platforms can be regulated with converging actions from the Ministry of Information and Broadcasting and the MoHFW.
- b. Violation of ban on e-cigarettes in India: Despite the ban on e-cigarettes in India in 2019, this menace is still alarming for Indian youth due to online and offline availability of e-cigarettes.<sup>23–25</sup> The different ministries such as Education, Information and Broadcasting, Law and Justice should collaborate for comprehensively monitoring

and implementing a strict enforcement of the ban.

## **Conclusion**

India has made rapid strides in tobacco control. However, India is yet to fully implement all the provisions of the WHO FCTC because the enforcement of tobacco control laws is a major challenge at the national and sub-national levels. Thus, the dynamic nature of tobacco control-related challenges in India demands a comprehensive, multi-pronged and multisectoral approach involving various stakeholders. The NTCP should be strengthened and scaled up to amplify tobacco control-related efforts across various sectors such as agriculture, finance and trade at the national and sub-national levels. The Ministry of Finance, along with the MoHFW, NGOs and CSOs should also come together and address the menace of illicit trade of tobacco products in India. The health and economic burden of tobacco consumption should be addressed via encompassing the social determinants related to tobacco use. Multisectoral coordination can play a key role in eradicating the tobacco use epidemic from India, guided by the National Multi-Sectoral Action Plan for the Prevention and Control of common Non-communicable Diseases and the SDGs.

## **Key messages**

- Policy commitment and intersectoral coordination between government and non-government agencies is needed for effective tobacco control at the national and sub-national levels.
- Multisectoral commitments and cooperation within and across sectors are needed to reduce tobacco use in the country.
- Regular monitoring and evaluation is required to address gaps in implementation of tobacco control strategies to achieve committed SDGs and national NCD targets.

## REFERENCES

1. John RM, Sung H-Y, Max WB, Ross H. Counting 15 million more poor in India, thanks to tobacco. *Tob Control*. 2011;20(5):349–52. DOI: 10.1136/tc.2010.040089.
2. Mohan P, Lando HA, Panneer S. Assessment of tobacco consumption and control in India. *Indian J Clin Med*. 2018;9. doi.org/10.1177/1179916118759289.
3. Reddy KS, Yadav A, Arora M, Nazar GP. Integrating tobacco control into health and development agendas. *Tob Control*. 2012;21(2):281–6. DOI: 10.1136/tobaccocontrol-2011-050419.
4. Reddy KS, Gupta PC. Tobacco control in India. New Delhi: Ministry of Health and Family Welfare, Government of India; 2004:43–7. Available from: <https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf>, accessed 26 August 2022.
5. Geist HJ. Global assessment of deforestation related to tobacco farming. *Tob Control*. 1999;8(1):18–28. DOI: 10.1136/tc.8.1.18.
6. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res*. 2021;23(2):294–301. DOI: 10.1093/ntr/ntaa154.
7. Duxbury T, Rath S, Maraj P, Bosman SJ, Srinivas S. Controlling the use of tobacco for sustainable development: a focus on India and South Africa. *Indian J Pharm Pract*. 2016;9(2):86–94. doi.org/10.5530/ijopp.9.2.5
8. Mascarenhas. Non-communicable diseases led to 66% of deaths in India in 2019: WHO 2022. Available at <https://indianexpress.com/article/cities/pune/66-of-all-deaths-in-india-in-2019-due-to-non-communicable-diseases-who-report-8165201/>
9. Halpern MT, Shikar R, Rentz AM, Khan ZM. Impact of smoking status on workplace absenteeism and productivity. *Tob Control*. 2001;10(3):233–8. DOI: 10.1136/tc.10.3.233.
10. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003. Available from: <https://legislative.gov.in/sites/default/files/A2003-34.pdf>, accessed 14 May 2022.
11. National Health Mission. National Tobacco Control Programme (NTCP). Ministry of Health and Family Welfare, Government of India. Available from: <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1052&lid=607>, accessed 14 May 2022.
12. Govt releases new health warnings for tobacco packs. WHO FCTC Secretariat's Knowledge Hub on smokeless tobacco. Available from: <https://untobaccocontrol.org/kh/smokeless-tobacco/govt-releases-new-health-warnings-tobacco-packs/>, accessed 14 May 2022.
13. John RM, Dauchy E, Goodchild M. Estimated impact of the GST on tobacco products in India. *Tob Control*. 2019;28(5):506–12. DOI: 10.1136/tobaccocontrol-2018-054479.
14. The Gazette of India. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019; 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement\)-Act-2019.pdf](https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement)-Act-2019.pdf), accessed 14 May 2022.
15. Ministry of Health and Family Welfare. National Multisectoral Action Plan for Prevention and Control of Common Noncommunicable Diseases (2017–2022). Government of India; 2017. Available from: [https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29\\_1.pdf](https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29_1.pdf), 14 May 2022.
16. Tata Institute of Social Science. Global Adult Tobacco Survey 2, India 2016–17. Research Project. Available from: <https://www.tiss.edu/view/11/research-projects/global-adult-tobacco-survey-round-2-for-india-2016/>, accessed 14 May 2022.
17. World Health Organization. Tobacco in India. Available from: <https://www.who.int/india/health-topics/tobacco>, accessed 14 May 2022.
18. Kaur J, Jain DC. Tobacco control policies in India: implementation and challenges. *Indian J Public Health*. 2011;55(3):220–7. DOI: 10.4103/0019-557X.89941.
19. ILO's Pilot Action Project for Beedi Women Workers in India. Final Report of the Project; 2002. Available from: [https://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@sro-new\\_delhi/documents/projectdocumentation/wcms\\_125467.pdf](https://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/@sro-new_delhi/documents/projectdocumentation/wcms_125467.pdf), accessed 14 May 2022.
20. Ministry of Health and Family Welfare. Code of Conduct for Public Officials in Compliance to Article 5.3 of WHO FCTC. Government of India; 2021. Available from: <http://smokelesstobaccocontrolindia.com/wp-content/uploads/2020/07/Code-of-Conduct-for-Public-Officials-6th-July.pdf>, accessed 14 May 2022.
21. Effective Implementation of Tax and Tobacco Advertisement, Promotion and Sponsorship (TAPS) measures for Prevention and Control of Smokeless Tobacco in South East Asia Region (SEAR). Orders and Notifications. Available from: <http://smokelesstobaccocontrolindia.com/ordersnotifications/#/>, accessed 14 May 2022.
22. Arora M, Nazar GP, Chugh A, Rawal T, Shrivastava S, Sinha P, et al. Tobacco imagery in on-demand



- streaming content popular among adolescents and young adults in India: implications for global tobacco control. *Tob Control*. 2021;30(1):42–8. DOI: 10.1136/tobaccocontrol-2019-055360.
23. Amalia B, Kapoor S, Sharma R, Singh RJ. E-cigarette retailer storefront availability following a nationwide prohibition of e-cigarettes in India: a multi-centric compliance assessment. *Tob Prev Cessat*. 2020;6:42. DOI: 10.18332/tpc/123822.
24. Amalia B, Kapoor S, Sharma R, Fu M, Fernández E, Rana JS. Online sales compliance with the electronic cigarettes ban in India: a content analysis. *Int J Public Health*. 2020;65(8):1497–505. DOI: 10.1007/s00038-020-01480-6
25. Chakma JK, Kumar H, Bhargava S, Khanna T. The e-cigarettes ban in India: an important public health decision. *Lancet Public Health*. 2020;5(8):e426. DOI: 10.1016/S2468-2667(20)30063-3.







---

# Tobacco use in India: Practices, patterns, prevalence and trends

---

**Dhirendra Narain Sinha, T. Sundararaman, Sulabha Parasuraman, Nitika Sharma,  
Mangesh S. Pednekar, Gaurang P. Nazar**



The widespread use of tobacco began more than a century ago, and the epidemic of tobacco-associated diseases and premature mortality related to tobacco use has continued to the present day among youth and adults.

## Tobacco use among youth

The epidemic of tobacco use among school-going adolescents is a major public health concern, globally as well as nationally.<sup>1</sup> This epidemic has been growing since 1970.<sup>2</sup> Adolescents often resort to tobacco use due to stress, peer pressure, curiosity or marketing strategies of the tobacco industry.<sup>2-5</sup> There is ample literature on tobacco use among school-going adolescents in different regions of India.<sup>6-19</sup> The prevalence however varies across the studies mainly because of different sampling designs.

To strengthen the monitoring and implementation of national tobacco control policies, the World Health Organization (WHO) has developed a standardized school-based survey, called the Global Youth Tobacco Survey (GYTS), which has been conducted in 180 countries.<sup>20</sup> The GYTS uses a standard methodology for the sampling frame, questionnaire, field procedures, data management and analysis. This section compares the GYTS estimates for India from 2009-2019. The participants in the GYTS were school-going adolescents in the age group of 13–15 years, corresponding to grades 8 to

10 in India. The 2003 round of the GYTS India provided state-wise and national estimates; the 2006 and 2009 rounds provided regional estimates and national estimates; while GYTS 2019 provided national, state-wise as well as rural–urban estimates.<sup>21</sup>

## Salient features of tobacco use among school-going adolescents in Global Youth Tobacco Survey 2019

1. The reported current use of tobacco among students aged 13–15 years was 8.4%. The gap between boys (9.4%) and girls (7.4%) was not large.
2. The current smokeless tobacco (SLT) use was 4.0% with higher prevalence among boys (4.5%) than girls (3.4%). Consumption among rural students was 4.6% and 2.0% among urban students.
3. The prevalence of current use of cigarettes (rural: 2.7%, urban: 2.1%), *bidis* (rural: 2.2%, urban: 1.7%) and all kinds of tobacco products (rural: 9.4%, urban: 5.2%) was higher in the rural than urban areas.
4. Ever e-cigarette use was higher among boys (3.4%) than girls (2.1%) and higher in urban areas (3.0%) than rural areas (2.7%) (Table 3.1).
5. There were wide regional variations in current tobacco use, which ranged from 1.1% in Himachal Pradesh to 64.9% in Arunachal Pradesh.

**Table 3.1: Prevalence of tobacco use among youth by sector/place of residence (urban/rural)**

Tobacco use	Total (%)	Urban (%)	Rural (%)
Current tobacco users	8.4	5.2	9.4
Current tobacco smokers	7.2	4.3	8.1
Current cigarette smokers	2.5	2.1	2.7
Current <i>bidi</i> smokers	2.1	1.7	2.2
Current smokeless tobacco users	4.0	2.0	4.6
Ever e-cigarette users	2.8	3.0	2.7

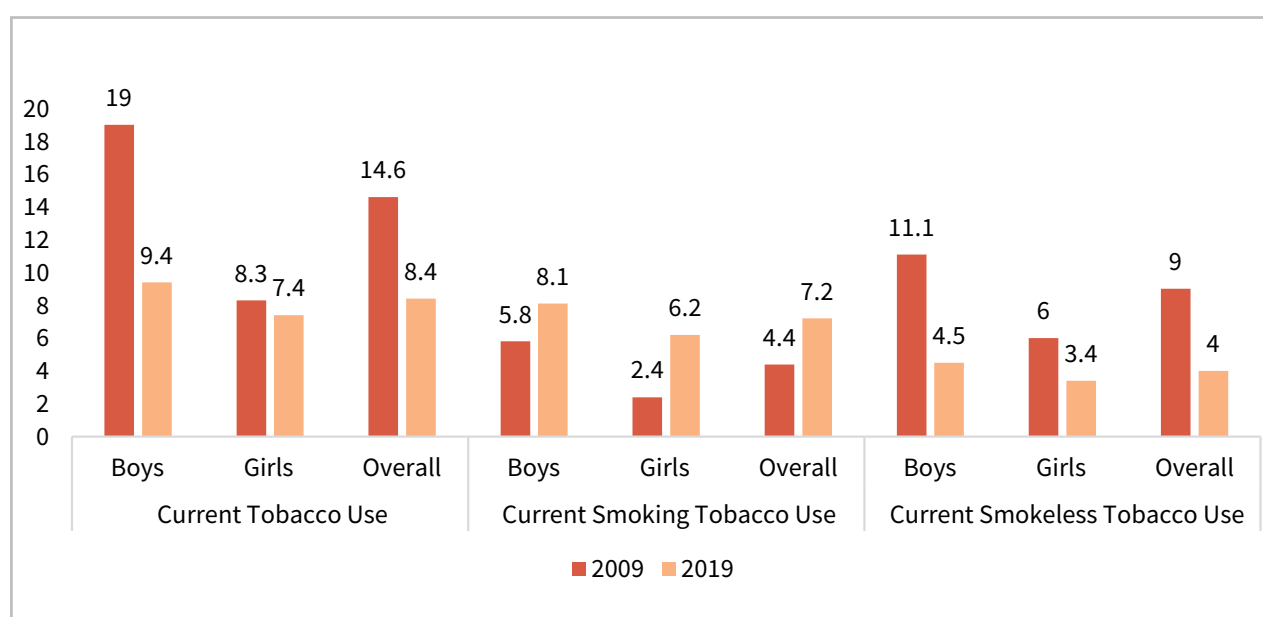
Source: GYTS 2019

## Change in prevalence of tobacco use from Global Youth Tobacco Survey 2009 to Global Youth Tobacco Survey 2019

**Current tobacco use:** Figure 3.1<sup>21</sup> illustrates the prevalence of tobacco use among youth, as per the GYTS data from 2009 to 2019. Between 2009 and 2019, there was a notable decline in overall tobacco use, decreasing from 14.6% to 8.4%. This reduction was more pronounced

among boys, dropping from 19% to 9.4%, while girls experienced a decrease from 8.3% to 7.4%. Specifically, current smoking saw an increase from 4.4% in 2009 to 7.2% in 2019, among boys rising from 5.8% to 8.1% and among girls from 2.4% to 6.2%. Conversely, current smokeless tobacco use witnessed a substantial decline from 9% in 2009 to 4% in 2019, among boys decreasing from 11.1% to 4.5% and among girls from 6% to 3.4%. These trends indicate an overall positive shift in reducing tobacco use, especially in smokeless forms, over the decade.

**Figure 3.1. Prevalence of tobacco use among youth between 2009 and 2019**



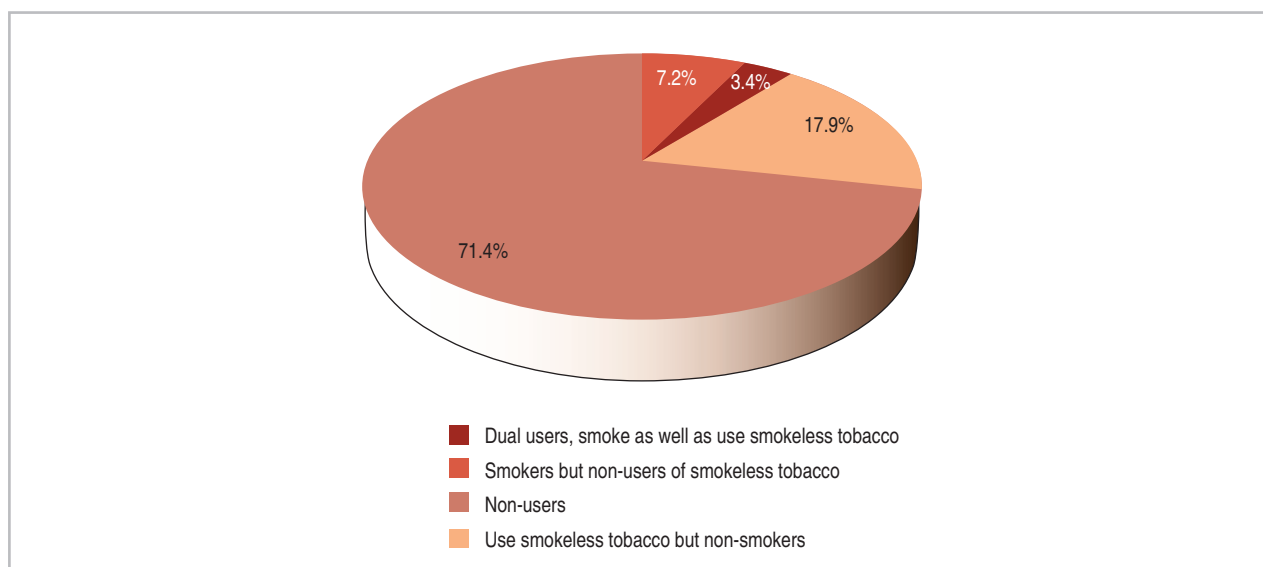
Source: GYTS 2009 and GYTS 2019

## Prevalence of tobacco use among adults

In the past two decades, many nationwide surveys, including two rounds of the Global Adult Tobacco Survey (GATS) and three rounds of the National Family Health Survey (NFHS), have collected data on tobacco use among 15 years and above. The third round of the NFHS (NFHS-3) in 2005–2006, and the subsequent round (NFHS-4) in 2015–2016<sup>22</sup> collected data on tobacco use among women aged 15–49 years and men aged 15–54 years. However, the questionnaires used in NFHS-3 and NFHS-4 were not comparable. Among

all the nationwide surveys, GATS-2 (2016–2017) provides the latest national-level data on tobacco use for a wider age group, with a standard and comparable questionnaire used in both rounds. According to GATS-2, the prevalence of tobacco use among adults was 28.6%. Among these adults, 7.2% were exclusive smokers, 17.9% exclusive SLT users and 3.4% dual users (Figure 3.2).<sup>23</sup>

**Figure 3.2: Percentage distribution of adults (15 years and above) by type of tobacco use**



Source: GATS-2 (2016–2017)

## Demographic differentials in tobacco use

Current tobacco use was almost thrice among men (42.4%) than women (14.2%). The reported difference in the use of tobacco products based on gender was much larger for smoking tobacco (19% among men and 2% among women) than SLT use (29.6% among men and 12.8% among women). According to GATS-2, the prevalence of tobacco use increased with age, and this held good both for smoking (except *bidi*) and SLT products (except *gutkha* and *paan masala*) with tobacco (Table 3.2).<sup>23</sup>

The use of all kinds of tobacco products was reported to be higher among the rural than the urban population. The two exceptions were cigarette smoking, which was slightly more prevalent among the urban population, and the use of snuff (prevalence of 0.6% for both).

The prevalence of tobacco use was lower among the educated population than among illiterate adults.<sup>23</sup>

## Variation in tobacco products used by states

The overall prevalence of any tobacco use varies greatly among the states. Table 3.3 shows the variations in the use of any tobacco product and individual tobacco products in GATS-2. This includes electronic cigarettes used by less than 1% of adults across all states.

## Change in tobacco use among adults between 2010 and 2017

Current tobacco use decreased from 34.6% in 2010 (GATS-1) to 28.6% in 2017 (GATS-2). A product-wise reduction in prevalence was also noticed. Current smoking decreased from 8.7% in 2010 to 7.2% in 2017 and current SLT use decreased from 20.6% in 2010 to 17.9% in 2017. Further, current cigarette smoking decreased from 5.7% in 2010 to 4% in 2017.

**Table 3.2: Prevalence of tobacco use by sector/place of residence (urban/rural), sex and age group, GATS-2 (2016–2017)**

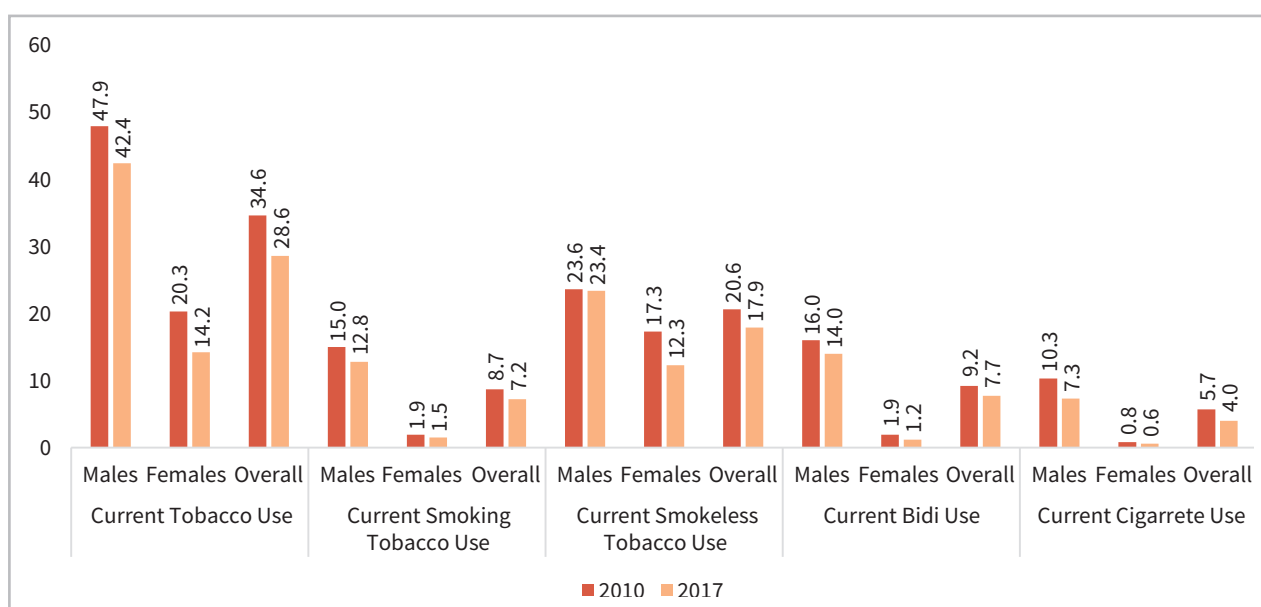
Tobacco products	Overall	Sector		Sex		Age group			
		Urban	Rural	Men	Women	15–24 years	25–44 years	45–64 years	65 years and above
Any tobacco product	28.6	21.2	32.5	42.4	14.2	12.4	30.1	39.8	41.4
Any smoking product	10.7	8.3	11.9	19.0	2.0	3.4	10.9	16.8	15.5
Any cigarette	4.0	4.4	3.8	7.3	0.6	2.1	4.8	5.0	3.6
<i>Bidi</i>	7.7	4.7	9.3	14.0	1.2	1.7	7.7	13.1	12.1
Cigars, cheroots or cigarillos	0.3	0.2	0.4	0.6	0.1	0.1	0.3	0.4	0.6
<i>Hookah</i>	0.7	0.3	0.9	1.1	0.3	0.1	0.5	1.3	1.7
Other smoked tobacco	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.3
Any smokeless tobacco (SLT) product	21.4	15.2	24.6	29.6	12.8	10.8	23.3	27.1	29.6
Betel quid with tobacco	5.8	4.3	6.6	7.1	4.5	2.3	6.1	8.0	9.3
<i>Khaini</i> (tobacco–lime mixture)	11.2	6.8	13.5	17.9	4.2	4.4	12.0	15.4	17.0
<i>Gutkha</i> (tobacco, lime and areca nut mixture)	6.8	6.3	7.1	10.8	2.7	5.3	8.8	5.8	4.8
Chewing tobacco	3.8	2.8	4.4	3.3	4.3	1.5	3.9	5.8	5.6
<i>Paan masala</i> with tobacco	2.8	2.3	3.1	4.5	1.1	2.2	3.6	2.6	1.9
Snuff	0.6	0.6	0.6	0.7	0.6	0.2	0.6	1.0	1.2
Other SLT products	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.4	0.5



**Table 3.3: Prevalence of use of different tobacco products among adults (15 years and above) in the states of India, GATS-2 (2016–2017)**

Tobacco products	Overall prevalence (%)	Lowest prevalence (%)	Highest prevalence (%)
Any tobacco product	28.6	9.7 (Goa)	64.5 (Tripura)
Any smoking product	10.7	3.8 (Maharashtra)	34.4 (Mizoram)
Cigarettes	4.0	0.9 (Bihar)	29.1 (Mizoram)
<i>Bidis</i>	7.7	1.5 (Mizoram)	19.3 (Tripura)
Electronic cigarettes	0.02	0.02 (Bihar, Tamil Nadu, Puducherry)	0.57 (Delhi)
Smokeless tobacco (SLT)	21.4	3.1 (Himachal Pradesh)	48.5 (Tripura)
<i>Khaini</i>	11.2	0.7 (Kerala)	26.6 (Jharkhand)
<i>Gutkha</i>	6.8	0.4 (Jammu and Kashmir)	18.9 (Arunachal Pradesh)
Betel quid with tobacco	5.8	0.0 (Himachal Pradesh)	39.5 (Tripura)
Chewing tobacco	3.8	0.0 (Himachal Pradesh)	21.6 (Mizoram)
<i>Paan masala</i> with tobacco	2.8	0.1 (Tamil Nadu, Puducherry, Himachal Pradesh)	21.1 (Nagaland)
Snuff	0.6	0.0 (Punjab, Chandigarh, Uttarakhand, Chhattisgarh, Sikkim)	3.2 (Rajasthan)

**Figure 3.3. Prevalence of tobacco use among adults between 2010 and 2017**



Source: GATS-1 (2009–2010) and GATS-2 (2016–2017)

## Tobacco smoking practices

In the past, *bidis* were the most common form of smoked tobacco used in India,<sup>17</sup> followed by cigarettes, and this pattern has remained unchanged according to GATS-2.<sup>23</sup> Cigarettes are followed by other forms of smoked tobacco, such as *hookah*, cheroots and cigars. Traditional products, including *chillum*, *chutta* and *dhumti*, are also used, as in the past. *Bidis* are classified as unfiltered, hand-rolled cigarettes.<sup>24</sup> Gujarat and Maharashtra are the largest producers of *bidi* tobacco.<sup>24</sup> Cigarette smokers in India largely confine themselves to manufactured cigarettes, which are available in various sizes and may or may not have filters. The use of hand-rolled cigarettes has been reported from northeastern India.<sup>24</sup> Some smoking tobacco products and devices are restricted to specific regions of India. For example, *chutta*, a coarsely prepared roll of tobacco leaves, is smoked in the coastal areas of Andhra Pradesh, Tamil Nadu and Odisha.<sup>23–24</sup> *Dhumti*, a conical cigar made by rolling tobacco leaves in the leaves of another plant, is popular in Goa. *Chillum*, a conical pipe made of clay, is used for smoking tobacco predominantly in the northern states of India.<sup>23–24</sup> *Hookli*, a short clay pipe, is used to smoke tobacco mainly in Gujarat. A traditional method of smoking tobacco is through *hookahs* or *shishas*, which contain water through which the tobacco smoke passes before being inhaled.<sup>23–24</sup> *Hookahs* and *shishas* have been common in India since ancient times. Now, however, less than 1% of the population uses these, and that too, only in some states (GATS-2).

## Electronic nicotine delivery systems

Due to the health harms associated with tobacco use and the potential risk of future tobacco use, the Government of India (GoI) banned all electronic nicotine delivery systems (ENDS) in September 2019.<sup>25</sup> ENDS are battery-operated devices that heat (without burning) a liquid containing various chemicals, and generate

an aerosol that is inhaled by the user.<sup>26</sup> These products are available in a variety of shapes and sizes and are known by various names, such as e-cigarettes, *e-hookahs*, *e-shishas*, vape pens, pods and mods. The liquid typically contains nicotine, propylene glycol, glycerol, flavouring agents and other chemicals. Although the prevalence of e-cigarette use was reported as 0.02% among adults in general, as well as those in the age group of 15–24 years in GATS-2,<sup>23</sup> recent research conducted with a sample of 2037 urban school-going children in Delhi, Ahmedabad and Hyderabad reported ever ENDS use to be 4.12% and current ENDS use to be 2.2%.<sup>27</sup> This indicates the increasing popularity of these products among the youth despite the ban.<sup>27</sup>

## Smokeless tobacco

SLT is defined as all commercial or non-commercial products that contain tobacco, but are not ignited at the time of consumption. They may be consumed orally or nasally, and may or may not be mixed with other substances, such as sweetening agents, aromatic spices, areca nut and lime.<sup>28</sup> The consumption of *paan* (betel quid) with or without tobacco, has been a socially acceptable practice in India. The practice of offering betel quid to guests (as a mark of courtesy or respect) is a part of certain cultures in India. A betel quid typically contains areca nut, catechu (*kattha*), slaked lime, cinnamon, cardamom, sweeteners and exotic spices wrapped in a betel leaf. Some tobacco derivatives, such as *zarda* (flavoured, spiced tobacco) and *kiwam* (fermented thick paste made with tobacco leaf extract, spices and other additives), may also be added to a betel quid.<sup>24,28</sup> It has been observed that the traditional betel is gradually being replaced by manufactured products such as *paan masala* and *gutkha*.

*Khaini* (a mixture of sundried, flaked tobacco and slaked lime) is the most commonly used SLT product in India, the prevalence of its use among adults being 11.2%.<sup>29</sup> Though it is used all over India, it is the most popular in Jharkhand, Bihar,

Uttar Pradesh, Arunachal Pradesh, Assam and Maharashtra.<sup>23</sup>

*Gutkha* is the second most commonly used SLT product in India and the prevalence of its use is 6.8%.<sup>23</sup> It is a commercially prepared mixture of tobacco, slaked lime, catechu, areca nut and condiments, and is typically available in small plastic/aluminium sachets.<sup>29</sup> Numerous varieties of *paan masala*, with or without tobacco, are consumed in India. *Paan masala* is commercially prepared and packed in small plastic/aluminium sachets or tins.<sup>29</sup>

### Regional smokeless tobacco products

Mainpuri tobacco, a mixture of tobacco, slaked lime, finely cut areca nut, cloves, camphor and other aromatic substances, is popular in the Mainpuri district of Uttar Pradesh. *Mawa*, a mixture of the shavings of areca nut, slaked lime and tobacco, wrapped in cellophane paper is a popular product in Gujarat.

*Kharra*, a mixture of tobacco, areca nut, lime, catechu and other ingredients, is commonly used in eastern Maharashtra. *Dohra* is a wet mixture of tobacco, slaked lime, areca nut and other ingredients, such as catechu, peppermint and cardamom. It is primarily available in two varieties: (i) wet (shelf-life of a few days), and (ii) dry (shelf-life of a few months). *Dohra* is used in the Prayagraj, Jaunpur and Pratapgarh districts of eastern Uttar Pradesh.<sup>30,31</sup>

Tobacco preparations are used as a dentifrice in India.<sup>32</sup> Women in Maharashtra, Gujarat and Goa commonly use *mishri* (a roasted, powdered form of tobacco) to clean their teeth.<sup>33</sup> *Gul*, a pyrolysed powdered tobacco product that contains the ash of *tendu* leaves, is commonly used in many states of India.<sup>33</sup> *Bajjar/tapkeer*/dry snuff, a tobacco powder which may be scented or unscented and is applied nasally/orally, is used primarily in Maharashtra, Gujarat, Goa and eastern India. A tobacco product used commonly as a dentifrice in the eastern and central states of India is *gudakhu*, a paste-like preparation made of fine tobacco leaf

dust, *sheera* (molasses), lime and *gerumati* (red soil).<sup>33</sup> *Lal dant manjan* (red tooth powder) and creamy snuff (toothpaste) are marketed as dentifrices, but are known to cause tobacco addiction. People in Mizoram and Manipur gargle with tobacco water (*tuibur/hidakphu*), which is prepared by passing tobacco smoke through water.<sup>34</sup>

### Nicotine lozenges/candies/patches

Nicotine lozenges/candies are manufactured by certain pharmaceutical companies in India and marketed under different brand names. These are usually available in strengths of 2 mg and 4 mg. Though most of them are classified as therapeutic nicotine replacement products intended for tobacco cessation, addiction to these products has been reported.<sup>35</sup>

There are also transdermal nicotine patches (TNPs) which are used to help people stop smoking cigarettes and provide a source of nicotine that reduces the withdrawal symptoms experienced when smoking is stopped. This patch has several advantages: it delivers a steady supply of nicotine through the skin and into bloodstream for 18–24 hours and does not give users the buzz they may feel from gums and lozenges. Further, it is the easiest form to stop using when the cessation programme is completed.

### Conclusion

Findings from the GYTS and GATS suggest that there has been a reduction in the use of tobacco products among adolescents and adults over time. However, variations have been observed in the pattern of consumption of tobacco products and the prevalence of tobacco use between the genders, areas of residence and states. The factors associated with tobacco use are older age, male gender, residence in rural areas, relatively lower socioeconomic status and low levels of education. Interventions aimed at reducing the

## Key messages

- Despite the country's ongoing efforts to control the consumption of tobacco, its use is still rampant among adults and the youth. However, there has been a reported decrease in the use of cigarettes, *bidis* and SLT products between 2010 and 2017.
- As reported in GATS-2, *bidis* remain the most popular form of smoked tobacco, followed by cigarettes.
- There are wide variations across the states in the consumption of different tobacco products, both among youth and adults.
- Despite a complete ban on all ENDS products by the GoI since 2019, the popularity of these products is increasing among the youth, underscoring the need to strengthen the enforcement of the ban.
- The factors associated with tobacco use are older age, male gender, residence in rural areas, relatively lower socioeconomic status, and lower levels of education. Interventions aimed at reducing the prevalence of tobacco use must be designed to target people falling in these categories.

prevalence of tobacco use must be designed to target people falling in these categories. Further, there should be regular evaluation of compliance to the existing regulations and bans, and gaps in implementation must be addressed.

## REFERENCES

1. Perry CL, Eriksen M, Giovino G. Tobacco use: a pediatric epidemic. *Tob Control*. 1994;3(2):97–8. PMID: PMC1759328.
2. Tobacco Free Initiative, World Health Organization. Tobacco and youth in the South East Asian region. *Indian J Cancer*. 2002;39(1):1–33. PMID: 12931709.
3. Sinha DN, Gupta PC, Pednekar M. Tobacco use among students in Bihar (India). *Indian J Public Health*. 2004;48(3):111–17. PMID: 15709596.
4. Chatterjee N, Todankar P, Mandal G, Gupte H, Thawal V, Bhutia TS, et al. Factors associated with tobacco use in students attending local government schools in Mumbai, India. *Asian Pac J Cancer Prev*. 2016;17(12):5075–80. doi: 10.22034/APJCP.2016.17.12.5075.
5. Sreeramareddy CT, Kishore P, Paudel J, Menezes RG. Prevalence and correlates of tobacco use amongst junior collegiates in twin cities of western Nepal: a cross-sectional, questionnaire-based survey. *BMC Public Health*. 2008;8:97. doi: 10.1186/1471-2458-8-97.
6. Sinha DN, Gupta PC, Pednekar MS. Tobacco use among students in the eight North-eastern states of India. *Indian J Cancer*. 2003;40(2):43–59. PMID: 14716119.
7. Pednekar MS, Gupta PC. Tobacco use among school students in Goa, India. *Indian J Public Health*. 2004;48(3):147–52. PMID: 15709603.
8. Jaisooriya TS, Beena KV, Beena M, Jose DC, Ellangovan K, Thennarasu K, et al. Prevalence & correlates of tobacco use among adolescents in Kerala, India. *Indian J Med Res*. 2016;144(5):704–11. doi: 10.4103/ijmr.IJMR\_1873\_14.
9. Thakur SS, Sachdeva A, Singh HP, Barwal V. Prevalence and determinants of tobacco use among school going adolescents in a hilly district of Himalayan region in India. *Sch J Appl Med Sci (SJAMS)*. 2017;5(10D):4074–9. DOI: 10.21276/sjams.2017.5.10.52.
10. Janeswar A, Kumar G, Kanungo S, Singh A, Subramanya GB, Jha K. Prevalence patterns and profile of adolescent tobacco users findings from a youth survey: a cross-sectional study. *J Family Med Prim Care*. 2019;8(6):2017–22. doi: 10.4103/jfmpc.jfmpc\_219\_19.
11. George RM, Thomas T. Perceptions and practice of tobacco use among adolescents of Mangalore city. *J Indian Assoc Public Health Dent*. 2018;16:242–5. Available from: <https://www.jiaphd.org/text.asp?2018/16/3/242/238585>, accessed 7 October 2022.
12. Singh G, Sinha DN, Sarma PS, Thankappan KR. Prevalence and correlates of tobacco use among 10–12 year old school students in Patna district, Bihar, India. *Indian Pediatr*. 2005;42(8):805–10. PMID: 16141483.

13. Singh V, Gupta R. Prevalence of tobacco use and awareness of risks among school children in Jaipur. *J Assoc Physicians India*. 2006;54:609–12. PMID: 16941790.
14. Singh V, Pal HR, Mehta M, Kapil U. Tobacco consumption and awareness of their health hazards amongst lower income group school children in National Capital Territory of Delhi. *Indian Pediatr*. 2007;44(4):293–5. PMID: 17468526.
15. Dongre A, Deshmukh P, Murali N, Garg B. Tobacco consumption among adolescents in rural Wardha: where and how tobacco control should focus its attention? *Indian J Cancer*. 2008;45(3):100–6. doi: 10.4103/0019-509x.44065.
16. Sharma R, Grover VL, Chaturvedi S. Tobacco use among adolescent students and the influence of role models. *Indian J Community Med*. 2010;35(2):272–5. doi: 10.4103/0970-0218.66891.
17. Narain R, Sardana S, Gupta S, Sehgal A. Age at initiation & prevalence of tobacco use among school children in Noida, India: a cross-sectional questionnaire based survey. *Indian J Med Res*. 2011;133(3):300–7. PMID: 21441684.
18. Muttappallymyalil J, Divakaran B, Thomas T, Sreedharan J, Haran JC, Thanzeel M. Prevalence of tobacco use among adolescents in north Kerala, India. *Asian Pac J Cancer Prev*. 2012;13(11):5371–4. doi: 10.7314/apjcp.2012.13.11.5371.
19. Thakur D, Gupta A, Thakur A, Mazta SR, Sharma D. Prevalence of cigarette smoking and its predictors among school going adolescents of North India. *South Asian J Cancer*. 2014;3(4):193–5. doi: 10.4103/2278-330X.142946.
20. World Health Organization. Noncommunicable disease surveillance, monitoring and reporting. Global youth tobacco survey (GYTS); 2016. Available from: <http://www.who.int/tobacco/surveillance/gyts/en/>, accessed 7 October 2022.
21. International Institute for Population Sciences (IIPS) and Ministry of Health and Family Welfare (MoHFW). (2021). Global Youth Tobacco Survey (GYTS-4), India 2019: Report. Mumbai: IIPS.
22. National Family Health Survey. NFHS-4 Fact sheets for key indicators based on final data. International Institute for Population Sciences. Available from: [http://rchiips.org/nfhs/factsheet\\_nfhs-4.shtml#](http://rchiips.org/nfhs/factsheet_nfhs-4.shtml#), accessed 7 October 2022.
23. Tata Institute of Social Sciences. Global Adult Tobacco Survey 2, India 2016–17. TISS. Available from: <https://www.tiss.edu/view/11/research-projects/global-adult-tobacco-survey-round-2-for-india-2016/>, accessed 7 October 2022.
24. Gupta PC, Asma S, editors. *Bidi Smoking and Public Health*. New Delhi: Ministry of Health and Family Welfare, Government of India; 2008. Available from: <http://www.dphodisha.nic.in/sites/default/files/Download/Bidi%20Smoking%20and%20Public%20Health.pdf>, accessed 7 October 2022.
25. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage And Advertisement) Act, 2019. An Act to prohibit the production, manufacture, import, export, transport, sale, distribution, storage and advertisement; 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement\)-Act-2019.pdf](https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement)-Act-2019.pdf), accessed 7 October 2022.
26. World Health Organization. Electronic Nicotine Delivery Systems and Electronic Non-Nicotine Delivery Systems (ENDS/ENNDS); 2017. Available from: [https://www.who.int/publications/m/item/electronic-nicotine-delivery-systems-and-electronic-non-nicotine-delivery-systems-\(ends-ennds\)](https://www.who.int/publications/m/item/electronic-nicotine-delivery-systems-and-electronic-non-nicotine-delivery-systems-(ends-ennds)), accessed 7 October 2022.
27. HRIDAY. Electronic Nicotine Delivery Systems (ENDS) use and its correlate among school-going adolescents in India: Implications for global tobacco control (Unpublished).
28. Smokeless Tobacco and Public Health in India – WHO FCTC Secretariat's Knowledge Hub on smokeless tobacco. WHO FCTC Knowledge Hub. Available from: <https://extranet.who.int/fctcapps/fctcapps/fctc/kh/slt/news/smokeless-tobacco-and-public-health-india>, accessed 7 October 2022.
29. Gupta PC, Arora M, Sinha DN, Asma S, Parascandola M, editors. *Smokeless Tobacco and Public Health in India*. New Delhi: Ministry of Health and Family Welfare, Government of India; 2016. Available from: [https://nhm.gov.in/NTCP/Surveys-Reports-Publications/Smokeless\\_Tobacco\\_and\\_Public\\_Health\\_in\\_India.pdf](https://nhm.gov.in/NTCP/Surveys-Reports-Publications/Smokeless_Tobacco_and_Public_Health_in_India.pdf), accessed 7 October 2022.
30. Dobe M, Sinha DN, Rahman K. Smokeless tobacco use and its implications in WHO South East Asia Region. *Indian J Public Health*. 2006;50(2):70–5. PMID: 17191408.
31. Sharma V, Nandan A, Shukla AK, Chandra A, Kaushik R, Sinha DN, et al. Dohra – a mixture of potent carcinogens. *Indian J Med Res*. 2018;148(1):116–19. doi: 10.4103/ijmr.IJMR\_39\_18.
32. Sinha DN, Gupta PC, Pednekar MS. Use of tobacco products as dentifrice among adolescents in India: questionnaire study. *BMJ*. 2004;328(7435):323–4. doi: 10.1136/bmj.328.7435.323.
33. Commonly used smokeless tobacco products around the globe – WHO FCTC Secretariat's Knowledge Hub on smokeless tobacco. WHO FCTC Knowledge Hub. Available from: <https://untobaccocontrol.org/kh/smokeless-tobacco/paan-betel-quid-tobacco/#mishri>, accessed 5 February 2021.

34. Sinha DN, Gupta PC, Pednekar M. Tobacco water: a special form of tobacco use in the Mizoram and Manipur states of India. *Natl Med J India*. 2004;17(5):245–7. PMID: 15638304.
35. Wadgave U, Nagesh L. Nicotine replacement therapy: an overview. *Int J Health Sci (Qassim)*. 2016;10(3):425–35. PMID: 27610066.





---

# Health consequences of tobacco and nicotine use

---

4.0: Introduction Prakash C. Gupta, Cecily S. Ray	35	4.6: Tobacco and reproductive outcomes Prakash C. Gupta, Cecily S. Ray	59
4.1: All-cause mortality and tobacco use in India Prakash C. Gupta, Cecily S. Ray	39	4.7: Tobacco-induced oral diseases Prakash C. Gupta, Stuti S. Bhargava, Cecily S. Ray	61
4.2: Tobacco and cancer Prakash C. Gupta, Cecily S. Ray	41	4.8: Green tobacco sickness Prakash C. Gupta, Cecily S. Ray	64
4.3: Tobacco and risk of cardiovascular and metabolic diseases Prakash C. Gupta, Cecily S. Ray	51	4.9: Health effects of electronic nicotine delivery systems Prakash C. Gupta, Cecily S. Ray	65
4.4: Tobacco smoking and lung disease Prakash C. Gupta, Cecily S. Ray	53	4.10: Tobacco, alcohol, drugs: Interlinkages Prakash C. Gupta, Stuti S. Bhargava, Cecily S. Ray	67
4.5: Tobacco smoking and pulmonary tuberculosis Prakash C. Gupta, Cecily S. Ray	55	4.11: Research gaps in health effects of tobacco in India Prakash C. Gupta, Manu Raj Mathur, Cecily S. Ray	69





## 4.0: Introduction

There is considerable evidence that every organ of human body is adversely impacted by tobacco use. By 2004, sufficient evidence had been gathered and shown in the reports of the US Surgeon General, an internationally respected authority on the health consequences of tobacco smoking, to infer a causal relationship between smoking and ten cancers, cardiovascular diseases, respiratory diseases (chronic obstructive pulmonary disease [COPD] and pneumonia) and adverse reproductive effects, periodontitis and cataract. The 2014 US Surgeon General Report had newer findings with sufficient evidence for smoking causing diabetes mellitus, increased risk for tuberculosis (TB), impaired fertility and erectile dysfunction, ectopic (tubal) pregnancy, cleft lip and palate in babies of women who smoke in early pregnancy, as well as some other diseases (age-related macular degeneration, rheumatoid arthritis, and immune system weakness). It also showed that exposure to second-hand smoke (SHS) causes strokes in non-smokers.<sup>1</sup>

Studies conducted in India up to 2004 were described in the first edition of the *Report on Tobacco Control in India*.<sup>2</sup> They showed evidence that the major diseases caused by tobacco use in India were respiratory diseases including TB, vascular diseases and cancers. This updated report presents the ever-growing evidence from India published with few exceptions between 2004 and 2021 on the adverse health consequences of tobacco smoking as well as of now common smokeless tobacco (SLT) use.

New topics in this chapter include metabolic diseases, the health effects of electronic nicotine delivery system (ENDS), the effects of interactions of tobacco with different drugs used with it, including areca nut, alcohol, cannabis and opium. A section on research gaps closes the chapter.

Studies show that the lower socioeconomic groups are generally the most affected by tobacco-related diseases; this is reflected by more prevalent tobacco use among them.<sup>3</sup> Worksite and occupational studies, such as oral screening for precancerous lesions and conditions, have revealed occupational patterns of tobacco use and disease.

Psychological distress can be associated with tobacco use, either as a reason for use or as an effect. Substance use, including tobacco use has increased among many migrant workers who lost their jobs during the COVID-19 pandemic in India.<sup>4</sup> Smokers, being more vulnerable to COVID-19 infection, have tended to experience more severe disease and greater risk of death than non-users. Awareness of these facts has motivated some smokers to quit during the pandemic,<sup>5</sup> which also increased the calls to helplines with intentions to quit.<sup>6</sup>

A section-wise summary of the chapter is given below showing that tobacco causes many diseases. Some studies published before 2004 on exposure to environmental tobacco smoke (ETS) are also included as this topic was not covered in the earlier report.

## 1. Tobacco use and all-cause mortality

- New evidence shows that smokers have 31% to 55% higher risks of premature death than non-smokers due to all causes, in cohort studies from Mumbai and from Thiruvananthapuram.
- The risk of premature death was found to be higher in younger smokers as they had started smoking earlier and smoked more cigarettes or *bidis* per day than older smokers in the Mumbai cohort study – this shows the progression of the smoking epidemic in India.
- SLT users have a 30% higher likelihood of premature death, according to a population-based case-control study conducted among never smokers in Chennai and Villupuram district.

## 2. Tobacco use and cancer

- Cancers of the mouth and throat, oesophagus, pancreas, larynx, hypopharynx, stomach and lung were found caused by tobacco use in six new large population-based follow-up studies one in Mumbai and five in Karunagapally, Kerala.
- Among these cancers, lung cancer, hypopharynx and stomach cancers were found to be caused by smoking only. The others were caused by either smoking or SLT use.
- Tobacco use greatly increased the likelihood of having cancers, including of head and neck, oral cavity, larynx, hypopharynx, oesophagus, stomach, and lung, in 15 new hospital-based case-control studies that compared cancer patients with people without cancer.
- *Bidi* smoking emerged as a risk factor for cancer at least as strong as cigarette smoking and sometimes higher in all studies that included some *bidi* smokers.
- An association between ETS exposure and lung cancer was found in a review of studies in India and elsewhere.

## 3 Tobacco use, cardiovascular diseases (CVDs) and diabetes

- Smoking was significantly associated with CVDs in four new studies: two longitudinal studies and two case-control studies.
- Type 2 diabetes is a metabolic disorder that is a risk factor for CVDs.
- A definite association of tobacco with diabetes associated disability and death in India was reported by the Global Burden of Disease study.
- Self-reported diabetes was 3 times higher among smokers than non-smokers in the Demographic and Health Survey (2015–2016) for India.

## 4. Tobacco use and lung disease

- Smoking was associated with COPD or its symptoms (decreased lung function symptoms), or with asthma in four new cross-sectional studies (one on waterpipe smoking from Kashmir, one from Delhi and two from across India). ETS exposure was also associated with decreased lung function, COPD or asthma in three of these studies.
- An association between ETS exposure and reduced lung function or asthma, including in women or children was also shown in a review published in 2002 that lists several studies from India (cross-sectional and case-control) as well as some from other countries.
- Tobacco smokers infected with COVID-19 tend to have greater disease severity and negative outcomes than non-smokers.
- Vapers infected with COVID-19 tend to have more disease symptoms than non-users.

## 5. Tobacco use and tuberculosis (TB)

- An association between tobacco smoking and TB was found in 12 new studies: 2 cohort studies, 1 nationally representative case-control study, 6 hospital-based case-control studies and 3 cross-sectional studies.
- Exclusive SLT use significantly raised the likelihood of death due to TB in 2 new population-based studies (1 follow-up and 1 case-control).
- If cured TB patients smoked, they were more likely to have a recurrence/relapse of the disease, according to 2 new studies.
- SHS exposure in children 1–14 years increased the likelihood of them having tuberculosis (pulmonary or extrapulmonary) according to 2 new case-control studies – 1 community-based and 1 hospital-based.

## 6. Tobacco use and adverse reproductive outcomes

- SLT use by women in pregnancy can lead to: Anaemia, low birth weight (LBW) or stillbirth.
- *Bidi* rolling in pregnancy can lead to: LBW and poor growth in the first 3 years of childhood.
- Smoking during pregnancy can lead to: LBW, gestational diabetes mellitus or maternal mortality.
- Exposure to ETS at home or in the workplace during pregnancy can lead to: Stillbirth or LBW.
- For women trying to become pregnant, exposure to ETS can delay their conception.
- Men who use tobacco in any form are more likely to be infertile.

## 7. Tobacco-induced oral lesions and conditions

- Greater severity of periodontitis was found in smokers and tobacco chewers in a cross-sectional survey.
- Significant associations of oral lesions/conditions with tobacco use, and where relevant also with areca nut and alcohol were shown in seven cross-sectional studies in various populations.
- Oral submucous fibrosis (OSF) prevalence was high (6.3%) among habitual *gutkha* and areca nut chewers in a survey.
- High prevalence of tobacco-induced precancerous oral lesions was found among workers with high prevalence of tobacco use and other substances in four worker screening surveys. Other oral conditions were also found.
- A high prevalence of tobacco-induced oral lesions and conditions, with highest prevalence among the elderly was found in four studies on dental outpatients (one on teenagers, three on the elderly).
- A yearly increase in the use of areca nut-based products and in the prevalence of OSF was found in a study on dental outpatients of all ages, including children. The highest prevalence of OSF was found among the youngest patients (15–34 years) in one study.
- Oral screening can accompany tobacco cessation programmes, to monitor regression of lesions and conditions.

## 8. Green tobacco sickness (GTS)

- Among 685 agricultural workers exposed to tobacco plants in the field in a study in Anand district of Gujarat, 47% had GTS, which include headache, nausea, vomiting and weakness.
- Women tend to be more affected than men and children more than adults.
- This condition can be prevented by wearing protective clothing, which is rarely provided, or by stopping the cultivation of tobacco.

## 9. ENDS – Health effects

- ENDS, also known as e-cigarettes and vaping products, came in the market in India in 2007.
- The sale of such products to youth began to increase rapidly and schools in Delhi became surrounded by vape shops.
- While ENDS do not contain tobacco leaves nor are burnt, they contain nicotine that is vaporized using a battery and are sometimes used by adults in the hope of quitting smoking. However, ENDS use causes harm as described: ENDS users often experience coughing, sore throat, asthma, dehydration and fatigue. Some also have headaches and other symptoms of nicotine toxicity such as nausea and vomiting, difficulty in concentrating, seizures, heart palpitations, arrhythmia and high blood pressure.
- Abnormal brain development can result from ENDS use in youth.
- ENDS have been banned in India since September 2019 in view of their potential harms and their rising popularity among youth.

## 10. Tobacco and drugs/alcohol interlinkages

- Many people combine tobacco use with another addictive substance, such as areca nut, alcohol, cannabis or opium, which increases the risk of harmful effects.
- Use of two or more substances causes a stronger addiction to both or all substances.
- The greater addiction due to dual or multiple substance use causes greater exposure to these substances which increases their respective harms. Thus, users of tobacco in addition to another drug have higher risks of cancer, CVD and type 2 diabetes, and adverse reproductive outcomes.
- Concurrent use of other substances needs to be taken into consideration in research studies on health effects of tobacco.

## 11. Research gaps

- Given that the youth of India tend to be aware of and often use novel tobacco products, the health community in India needs to inform itself and keep up to date about global research results on the health hazards of widely used novel products such as ENDS, which tend to be sold illegally.
- Trends in the use of novel products also need to be monitored.
- Researchers in India need to study the effects of electronic and traditional *hookahs* as well as tobacco-mimicking products such as herbal cigarettes and tobacco-free mixtures for *hookahs*.
- SLT is sold and consumed in many forms and portion sizes used may differ. This could be taken into consideration when designing new studies.
- Studies in India are needed to discover any linkages of SLT with CVD and diabetes and with certain cancers, such as of the pancreas.
- Studies on the effectiveness of cessation strategies for SLT would also be useful.
- More large population-based studies are needed to provide stronger evidence on the adverse health impacts of consuming tobacco in its many forms and those of SHS or ETS and tobacco smoke deposited on indoor surfaces as well, also called third-hand smoke.

## 4.1: All-cause mortality and tobacco use in India

The earlier Report On Tobacco Control in India<sup>2</sup> showed that tobacco use, especially smoking, is responsible for many premature deaths from all causes in India. Further results are presented here.

### Cohort studies linking tobacco use with all-cause mortality

After 5.5 years of follow-up of a cohort of 97,244 Mumbai residents aged 35 years and above, originally interviewed during 1992–1994, SLT users had statistically significant higher risks of premature death due to any cause than never tobacco users. Women SLT users had a 25% higher risk of death from all causes, as shown by the age- and education-adjusted relative risk (RR=1.25) of early death. Men SLT users had a 16% higher risk (RR=1.16). Since smoking among women was uncommon, the RR for death among smokers was not significantly elevated. However, men who smoked in any

form had a 55% greater risk of death than never tobacco users (RR=1.55). Specifically, men who smoked cigarettes had a 37% higher risk (RR=1.37) and men who smoked *bidis* had a 64% higher risk (RR=1.64).<sup>7</sup>

A more recent analysis of Mumbai cohort study data showed that in successive birth cohorts (groups of adults born in specific time periods and followed up over time) among the participants, the excess risks of death (expressed as hazard ratios – HRs) due to all causes among current smokers increased rapidly among both men and women, although for women they did not reach significance due to the few smokers among them. For men, the increase in risk due to smoking was higher (HRs from 1.09 to 1.45) (Table 4.1). This meant that the younger participants started smoking at earlier ages and were smoking more frequently per day, showing the evolution of the smoking epidemic.<sup>8</sup>

**Table 4.1: Risk of death associated with tobacco smoking by birth cohorts on data collected on 138,179 individuals aged ≥35 years during 1991–1997 and followed up for an average of 5.5 years in the Mumbai Cohort study<sup>8</sup>**

Current smoker vs. never smoker	No. of participants	Born before 1920		Born between 1920 and 1929		Born during or after 1930	
		No. of deaths	HR (95% CI)*	No. of deaths	HR (95% CI)*	No. of deaths	HR (95% CI)*
Male	79,705	1,059	1.09 (0.92–1.28)	1,981	1.18 (1.06–1.30)	4,242	1.45 (1.36–1.54)
Female	58,474	553	0.93 (0.44–1.99)	925	1.28 (0.68–2.38)	1,539	1.30 (0.72–2.36)

\*Adjusted for age, educational level, marital status, rural or urban residence, and body mass index and stratified by 5-year groups of the birth year and enrolment year. Significance was not reached for HRs for females as there were few women smokers, although a similar trend was seen.

HR: hazard ratio

In a large cohort study conducted in 13 *panchayats* of rural Thiruvananthapuram district in Kerala with 167,343 adults, aged 34 years and above, who were first surveyed during 1996–1998 and later followed up in two rounds during 1999–2001 and 2002–2004, ever smoking of cigarettes or *bidis* was associated with a 95% excess risk of death due to any cause if adjusted only for age and a 31% excess risk of death (HR=1.31; 95% CI 1.24–1.39), after adjustment for sex, age, chewing habits, smoking habits, alcohol consumption, occupation, education level, vegetables intake, fruits intake, equipment, study group and religion. However, the HR for all-cause mortality for chewing substances that included tobacco (mainly betel quid) was not elevated, even when adjusted only for age.<sup>9</sup>

### **A case-control study on smokeless tobacco users and mortality**

In a large population-based case-control study in both Chennai city and the rural Villupuram district of Tamil Nadu, with 22,460 deaths (all

lifelong non-smokers and non-drinkers) aged 35–69 years at the time of death and 429,306 controls aged 35–69 years at the time of the survey,<sup>10</sup> the odds or likelihood of death was 30% higher among SLT users compared to non-users, after adjustment for age and education (odds ratio [OR]=1.3), with slightly higher ORs among women and those in rural populations.

### **Estimate of deaths due to smokeless tobacco use in India**

An estimate of all deaths from SLT use in India was made<sup>11</sup> with a meta-analysis that used mortality risk data from four early cohort studies and one large case-control study, prevalence estimates of SLT use from the Global Adult Tobacco Survey (GATS),<sup>12</sup> and numbers of deaths from UN estimates. A total of 368,127 excess deaths was estimated to have occurred in 2008 due to SLT use among non-smokers aged 35 years and above in India, among whom nearly three-fifths were women. The article states at the end that the studies included in the meta-analysis clearly demonstrate the need for further research.

### **Key messages**

- Tobacco smokers have higher risks of early death from any-cause (between 31% and 55% in different studies).
- SLT users who do not smoke or drink also have higher risks of early death (about a 30% excess risk) due to SLT use alone.



## 4.2: Tobacco and cancer

High levels of carcinogens in tobacco products make tobacco use highly likely to cause cancer. Areca nut use contributes further carcinogens. In the evaluation of the carcinogenicity of various forms of tobacco and betel quid use by the International Agency for Research on Cancer (WHO), the following causal relationships were established based on studies from across the world<sup>13</sup>.

- Tobacco smoking causes cancers of the lung, oral cavity, naso-, oro- and hypopharynx, nasal cavity and paranasal sinuses, larynx, oesophagus, stomach, pancreas, colorectum, liver, kidney (body and pelvis), ureter, urinary bladder, uterine cervix, ovary (mucinous), and bone marrow (myeloid leukaemia). Parental smoking causes hepatoblastoma in children and childhood leukaemia.
- Second-hand tobacco smoke causes cancer of the lung.
- SLT products cause cancers of the oral cavity, oesophagus and pancreas.
- Betel quid with tobacco causes cancers of the oral cavity, pharynx and oesophagus.
- Betel quid without tobacco causes cancer of the oral cavity and oesophagus.

The National Cancer Registry Programme presently considers the following sites related to tobacco: lip, tongue, mouth, oropharynx, hypopharynx, pharynx, oesophagus, larynx, lung and urinary bladder – basically head and neck

cancers plus lung and urinary bladder.<sup>14</sup> Data reported from the 27 population-based cancer registries in India during 2012–2014 show that the proportion of cancers at tobacco-related sites among all cancers ranged from 24.4% to 54.5% in men and from 6.9% to 42.3% in women.

In 2016, tobacco was responsible for 10.9% of total cancer disability-adjusted life years (DALYs) in India.<sup>15</sup>

### Cohort studies on cancer and tobacco use

Two cohort studies on mortality in India, one in Thiruvananthapuram<sup>16</sup> and another analysis of the Mumbai cohort study on cancer incidence<sup>17</sup> have shown a strong relationship between tobacco use and cancer (Table 4.2a).

Five reports from a rural cohort study on cancer incidence in the rural Karunagapally subdivision of Kollam district, Kerala<sup>18–22</sup> (Table 4.2b) have shown significantly high risks of cancer for smoking.

In all these cohort studies, *bidi* smoking emerged as a risk factor for cancer at least as strong as cigarette smoking. The fact that cigarette smoking did not always show a significant risk, is perhaps due to the fact that cigarette smokers tend to smoke less frequently than *bidi* smokers, probably due to the higher cost involved for cigarettes.

**Table 4.2: Major results of cohort studies on cancer incidence by site and tobacco use by type in Mumbai and Karunagapally**

Reference, place and follow-up; participants; person-years	Cancer site	Sex	Tobacco use categories	Cancer cases	Risk measure	95% CI	Comments
Table 4.2a Pednekar et- al. (2011); <sup>17</sup> Mumbai, Maharashtra; 5.5 years follow-up during 1997–2003; 88,658 men aged 35 years and above; 649,228 person-years	All cancers	M	Never tobacco Smokeless Smoking <i>Bidi</i> Cigarette	273 476 518 295 223	HR 1.00 1.20 2.00 2.11 1.92	Ref. 1.03–1.41 1.72–2.32 1.77–2.53 1.60–2.29	HRs adjusted for age, education, religion, mother tongue and body mass index
	Lip, oral cavity and pharynx	M	Never tobacco Smokeless Smoking <i>Bidi</i> Cigarette	44 107 136 89 47	1.00 1.48 3.03 3.55 2.50	Ref. 1.03–2.13 2.14–4.29 2.40–5.24 1.65–3.78	
	Oesophagus	M	Never tobacco Smokeless Smoking <i>Bidi</i> Cigarette	7 36 40 22 18	1.00 3.65 5.75 5.46 5.72	Ref. 1.59–8.38 2.54–12.98 2.23–13.58 2.38–13.76	
	Pancreas	M	Never tobacco Smokeless Smoking <i>Bidi</i> Cigarette	5 15 17 7 10	1.00 1.95 3.86 2.92 4.66	Ref. 0.68–5.54 1.40–10.66 0.85–10.02 1.58–13.71	

Reference, place and follow-up; participants; person-years	Cancer site	Sex	Tobacco use categories	Cancer cases	Risk measure	95% CI	Comments
Table 4.2b Jayalekshmi et al. (2008); <sup>18</sup> Karanagapally, Kerala; 7.6 years average follow-up during 1997–2004 of 65,829 men aged 30–84 years; 501,508 person-years	Larynx	M	Never tobacco	9	1.00	Ref.	
			Smokeless	26	1.86	0.85–4.06	
			Smoking	40	4.33	2.07–9.05	
			<i>Bidi</i>	28	6.10	2.72–13.69	
			Cigarette	12	2.87	1.21–6.85	
	Lung	M	Never tobacco	17	1.00	Ref.	
			Smokeless	34	1.59	0.87–2.90	
			Smoking	65	4.05	2.35–7.00	
			<i>Bidi</i>	41	4.69	2.56–8.59	
			Cigarette	24	3.48	1.86–6.52	
Jayalekshmi et al. (2009); <sup>19</sup> Karanagapally, Kerala; follow-up during 1990–2005 of 78,140 women aged 30–84 years; 921,051 person-years	Lung	M	Total	212	RR	–	Regression analyses were stratified by attained age, religion and education
			<i>Bidi</i> smoking:				
			Never	27	1.0	Ref.	
			Current	143	3.9	2.6–6.0	
			Exclusive <i>bidi</i> smokers	60	4.6	2.5–8.5	
	Oral cavity	F	Exclusive cigarette	9	1.4	0.6–3.3	Regression analyses were stratified by age, and family income
			Exclusive chewing	3	0.8	0.2–2.8	
			Total	92	RR		
			Tobacco chewing:				
			Never	25	1.0	Ref.	
			Current	53	5.5	3.3–9.0	

Reference, place and follow-up; participants; person-years	Cancer site	Sex	Tobacco use categories	Cancer cases	Risk measure	95% CI	Comments
Jayalekshmi et al. (2011); <sup>20</sup> Karunagapally, Kerala; follow-up during 1990–2005 of 66,277 men aged 30–84 years; 769,202 person-years	Oral cavity	M	Total	160	RR		Regression analyses were stratified by attained age, calendar time, income, and education
			Tobacco chewing (among never <i>bidi</i> smokers):			Ref.	
			Never			3.0–9.0	
			Current	18	1.0		
			<i>bidi</i> smoking:	37	5.4	Ref.	
			Never			1.4–4.9	
			Current	18	1.0		
			exclusive	38	2.6		

Reference, place and follow-up; participants; person-years	Cancer site	Sex	Tobacco use categories	Cancer cases	Risk measure	95% CI	Comments
Jayalekshmi et al. (2013); <sup>21</sup> Karunagapally, Kerala; follow-up during 1990–2009 of 65,553 men aged 30–84 years; 900,720 person-years	Hypopharynx	M	Total	52	RR		Regression analyses were stratified by attained age, income and education
			<i>Bidi</i> smoking: Never		1.0	Ref.	
	Current	4.0	1.8–9.0				
	Larynx		Cigarette smoking: Never	85	1.0	Ref.	
			Current		1.6	0.9–2.8	
			<i>Bidi</i> smoking: Never		1.0	Ref.	
			Current		5.5	2.8–10.8	
			Cigarette smoking: Never		1.0	Ref.	
			Current		1.7	1.1–2.7	
	Stomach	M	Total	116	RR		Regression analyses were stratified by attained age, calendar time, occupation and education
<i>Bidi</i> smoking: Never			1.0		Ref.		
Current			1.6		1.0–2.5		
Cigarette smoking: Never							
Current			1.0		Ref.		
			0.8		0.5–1.2		

HR: hazard ratio; RR: relative risk; CI: confidence interval; M: male; F: female; Ref.: reference group

## Case-control studies on cancer and tobacco use

A large population-based case-control analysis of about 22,000 deceased individuals and 429,000 living controls among non-smokers and non-drinkers in rural (Villupuram) and urban (Chennai) Tamil Nadu<sup>23</sup> revealed that men who chewed tobacco had about twice the likelihood of dying of upper aerodigestive (i.e. head and neck) cancers compared to non-users:  $OR_{urban}=2.2$ ;  $OR_{rural}=1.9$ . Women who chewed tobacco had somewhat higher likelihoods than men  $OR_{urban}=2.7$ ;  $OR_{rural}=3.8$ . For deaths due to stomach cancer, both men and women tobacco chewers were around twice more likely to die of it compared to non-tobacco users, with the

exception of rural woman tobacco chewers who were only 1.4 times more likely to die of stomach cancer compared to non-tobacco users. Women tobacco chewers also had twice the likelihood for cervical cancer for SLT use (urban:  $OR=2.0$ ; rural:  $OR=2.2$ ). ORs in this study were adjusted for age and education.

Several hospital-based case-control studies on cancer and its relationship with tobacco use are listed by cancer site in Table 4.3.<sup>24–37</sup> One study on lung cancer published in 2003<sup>36</sup> is included because that was not mentioned in the 2004 report. All these studies show significantly elevated ORs for cancers for use of different forms of tobacco (Table 4.3). Further details can be found in the respective articles.

**Table 4.3: Hospital based case-control studies in men and women on cancer and tobacco use in India published since 2004, by cancer site in chronological order**

Cancer site	Participants and study location	Exposures: Main risk factors found	Greater likelihood, measured as OR for exposure*	Reference
Head and neck	110 cases; 110 controls Kolkata, West Bengal	Former tobacco use Current tobacco use	1.93 2.17	Basu et al. (2008) <sup>24</sup>
Oral cavity	388 cases; 388 controls Chidambaram, Tamil Nadu	Betel quid without tobacco Tobacco chewing Betel quid with tobacco <i>Bidi</i> smoking Cigarette smoking All smoking (Current users)	2.2 2.9 3.2 4.6 2.3 3.6	Subapriya et al. (2007) <sup>25</sup>
Oral cavity	282 cases; 1410 controls Thiruvananthapuram, Kerala	Betel quid with tobacco Betel quid without tobacco <i>Bidi</i> smoking (Ever users)	5.4 3.5 1.9 (men)	Muwonge et al. (2008) <sup>26</sup>
Oral cavity	350 cases; 350 controls Pune, Maharashtra	<i>Gutkha</i> Chewing tobacco <i>Supari</i> <i>Bidi</i> <i>Mishri</i> (Ever users)	12.8 8.3 6.6 4.1 3.3	Madani et al. (2012) <sup>27</sup>

Cancer site	Participants and study location	Exposures: Main risk factors found	Greater likelihood, measured as OR for exposure*	Reference
Oral cavity	134 cases; 268 controls Manipal, Karnataka	<i>Gutkha</i> use Chewing tobacco <i>Supari</i> (areca nut) Betel quid <i>Bidi</i> smoking Alcohol drinking	5.1 6.0 11.4 6.4 2.3 3.7	Mahapatra et al. (2015) <sup>28</sup>
Oral cavity	187 cases; 240 controls Pune, Maharashtra	Tobacco chewing Smoking (Ever users)	8.5 2.0	Gupta et al. (2017) <sup>29</sup>
Oral cavity	58 cases; 58 controls Dibrugarh, Assam	Tobacco chewing Betel quid with tobacco Smoking (Ever users)	6.1 20.5 3.6	Chetia and Baruah (2020) <sup>30</sup>
Larynx	305 cases; 305 controls New Delhi	Smoking Betel quid and tobacco (Current users)	4.5 2.4	Kapil et al. (2005) <sup>31</sup>
Larynx	511 cases; 718 controls Ahmedabad, Gujarat	Smoking (Ever users)	5.3-8.2 (for different parts of the larynx)	Sapkota et al. (2007) <sup>32</sup>
Hypopharynx	513 cases; 718 controls Ahmedabad, Gujarat	Smoking Tobacco Chewing (Never smokers) Snuff use (Never smokers) (Ever users)	5.7 3.2 2.9	Sapkota et al. (2007) <sup>32</sup>
Oesophagus	442 cases; 1628 controls Mumbai, Maharashtra	Cigarette smoking <i>Bidi</i> smoking Tobacco chewing alone <i>Paan</i> with tobacco chewing (Current users)	2.0 1.8 NS 1.3	Ganesh et al. (2009) <sup>33</sup>
Oesophagus	200 cases; 200 controls Jammu, Jammu and Kashmir	Snuff use Smoking (Current users)	3.9 2.0	Seghal et al. (2012) <sup>34</sup>



Cancer site	Participants and study location	Exposures: Main risk factors found	Greater likelihood, measured as OR for exposure*	Reference
Stomach	329 cases; 665 controls Aizawl, Mizoram	Cigarette smoking Meiziol smoking Meiziol and cigarette smoking Tobacco chewing alone Betel quid with tobacco Tuibur use (Current users)	1.2 2.2 3.1 2.6 2.0 2.1	Phukan et al. (2005) <sup>35</sup>
Lung	778 cases; 3430 controls Chennai, Tamil Nadu and Thiruvananthapuram, Kerala	Cigarette smoking <i>Bidi</i> smoking Mixed <i>bidi</i> and cigarette smoking (Current smokers)	3.8 5.3 9.1	Gajalakshmi et al. (2003) <sup>36</sup>
Lung	408 cases (men only); 1383 controls (men only) Mumbai, Maharashtra	Cigarette smoking <i>Bidi</i> smoking (Ever smokers)	5.2 8.3	Ganesh et al. (2011) <sup>37</sup>

Odds ratios (ORs) are generally adjusted for confounding variables such as socio-demographics (if not matched) and other risk factors (e.g. other forms of tobacco use, areca nut, alcohol, diet); if ORs were not adjusted, the cases and controls were at least matched on basic demographic variables. In general, ORs increased with frequency and duration of substance use and with combined use of chewing smoking and alcohol drinking.

BQ: betel quid

\*All ORs in the table are statistically significant

An important finding in two studies is the high likelihood of oral cancer posed by *gutkha* as well as by *supari*, i.e. areca nut.<sup>27,28</sup> A study on a series of cancer cases of upper-aero digestive cancer in Mumbai found that among 747 patients, patients with chewing as the only habit had the oral cavity as the most common site, whereas patients with smoking as the only

habit had larynx and oropharynx as the most common sites. Tongue was the most common site for non-tobacco users.<sup>38</sup>

A case study of a young *gutkha* chewer, Mukesh Harane, who developed oral cancer after one year of use, and became the voice of a media campaign, is presented here (Box 4.1).

#### BOX 4.1: Case study – *Gutkha* chewer: Mr. Mukesh Harane

Mr. Mukesh Harane, a young matriculate from Bhusawal, Maharashtra, the breadwinner for his family, had chewed *gutkha* for one year, despite warnings from his mother. He then developed oral cancer and lost his voice. With his consent while under treatment at Tata Memorial Hospital, Mumbai, in 2009, he participated in the Surgeon Campaign. However, he could not be saved and soon after the campaign was aired, he died on 27 October 2009. Afterwards, with the consent of his family, he became the face of the Mukesh Campaign requested by the Health Ministry to counter *gutkha* and SLT use, which was aired in 2011.<sup>39,40</sup>



#### Studies on passive smoking and cancer

Although few in number, studies conducted in India show a relationship between SHS and cancer in the exposed persons. For example, a case-control study conducted in Chandigarh found that lung cancer patients were more likely than controls to have a history of exposure to SHS, especially from parents.<sup>41</sup> Several more studies also found this relationship of lung cancer and passive smoking in a review.<sup>42</sup> A later case series of 100 women with breast cancer in Delhi found that 23 patients who had been exposed to SHS had an earlier age at presentation ( $45.7 \pm 11.9$  years) than those unexposed

( $53.1 \pm 11.5$  years), which hints at the possibility of causality.<sup>43</sup> There is also some initial evidence from Chandigarh that passive smoking plays a role in causing cervical cancer, in some women infected by human papillomavirus (HPV).<sup>44</sup>

#### Estimated yearly number of new cancer cases due to SLT use in India

A systematic review and meta-analysis of 72 cohort and case-control studies from India, published between 1955 and 2014, estimated the numbers of cancers attributable to SLT use in one year to be 49,192 for mouth (60% of all

oral cancers), 14,747 for pharynx (51% of all pharyngeal cancers), 11,825 for larynx (40% of all laryngeal cancers), 14,780 for oesophagus (35% of all oesophageal cancers), and 3101 for stomach (8% of all stomach cancers). This means around 93,645 new cancers per year (about 42.2% of all cancers at those sites) attributable to SLT use in India for the year 2010.<sup>45</sup>

## Probability of developing tobacco-related cancer in India

The probability of individuals in India developing tobacco-related cancer at age 35 years and above was estimated to be 4.75% for men and 2.16% for women in 2011, based on data from 12 population-based cancer registries and the Sample Registration System.<sup>46</sup>

### Key messages

- In all studies, *bidi* smoking emerged as a risk factor for cancer at least as strong as cigarette smoking and sometimes higher: smoking causes cancer of the lung, hypopharynx, larynx, oesophagus, pharynx, oral cavity, pancreas and stomach.
- SLT use is a risk for cancers mainly of the oral cavity, pharynx, oesophagus and larynx.

## 4.3: Tobacco and risk of cardiovascular and metabolic diseases

Cardiovascular diseases (CVDs) include all diseases of the heart and blood vessels, such as coronary heart disease, angina, heart attacks and stroke. Together they are the number one cause of adult deaths in India.

Metabolic disorders, such as high blood sugar and diabetes, are also risk factors for CVD. Metabolic disorders and CVDs have some common risk factors, including tobacco use.<sup>47</sup> In 2019, the Global Burden of Disease (GBD) study showed that metabolic disorders, which are increasing in India and globally, accounted for 27.5 million DALYs in India.<sup>48</sup>

The main risk factors for CVD are categorized as metabolic, behavioural, environmental, and social – all of which are modifiable, an important behavioural one being tobacco. In 2020, tobacco ranked sixth in the list of modifiable risk factors in terms the CVD burden it causes worldwide.<sup>49</sup> Tobacco use can be targeted to help reduce disability and death due to both CVD and diabetes, both of which are increasing in India.

### Studies on tobacco use and risk of cardiovascular disease

#### Cohort studies

In the Mumbai cohort study<sup>50</sup> men who smoked had a 54% higher risk of death due to CVD (RR=1.54). Women SLT users showed a 25% higher risk (RR=1.25) for deaths due to ischaemic heart disease compared to non-tobacco users. In this study, there were 97,244 participants aged  $\geq 35$  years who were followed up for 5.5 years.

A community-based cohort study<sup>51</sup> conducted in five villages in Tiruvallur, Tamil Nadu, among 6,026 adults aged 25–64 years, followed up for

8 years, found that smokers had a 72% excess risk of cardiovascular events (age-adjusted HR of 1.72). The population-attributable fraction (PAF) for smoking and CVD was 23.4%.

#### Case-control studies

A hospital-based case-control study was conducted in Kerala on 163 patients with a rare type of stroke – aneurysmal subarachnoid haemorrhage (aSAH) – and 150 matched controls to assess the risk factors for aSAH.<sup>52</sup> Current cigarette smoking was significantly associated with around a 6 times higher risk of aSAH for men and women combined ( $OR_{adj}=5.9$ ). The population-attributable risk (PAR) for cigarette smoking was 31.8%.

A population-based case-control study was conducted during 1998–2000 in Chennai city and rural Villupuram district in Tamil Nadu among non-drinkers and non-smokers to investigate the association between chewing tobacco and cause-specific mortality.<sup>53</sup> The likelihood of death due to stroke was 220% or 2.2 times higher among rural men who chewed tobacco after adjusting for age and education ( $OR=2.2$ ). Among both urban and rural women, the likelihood of death due to stroke was 30% higher in tobacco chewers compared to non-chewers ( $OR_{urban}=1.3$ ;  $OR_{rural}=1.3$ ). Among rural women in particular, cardiac and other vascular diseases were 20% higher among tobacco chewers ( $OR=1.2$ ).

### Estimate of cardiovascular disease deaths and disability-adjusted life years due to tobacco in India

Using data from the GBD study, in 2018 there were 449,844 tobacco-attributable deaths due

to CVDs in India.<sup>54</sup> In 2016, all forms of tobacco use contributed 18.9% of years of life spent in ill health or lost in early death, known as DALYs due to CVDs in India. Smoking contributed most (83%) of these tobacco-attributable DALYs.<sup>55</sup>

## Tobacco and diabetes

In the GBD study of 2016, in India tobacco smoking was found to be associated with

disability and death due to diabetes: around 11% each of DALYs and deaths.<sup>48</sup>

In the Demographic Health Survey (2015–2016), a cross-sectional study in India, on 803,164 individuals (111,182 men aged 15–54 years and 691,982 women aged 15–49 years), tobacco smoking was associated with a 3 times higher likelihood of self-reported diabetes (OR=3.04  $p<0.001$ ).<sup>56</sup>

### Key messages

- Tobacco use in any form, as well as exposure to SHS, increases the risk of disease and death due to coronary heart disease and stroke.
- Tobacco smoking increases the odds of diabetes by 3 times in India.

## 4.4: Tobacco smoking and lung disease

Non-communicable lung diseases affecting the respiratory system include asthma,<sup>57</sup> chronic bronchitis and COPD.<sup>58</sup> All are characterized by inflammation and narrowing of the small airways. Chronic bronchitis with expectoration (wet cough) and a low forced expiratory volume (FEV), as measured by spirometry, is known as COPD. Lung function by itself is also sometimes recorded, based on FEV. In studies where spirometry cannot be conducted, individuals with wet cough are listed as having chronic bronchitis, not COPD. All these can be associated with tobacco smoking and ETS. Respiratory infections are communicable forms of lung disease that are more likely and more severe in smokers and those exposed to ETS. Of these, TB is covered in the next section.

### Studies on lung function, chronic obstructive pulmonary disease, asthma and smoking

A cross-sectional study in Kashmir found *hookah* smoking related to poor lung function (based on FEV);<sup>59</sup> another study in Delhi found current cigarette or *bidi* smoking highly associated with

COPD (OR=9.48).<sup>60</sup> Both studies found a dose-response relationship. A secondary analysis of the National Family Health Survey (NFHS), 2015–2016 dataset showed that women in the reproductive age who had self-reported asthma were more likely to smoke tobacco or use biomass for cooking.<sup>61</sup>

A large cross-sectional survey of 85,105 men and 84,470 women aged  $\geq 15$  years in 12 areas across India<sup>62</sup> showed that compared with non-smokers, cigarette smokers were nearly twice as likely to have asthma (OR=1.82), *bidi* smokers were nearly 3 times more likely (OR=2.87) and smokers of other products were also about 3 times more likely (OR=3.15) to have asthma.<sup>62</sup> In the same study, cigarette smokers were more than twice as likely (OR=2.35), *bidi* smokers were nearly 4 times more likely (OR=3.73) and smokers of other products were over 7 times more likely (OR=7.49) than non-smokers to have chronic bronchitis compared to non-smokers.<sup>62</sup>

During the current COVID-19 pandemic, smokers have often experienced more severe disease than non-smokers (Box 4.2).

### BOX 4.2: Tobacco use and COVID-19 infection

Tobacco smokers have been found to be more likely to experience greater disease severity, hospitalization, the need for oxygen to be provided during hospitalization, and negative outcomes, as shown in reviews of the literature on patients with COVID-19 (SARS-CoV-2) in cohort and case-control studies, carried out in various countries. This could, in part be due to impaired immune function due to smoking.<sup>63,64</sup>

ENDS users (vapers) who developed COVID-19 infection, compared to non-vapers in a case-control study of patients with COVID-19 conducted in the USA, were significantly more likely to experience typical COVID-19-related symptoms including chest pain or tightness, chills, muscle pain, headaches, loss of smell and or taste, nausea/vomiting/abdominal pain, diarrhoea and mild light-headedness, while fever, sore throat, cough and fatigue were present in both groups in about the same proportion.<sup>65</sup>

## Mortality due to poor lung function, chronic obstructive pulmonary disease, asthma and smoking

One cross-sectional study in Moradabad city reported significantly higher risk of death due to respiratory diseases (chronic bronchitis and asthma) among tobacco smokers compared to non-tobacco users using a Chi-square test ( $p < 0.001$ ).<sup>66</sup>

In the GBD study, for death due to COPD, smoking was the major risk factor followed by ambient particulate matter. For asthma patients, tobacco smoking and occupational exposures were the two main risk factors. India was among the countries with the highest DALYs due to COPD globally, having over 2000 DALYs per 100,000 people.<sup>67</sup>

## Passive smoking and risk of asthma and poor lung function

A review on health risks caused by passive smoking<sup>68</sup> reports several studies from India which showed that exposure to SHS in childhood increases the risk of asthma in children or worsens the symptoms in adults. Passive smoking has also been shown to reduce expiratory volume and peak expiratory flow. These results confirm the findings of studies conducted elsewhere.

A later cross-sectional study that looked at different kinds of respiratory problems showed that exposure to ETS in adulthood led to a 23% greater likelihood of developing asthma ( $OR = 1.23$ ) while exposure in both childhood and adulthood led to a 36% greater likelihood ( $OR = 1.36$ ).<sup>62</sup>

### Key messages

- Smoking greatly increases the risk of chronic bronchitis with expectoration (wet cough) and a low FEV, i.e. COPD.
- Smoking also greatly increases the risk of asthma in adults and exposure to ETS in childhood raises the risk of asthma.
- Tobacco smokers infected with COVID-19 tend to have greater disease severity and negative outcomes than non-smokers.
- Vapers infected with COVID-19 tend to have more disease symptoms than non-users.



## 4.5: Tobacco smoking and pulmonary tuberculosis

Incidence of TB is declining slowly in India,<sup>69</sup> but could decrease more rapidly if tobacco use was reduced. Various studies have shown a greater risk of TB in smokers, which is in part due to impaired immune function caused by smoking.

### Tobacco smoking and tuberculosis

#### Large death studies

In the first published analysis of the Mumbai cohort study (Table 4.4), men who were smokers were more than twice as likely to

die of TB (RR=2.30), and women smokers were nearly 6 times more likely to die of TB (RR=5.92) than never tobacco users.<sup>70</sup>

In a later analysis of the Mumbai cohort study with a larger male cohort (Table 4.4), smokers were more than twice likely to die of TB than never smokers (RR=2.12). *Bidi* smokers were 2.6 times more likely to die of TB. Those who smoked more than 10 *bidis* per day were at a higher risk (RR=2.77) than those who smoked less than equal to 10 *bidis* (RR 2.41).<sup>71</sup>

**Table 4.4: Person-years, number of deaths and relative risk for death due to tuberculosis (TB) and tobacco habit in a cohort of individuals >35 years living in Mumbai**

Tobacco use status	Person-years	TB deaths	Adjusted relative risk (RR) <sup>a</sup>	Reference
A. 97,244 individuals originally interviewed during 1992–1994 and followed up during 1997–1999 (after an average of 5.5 years)				Gupta et al. (2005) <sup>70</sup>
<b>Men</b>				
Never users	55,717	58	1.00 (ref)	
Smokers	57,528	160	2.30 (1.68–3.15)	
SLT users	96,884	152	1.46 (1.07–2.00)	
Total	210,129	370		
<b>Women</b>				
Never users	130,294	46	1.00 (ref)	
Smokers	1,398	5	5.92 (2.31–15.17)	
SLT users	191,625	123	1.40 (0.99–2.00)	
Total	323,316	174		
<b>Total</b>	<b>533,445</b>	<b>544</b>		

Tobacco use Status	Person-years	TB deaths	Adjusted relative risk (RR) <sup>a</sup> (95% CI)	Reference
B. 81,443 men initially interviewed during 1991–1997 and followed up during 1997 to the end of 2003 after an average of 5.5 years <sup>b</sup>				Pednekar and Gupta (2007) <sup>71</sup>
<b>Men</b>				
Never smokers	339,928	367	1.0 (ref)	
All smokers	150,474	266	2.12 (1.70–2.66)	
<i>Bidi</i> smokers	72,535	165	2.60 (2.02–3.33)	
Frequency/day <sup>c</sup>				
1–10	28,033	58	2.41 (1.74–3.33)	
>10	44,480	107	2.77 (2.10–3.65)	
Other smokers (mainly of cigarettes)	77,939	101	1.68 (1.28–2.20)	

<sup>a</sup>Adjusted for age, education, using Cox model. RRs in Pednekar and Gupta (2007) were also adjusted for SLT use.

<sup>b</sup>In this study, SLT users who had not been smokers were considered part of never smokers which also included never tobacco users.

<sup>c</sup>Total may not add up because of some missing frequency.

A nationally representative case-control study compared persons who had died of TB between 2001 and 2003, with living persons surveyed in their homes using the Sample

Registration System (Table 4.5). Compared to non-smokers, ever smoker women and men were 3 times and 2 times more likely to die of TB, respectively.

**Table 4.5: Deaths from tuberculosis (TB) and rate of smoking among women and men aged 30–69 years in a nationally representative case-control study<sup>72</sup>**

Age group	No. of deaths due to TB (cases)	Proportion who smoked (%)	No. of living (controls)	Proportion who smoked (%)	Risk ratio (99% CI)	Smoking-associated excess deaths no. (%)
Women	1,363	13	26,678	3.7	3.0 (2.4–3.9)	127 (9)
Men	3,119	66	31,661	35.7	2.3 (2.1–2.6)	1,174 (38)
Total	4,482		58,339			

Note: Numbers of living controls calculated from data in the Supplementary Appendix, available at: <https://www.nejm.org/doi/full/10.1056/NEJMsa0707719>

### Hospital-based case-control studies

Several case-control studies consistently showed that the ORs for TB and tobacco smoking in the

previous 5 years varied from around 1.7 to 4.6 (70% to 460% higher likelihood) compared to non-smokers (Table 4.6).<sup>73–78</sup>

**Table 4.6: Case-control studies on tobacco smoke exposure and tuberculosis (TB) (active cases)**

Location (year of publication)	Participants	Exposure type	Greater likelihood measured as OR (95% CI) for exposure	Reference
Bangalore, Karnataka (2006)	189 cases; 189 controls (age- and sex-matched)	Past smoking (>6 months) (not current smoking)	2.37 (1.0–5.62) Adjusted for demographic, socioeconomic and personal health-related aspects	Shetty et al. (2006) <sup>73</sup>
Aurangabad, Maharashtra (2008)	153 cases; 160 controls	Current smoking	1.70 (1.01–2.88), p<0.05; age-adjusted	Dhamgaye (2008) <sup>74</sup>
Lucknow, Uttar Pradesh (2009)	111 cases; 333 controls (age- and sex-matched)	History of smoking ( <i>bidis</i> )	3.8 (2.0–7.0); adjusted for SES, BMI and house type	Prasad et al. (2009) <sup>75</sup>
Dehradun, Uttarakhand (2010)	95 cases; 190 controls (age- and sex-matched)	Smoking	3.53 (2.10–5.93), p<0.0001; adjusted for duration and amount consumed (no. of <i>bidis</i> or cigarettes) per day	Gambhir et al. (2010) <sup>76</sup>
Shivpuri district, Madhya Pradesh (2018)	220 cases; 660 controls	Smoking (mostly <i>bidis</i> )	1.59 (1.12 to 2.18), Adjusted for multiple variables	Rao et al. (2018) <sup>77</sup>
Dehradun, Uttarakhand (2020)	92 cases; 184 controls (age- and sex-matched)	Smoking	4.57 (2.64–7.91), p<0.0001; adjusted for SES	Tewatia et al. (2020) <sup>78</sup>

BMI: body mass index; SES: socioeconomic status

## Cross-sectional surveys

In three community-based cross-sectional studies, one in Tiruvallur district, Tamil Nadu,<sup>79</sup> Sheopur district, Madhya Pradesh<sup>80</sup> and a third in Jabalpur district also in Madhya Pradesh,<sup>81</sup> the prevalence of active TB was about double in smokers compared to non-smokers.

## Smoking and relapse of tuberculosis infection

A study on a cohort of 503 treated and cured TB patients in Tamil Nadu, registered between April 2000 and December 2001 and followed up at 6, 12, and 18 months after treatment completion,

found that smoking was an independent predictor of relapse, with smokers being 3 times more likely to relapse to active disease (OR=3.1).<sup>82</sup>

A more recent study that followed up TB patients treated at hospitals in Chennai (Tamil Nadu) and Pune (Maharashtra) found that treatment failure, recurrence of TB or death were factors significantly related to past and current smoking, with relative risks higher than two, using a multi-variate analysis. There was a dose-response with increasing pack years. Other significant factors included alcohol drinking and being underweight.<sup>83</sup>

## Smokeless tobacco use and death due to tuberculosis

In the Mumbai cohort study, men who used SLT had a 46% higher risk of dying due to TB than those who did not use it (RR=1.46). Women had a 40% higher risk (RR=1.40), which did not quite reach significance.<sup>70</sup>

In a large case-control study in Tamil Nadu, verbal autopsy was used to determine the cause of death among lifelong non-smokers and non-drinkers. Rural and urban men as well as rural women SLT users had significantly higher likelihoods of death (50% to 100%) due to TB. For all participants (men and women combined), the likelihood of death due to respiratory TB

was 70% higher among tobacco chewers than among never-chewers (OR=1.7), after adjustment for age, sex, education and study area.<sup>84</sup>

## Second-hand smoke and tuberculosis

In an international systematic review on the exposure of SHS and the risk of suffering from TB, studies from India included 12 studies on children, 8 studies on adult non-smokers and 2 studies on both populations. The pooled RR for exposed children was more than 3-fold higher for active TB compared to the unexposed. For exposed adults, the pooled RR was about 30% higher, compared to the unexposed.<sup>85</sup>

Two case-control studies from India in the review showed significant risk of TB disease to children 0–14 years from SHS exposure, in the same systematic review on SHS and TB.<sup>85</sup> The first study was on 123 cases and 82 controls in a neighbourhood of Thiruvananthapuram district of Kerala and the risk of contracting TB with exposure to SHS was over 6 times that in the non-exposed (OR=6.67), which is highly significant ( $p<0.001$ ). Exposure to firewood smoke and malnutrition were also significant factors.<sup>86</sup> The second study was on 200 cases and 200 controls, in a hospital in New Delhi. The OR for SHS exposure was 1.75;  $p=0.009$ , showing a 75% higher risk among the exposed.<sup>87</sup>

### Key messages

- Smokers were over twice as likely to die due to TB compared to non-smokers and *bidi* smoking was the most common form of smoking among TB patients, with at least as strong a risk as cigarettes.
- Exclusive SLT use also raises the risk of death due to TB.
- Exposure to second-hand tobacco smoke substantially raises the risk of children having TB or dying from it.

## 4.6: Tobacco and reproductive outcomes

Tobacco use during pregnancy in India is a reality, which has been shown to be significantly detrimental to fertility, the developing child and the pregnant woman. However, this has received little attention from the healthcare system.

Health effects of tobacco associated with women, such as reproductive and foetal health outcomes are not widely known and awareness about them needs to be spread to health professionals through guidelines and to the public through the communication campaigns.

### Effects of smokeless tobacco use in pregnancy

Recent studies show adverse birth outcomes in association with SLT use – common among women in India. These studies add further evidence of risk to previous findings and suggest modes of prevention.

In two studies in rural Maharashtra, SLT use by pregnant women was found to confer excess risks for LBW: over 5 times higher ( $RR=5.1$ )<sup>88</sup> and over 6 times higher ( $OR=6.4$ )<sup>89</sup> compared to no tobacco use. Since anaemia is often associated with LBW, it is significant that in two studies conducted in Mumbai, SLT use by women was to be found associated with greater risks of anaemia in their pregnancy with  $OR=1.7$ <sup>90</sup> and  $OR=14.3$ ,<sup>91</sup> compared to non-use.

Comparisons of pregnant women who use SLT with non-users found 2.6 and 4.5 times higher risks of stillbirth in two studies in Maharashtra where *mishri* use is common.<sup>88,92</sup> An analysis of the Annual Health Survey data from nine states also found that chewing tobacco, used by 9% of women respondents aged 15–49 years, was associated with a marginal increase in the odds of stillbirth ( $OR=1.1$ ).<sup>93</sup>

A systematic review and meta-analysis of nine studies from India (1978–2010)<sup>94</sup> estimated that about 11.6% of LBW infants (or ~8,70,951), 5.5% of preterm births (~1,93,633), and 21.6% of stillbirths (~1,23,549) were attributable to SLT use during pregnancy, in India, each year. This assumed 14.9% prevalence of SLT use among women aged 15–49 years (from GATS 2009–2010).

The pooled ORs from two studies<sup>88,92</sup> are as follows: (i)  $OR=1.88$  for LBW or 88% higher risk; (ii)  $OR=1.39$  for preterm birth or 39% higher risk; and (iii)  $OR=2.85$  for stillbirth or 185% higher risk.

### Effects of smoking during pregnancy

In a cross-sectional study of 1212 pregnant women in rural Assam, where smoking was found among 2% of women and gestational diabetes mellitus (GDM) was found in 16.7%, smoking was an associated factor for GDM, conferring a 61% higher risk ( $OR=1.61$ ;  $p=0.01$ ).<sup>95</sup> In Nepal, cigarette smoking has been associated with a 30% greater risk of infant mortality and a 57% greater risk of maternal mortality.<sup>96</sup>

### Effects of exposure to second-hand smoke at home

In a hospital-based case-control study on women in Lucknow, Uttar Pradesh, in which tobacco users were excluded, women exposed to SHS (also known as ETS) had a 3 times higher likelihood ( $OR=3.16$ ) of having a LBW baby compared to the unexposed women, after adjusting for preterm birth and other factors. A dose–response relationship was also found.<sup>97</sup> Not all studies have found an association

with SHS,<sup>98,99</sup> but this may be due to different circumstances and levels of exposure. Solid fuel use is another commonly reported risk factor which may not have been accounted for in some studies.

Women living with smokers or exposed to smoking at work were found to have double the risk (HR=2.1) of stillbirth compared to the unexposed women, in a study conducted at city health posts in Mumbai.<sup>98</sup> Yet women uncomfortable with ETS at home typically find husbands unresponsive to their requests to smoke outdoors.<sup>100</sup>

Exposure to ETS can cause delayed conception in women (beyond 6 months).<sup>101</sup> For men, infertility may result from whatever form of tobacco they use.<sup>102–105</sup>

Ignorance, illiteracy, low educational level, social influence, malnutrition, dental care needs (use of *mishri*), male privilege to smoke at home and poor access to antenatal care are the context of

tobacco use in pregnancy and ETS exposure. These must be tackled through the antenatal care system, supplemented by community outreach with behavioural change interventions.<sup>106–109</sup> Integration of the National Tobacco Control Programme (NTCP) across national programmes related to maternal and child health will help reduce this tobacco-attributable burden.

## Occupational hazards of *bidi* rolling on pregnancy

The main causal agent in all these adverse effects on pregnancy appears to be nicotine. Pregnant women who roll *bidis* for a living absorb nicotine through the skin into the bloodstream.<sup>110,111</sup> This can result in significantly lower mean birth weight and shorter neonatal length compared to the unexposed, as shown in two hospital-based studies of pregnant women.<sup>110,111</sup> Children born to *bidi* rolling women also tend to have poor growth in the first 3 years of life.<sup>112</sup>

### Key messages

- Evidence has shown an association of SLT use in pregnancy with LBW, stillbirth and pre-term birth.
- Women who do not use tobacco but roll *bidis* during pregnancy face a higher risk of LBW in their newborns and poor growth of their children in the first 3 years.
- Smoking in pregnancy is a risk factor for GDM in women.
- Exposure of pregnant women to SHS at home can be a risk factor for delayed conception, LBW and stillbirth.

## 4.7: Tobacco-induced oral diseases

Oral alterations resulting from tobacco use (smoked or smokeless) range from stained teeth to life-threatening oral cancers<sup>113</sup> (Table 4.7). Greater prevalence and severity of periodontitis

is seen in smokers and tobacco chewers as reported in a cross-sectional survey in rural Haryana.<sup>114</sup>

**Table 4.7: Tobacco-induced oral conditions<sup>113</sup>**

- |   |
|---|
| 1. <b>Hard tissue</b> (teeth and bones) – stained teeth and restorations, increased susceptibility for dental caries, tooth loss, implant failures  |
| 2. <b>Soft tissue</b> (mucosal surfaces, gums and tongue) – smokers palate, smokers melanosis, periodontitis, oral premalignant lesions and conditions and oral cancer, and opportunistic candidal infections |
| 3. <b>Sensory alterations</b> – altered taste perception  |

This section emphasizes oral potentially malignant disorders (OPMDs). Oral screening helps to diagnose these lesions at early, treatable stages.<sup>115</sup> Those affected by OPMDs commonly complain of sore throat, oral pain, difficulty in swallowing, chewing and speaking, lumps, white or red patches, and often have ulceration and bleeding.<sup>116</sup>

### Population surveys on oral mucosal lesions and conditions

In five recent population surveys on oral mucosal lesions, the sample sizes varied from 800 to about 2300 adults.<sup>117–121</sup> The prevalence of tobacco users in these populations varied from around 27% to 60%. Persons with any oral potentially malignant lesion varied from 3.7% to 13.7%; those with leukoplakia from 0.23% to 4.0%; and those with oral submucous fibrosis (OSF) from 1.2% to 8.1%. Several people were reported having erythroplakia and lichen planus. Two studies in urban populations examined only tobacco users among whom OSF was the most prevalent lesion, showing that areca nut was also used.<sup>122,123</sup>

A survey among 1000 habitual chewers of *gutkha/pan* and/or areca nut between the ages

of 11 and 40 years in rural and urban Moradabad district found that *gutkha* was the most common habit among the 6.3% people diagnosed with OSF and most of those diagnosed were men between 36 and 40 years. Pain during eating, altered taste perception and difficulty in hearing were experienced by large fractions of the OSF patients.<sup>124</sup>

### Worker oral screening surveys

Screening of workers can be an efficient way of reaching high-risk people and identifying oral precancerous and cancerous lesions at an early stage so that treatment can be successful.<sup>125</sup>

1,589 office workers were screened in Chandigarh, among whom 1,307 (82%) were men, 1,005 (63%) were college graduates or had higher degrees, 348 (21.9%) were current smokers, of whom the majority (78%) were *bidi* smokers; 55 (3.5%) chewed betel quid, among whom 13 (1.5% of the total participants) added an SLT product (24% of the betel quid chewers). During screening, 84 leukoplakia, 2 OSF, 2 lichen planus and 1 erythroplakia were found.<sup>125</sup>

A survey of 450 cab drivers in Bengaluru, Karnataka showed that 319 (70.9%) of them



used tobacco products (250 only chewed tobacco; 15 only smoked; 54 used both forms). They had a high prevalence of oral premalignant lesions: 32 (7.1%) had leukoplakia, 9 (2.0%) erythroplakia and 21 (4.7%) had OSF.<sup>126</sup>

In a survey of 700 *bidi* workers in Karnataka (51.4% men), all aged between 18 and 60 years, among 549 workers with habits mainly as *bidi* smoking or SLT use, 150 had oral mucosal conditions, including 12 oral cancers (2.1%), 38 leukoplakia (6.9%), 17 lichen planus (3.1%), 42 ulceration (7.6%), 33 candidiasis (6.0%) and 8 with other conditions.<sup>127</sup>

Among 408 brick kiln workers in Odisha (300 men; 108 women) between 22 and 65 years of age, 89.2% used SLT and 67.6% smoked. Periodontal disease was found in 86.3% with a dose–response relationship for frequency and duration of tobacco use.<sup>128</sup>

In an oral screening and tobacco cessation programme carried out in a factory in rural Maharashtra, at the initial oral screening of 104 employees, 50 workers were using tobacco, among whom 20 were found with oral precancerous lesions. One year after this programme, at the second screening, the lesions were found to have had regressed in 16 workers.<sup>129</sup> During this time, many of the tobacco users had quit or reduced their use.<sup>130,131</sup>

## Study on oral potentially malignant disorders in teenage youth

A total of 872 teenagers (12–19 years of age) who came as dental outpatients at a hospital in Varanasi, Uttar Pradesh (56.9% boys and 43.1% girls) had their mouths examined and then were interviewed about the nature, frequency and duration of their harmful habits, including *paan*, tobacco (*khaini*), *gutkha*, tobacco smoking or *ganja* smoking.<sup>132</sup> Among them, 293 had one or more harmful habits, generally for less than 3 years. Among the 872 observed teenage outpatients, 0.6% had leukoplakia, 0.3% had

erythroplakia, 0.7% had lichen planus and 0.7% had OSF.

## Studies on prevalence of oral potentially malignant disorders in the elderly

Studies on elderly dental outpatients<sup>133–135</sup> have reported a high prevalence of OPMD. For example, in a study in Jodhpur, Rajasthan, 64% of the 5,100 elderly outpatients (aged 60–98 years) had one or more oral lesions, either related to their tobacco use, areca nut use, or to dental trauma and prosthesis.<sup>133</sup>

## Oral submucous fibrosis

### Reports of oral submucous fibrosis in school children

OSF in school-going children and teenagers has been found to be common and related to the frequency and duration of consumption of areca nut and its products with or without tobacco, including *paan masala*, *supari*, betel quid, *gutkha*, *kharra*.<sup>136,137</sup>

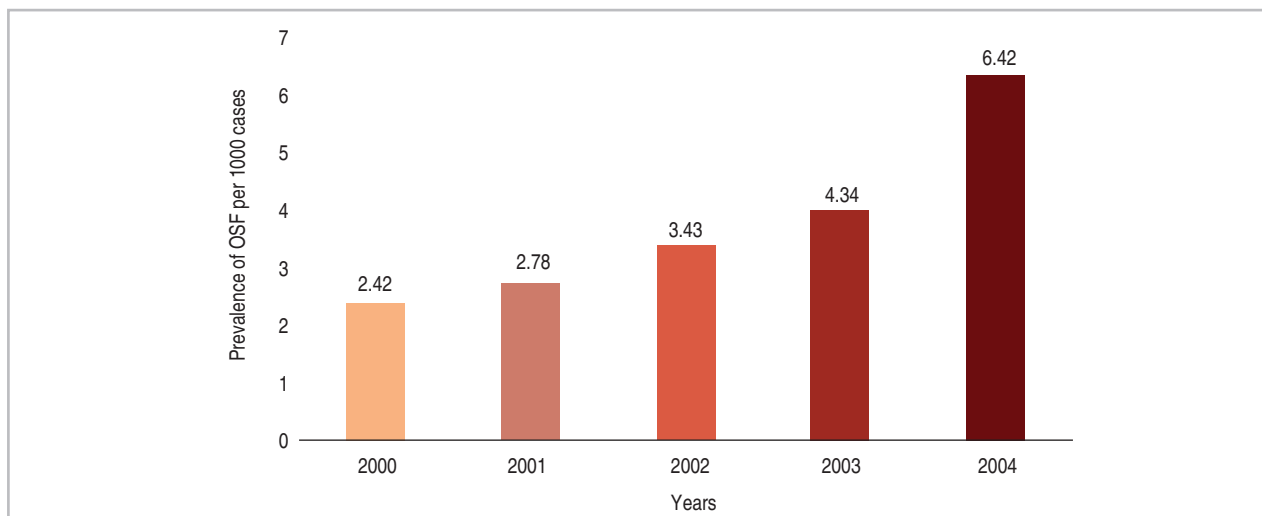
### Studies on oral submucous fibrosis among dental outpatients

A study in Nagpur, Maharashtra,<sup>138</sup> found an increase in the yearly number and prevalence of OSF cases among patients visiting the Government Dental College and Hospital (Figure 4.1). Substances consumed associated with OSF included areca nut, *kharra*, *gutkha*, tobacco and betel quid.

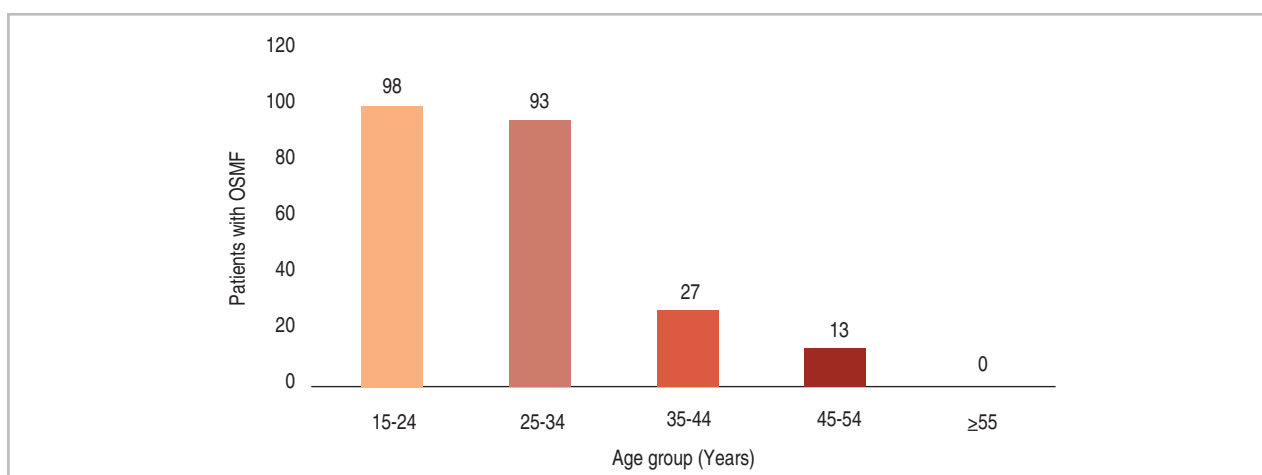
At the S.R.N Hospital, Allahabad, Uttar Pradesh OSF was the most common (57.0%) OPMD found among 1151 oral biopsies performed during 1990–2007 in the Department of Pathology.<sup>139</sup>

In a study of 6800 outpatients (≥15 years) in NIMS Dental College and Hospital, Jaipur, Rajasthan<sup>140</sup> 231 patients with OSF were in the age group of 15–24 years (Figure 4.2).

**Figure 4.1: Prevalence of oral submucous fibrosis (per 1000 outpatients) for 5 successive years among 266,418 patients (M:F=4.9:1) attending the outpatient department of the Government Dental College and Hospital in Nagpur during January 2000 to December 2004<sup>138</sup>**



**Figure 4.2: OSMF patients examined during July 2010 to December 2010 by age group at the NIMS Dental College and Hospital, Jaipur, Rajasthan<sup>140</sup>**



## Conclusion

Tobacco use, especially SLT, and areca nut use in any form, contribute to a widespread

occurrence of OPMD from childhood to old age, leading to a greater risk of oral cancer.

## Key messages

- Periodontitis is more common and more severe among tobacco users.
- Oral screening can accompany tobacco cessation programmes, to achieve regression of lesions and conditions (OPMDs).
- The largest increase in OPMDs remains that of OSF, as the use of areca nut products has been increasing, especially among youth.

## 4.8: Green tobacco sickness

A study on 683 agricultural workers in Gujarat published in 2005 found that 47.0% of these workers (55.7% women; 42.7% men) developed green tobacco sickness (GTS), an acute condition, after working in tobacco fields.<sup>141</sup> To prevent this illness, measures such as protective clothing,<sup>142</sup> including gloves, are needed. The same is true to prevent nicotine toxicity for those

working in tobacco-drying barns.<sup>142</sup> Children and adolescents engaged in agriculture in India are more vulnerable to GTS than adults.<sup>143</sup> However, putting safety measures in place has not been a priority of the tobacco industry.<sup>144</sup> This evidence forms an important basis for recommending replacement of tobacco crops with other viable alternate crop options.

### Key messages

- Protective gear such as gloves are not routinely provided to workers (which include highly vulnerable children) on tobacco farms or in tobacco-drying barns.
- Replacement of tobacco with other crops would solve the problem of GTS.

## 4.9: Health effects of electronic nicotine delivery systems

ENDS, also called “e-cigs,” “vapes,” “e-hookahs,” and “vape pens,” available in the Indian market since around 2007, do not burn tobacco but use a heated liquid to deliver an aerosol-containing nicotine. ENDS have been banned in India since September 2019.<sup>145</sup>

### Chemicals in electronic nicotine delivery systems

Propylene glycol (which creates the plume) and/or vegetable glycerin, mixed with water is used to dissolve nicotine and flavouring compounds. In some products, small amounts of ethylene glycol, an industrial solvent, is also present, which irritates the respiratory system.<sup>146</sup> When these chemicals are heated, they produce carcinogenic compounds such as formaldehyde and acetaldehyde.<sup>145</sup> Other harmful chemicals may also be present such as acrolein and heavy metals such as nickel and lead. Some ENDS liquids are oil-based and contain tetrahydrocannabinol (THC), the main psychoactive component of cannabis.<sup>147</sup>

### Harmful effects of electronic nicotine delivery systems

Nicotine absorption from ENDS can be higher than from cigarettes and can cause acute nicotine toxicity, resulting in headaches, abdominal pain, nausea, vomiting, difficulty in concentrating, seizures, heart palpitations, arrhythmia and high blood pressure. Nicotine addiction leads to continued use of ENDS or dual use with other tobacco products, most commonly cigarettes. Frequent ENDS use leads to increased heart rate, and risk of heart attack, as nicotine is a risk factor for poor cardiovascular health.<sup>147</sup>

Many youth think that nicotine can help them cope with feelings of stress, anxiety and depression, but actually, ENDS use and tobacco use in general can cause a worsening of these symptoms. Use of e-cigarettes imparts a higher risk of poor concentration, memory, decision-making and planning,<sup>148</sup> as well as other mental health issues.<sup>149</sup> Psychotic experiences are also associated with vaping even after accounting for cannabis use and mental health problems.<sup>150</sup> Nicotine from ENDS can lead to abnormal brain development.<sup>147</sup>

Other symptoms and disorders reported in a study that extracted data from more than 41,000 online forum posts of vapers between 2008 and 2015, included coughing (n=852), fatigue/tiredness/malaise (n=468), asthma (n=916), dehydration (n=803), and sore throat (n=565). Some symptoms were linked, such as coughing and headache.<sup>151</sup>

Acute toxicity from ENDS use leading to respiratory failure with an intense inflammatory response is common enough to be given a special name, EVALI (e-cigarette or vaping-associated lung injury), which can lead to hospitalization and death.<sup>146</sup>

A systematic review to evaluate the adverse effects of e-cigarettes on oral health showed that periodontal parameters such as plaque index, clinical attachment loss, probing depth, peri-implant bone loss, and radiographic bone level among ENDS users were poorer and pro-inflammatory cytokine levels were higher than among non-users. Lesions/conditions such as nicotinic steatitis, hairy tongue and angular cheilitis were more prevalent in e-cigarette users.<sup>152</sup>

Over the long term, other health risks from e-cigarette use include chronic lung diseases. While the pulmonary system is attacked by oxidative stress due to ENDS use, the immune system is also compromised.

Since ENDS have all these adverse effects, clearly the ban on ENDS is justified to prevent them from becoming widely used.<sup>153,154</sup>

## Key messages

The use of ENDS causes:

- Irritation to the respiratory system, which shows up as coughing and sore throat.
- Nicotine toxicity, with headaches, nausea and neurological symptoms including a higher risk of poor concentration, memory, decision-making and planning.
- Abnormal brain development due to nicotine, if ENDS are used by youth.

## 4.10: Tobacco, alcohol, drugs: Interlinkages

Addictive substances likely to be used concomitantly with tobacco in India include:

- Areca nut
- Alcohol
- Cannabis
- Opium

Tobacco, areca nut, Indian hemp (cannabis) and opium, are all classified as drugs by the Ministry of Agriculture.<sup>155</sup> Alcoholic beverages, made by fermenting agricultural products contain ethanol, which is a psychoactive drug.<sup>156</sup> Regular use of each of these is associated with excess risk of disease. In general, when used with tobacco, the use of one substance reinforces the addiction to the other and the risk of disease increases.

### Areca nut

Areca nut is a major ingredient in betel quid with or without tobacco, *gutkha*, *paan masala* with tobacco, *mawa*, etc. Chewing of betel quid without tobacco is by itself a risk factor for oral precancers and cancer as found in a large case-control study.<sup>157</sup> Areca nut by itself or betel quid without added tobacco causes oral cancer in humans, OPMDs including leukoplakia and OSF.<sup>158</sup> As per the GATS-1 (2009–2010) and GATS-2 (2016–2017) data analysis, the odds of use of betel quid with tobacco increased with decreasing wealth quintiles and use of betel quid without tobacco showed the highest odds among participants with moderate levels of education.<sup>159</sup> Betel quid with added tobacco causes oral, pharyngeal and oesophageal cancer.<sup>160</sup> Case-control studies have found especially high ORs for oral cancer among chewers of betel quid with tobacco<sup>161,162</sup> and *gutkha* chewers.<sup>162,163</sup> Long-term areca nut use increases the risk of coronary artery disease, and

if the user is also a smoker, the risk increases synergistically.<sup>164,165</sup> A causal relationship of areca nut with metabolic syndrome and type 2 diabetes has been found,<sup>166</sup> increasing with concomitant tobacco use.<sup>167</sup> Areca nut when used during pregnancy, harms the foetus.<sup>168</sup>

### Alcohol

Alcohol can cause cancers of the oral cavity, pharynx, larynx, oesophagus, colorectum, liver and female breast. When used with tobacco, it acts synergistically especially for cancers of oropharynx and oesophagus<sup>160</sup> and pancreatic cancer.<sup>169</sup> In India, tobacco users are more likely to be alcohol users as well,<sup>170</sup> even among grade 8–10 students in northeast India.<sup>171</sup> Alcohol increases the risk of diabetes, as does smoking.<sup>172</sup>

### Cannabis/marijuana

Cannabis smokers in India traditionally use a conical clay pipe called *chillum*. It can also be smoked in a *hookah* or hand rolled in paper. Some smokers mix cannabis with tobacco. Like tobacco smoke, cannabis smoke contains carcinogens and other harmful chemicals which irritate the lungs, harm the heart and cardiovascular system, has adverse reproductive consequences<sup>173</sup> and has been linked to head and neck cancer.<sup>174</sup> Some ENDS users add cannabis products to the vaping fluid.<sup>175</sup>

### Opium

Opium is smoked in a pipe. Some opium smokers also smoke tobacco or chew it. Risk of metabolic syndrome, a precursor to type 2 diabetes and CVDs, is high among opiate users (opium or heroin), which increases with tobacco

use. The cardio-metabolic profile of opiate users deteriorates not only with increasing levels of dependence on opiates, but also with co-dependence on tobacco. In a case-control study of opiate users in a de-addiction centre

in Rajasthan, the prevalence of metabolic syndrome was highest in opiate users who also chewed tobacco, next highest in those who also smoked tobacco, next in pure opiate users and lowest in healthy controls.<sup>176</sup>

## Key messages

- Use of another addictive substance along with tobacco increases the addiction to both.
- Use of such substances with tobacco increases the likelihood of diseases, such as cancer, CVD and diabetes.



## 4.11: Research gaps in health effects of tobacco in India

Although India has done well in terms of research on tobacco control, there is scope to strengthen research it still lags behind in a number of areas, especially on the health effects of the myriad types of tobacco products used by the Indian population.

### Novel products and their health hazards

Being a country with a large proportion of young persons, the youth in India is well aware of novel products, as once *gutkha* was and now electronic cigarettes (e-cigarettes or ENDS), and tobacco-mimicking products (such as herbal cigarettes and tobacco-free smoking mixtures for *hookahs*). Despite a ban by the government in 2019 on e-cigarettes, illegal sales are widely reported.<sup>177</sup> Hence, India needs to remain informed and up-to-date about the global research results on the health hazards of e-cigarettes, electronic *hookahs* and tobacco-mimicking products,<sup>178–181</sup> as well as traditional *hookahs* (*shishas*).<sup>182–184</sup> Upward trends in *hookah* smoking need to be monitored – whether traditional or “tobacco-free”.<sup>183</sup>

### Diversity of smokeless tobacco products and their diverse effects

An important area for research on health effects in India is SLT use. There are a number of challenges, e.g. in the area of methodology (widely varying SLT products, lack of standardized tools to comparably measure portion size, duration and frequency of SLT use) and lack of generalizability. These are challenges to having an in-depth

understanding of the impact of SLT on morbidity and mortality.<sup>185–186</sup>

### Effects of smokeless tobacco on health and their magnitude

The report “Smokeless Tobacco and Public Health in India”, released by the Ministry of Health and Family Welfare (MoHFW), Government of India (GoI) in 2016,<sup>187</sup> mentions several areas of research gaps, including the links between SLT products used in India with CVDs and other diseases, population estimates of morbidity and mortality due to SLT use, cessation strategies and policy research on strategies to reduce SLT use. According to a systematic review of Indian studies on cancer, there is a shortage of studies from the central and northern parts of the country and there is also a lack of good quality studies on the association of SLT with certain cancers in India including those of the pancreas, uterine cervix, breast, penis and other sites.<sup>188</sup>

### Cessation strategies for smokeless tobacco

There is a need for research on successful cessation strategies and policy research on strategies to reduce SLT use in the Indian context.

### Effects of tobacco on gums and periodontal status

While there is a clear connection between oral diseases and tobacco use, there is a need for research to assess the effect of tobacco consumption (in all forms) on gums and periodontal status.<sup>189</sup>

## Effects of exposure to environmental tobacco smoke

In studies on various diseases and adverse effects, there is a need for more attention to exposure ETS as a risk factor. These conditions would include, among others, adverse reproductive outcomes, cancers, and heart attacks (acute myocardial infarction).

## Effects of changes in tobacco consumption patterns

Tobacco consumers can change their consumption patterns<sup>190</sup> and correlating these changes to the health outcomes is also a potential area of research.

## The need for more large-scale studies

There is a need for more large-scale population-based cohort and case-control epidemiological studies. This is because a greater part of the evidence has limitations such as small sample size, lack of generalizability, and well-defined control groups, confounding risk factors and longer time-frame. Well-designed large analytical studies would help in providing stronger evidence on health effects of consuming tobacco in its many forms, as well as on exposure to SHS and third-hand smoke (deposits of tobacco smoke on surfaces at home touched by inhabitants).

### Key messages

- Large-scale epidemiological studies, especially cohort studies, are needed to further understand the health impacts of first-, second- and third-hand smoke released from Indian tobacco products, especially *bidis*.
- There is a need to develop universal definitions and standardized tools to measure portion size, duration, frequency and health impacts of the myriad varieties of SLT products to establish equivalence.
- More behavioural studies are needed to understand the changing patterns and trends of SLT use and smoking.

## REFERENCES

### 4.0 Introduction

1. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014. PMID: 24455788.
2. Reddy KS, Gupta PC, editors. Report on Tobacco Control in India. Ministry of Health and Family Welfare, Government of India, World Health Organization (South-East Asia), Centers for Disease Control and Prevention (USA); 2004. Available from: <https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf>, accessed 30 August 2022.
3. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey GATS 2 India 2016–17; 2018. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>, accessed 30 August 2022.
4. Chavan BS, Sidana A, Arun P, Rohilla R, Singh GP, Solanki RK, et al. Psychiatric morbidity and substance use in migrant workers: a population based study. *Int J Soc Psychiatry*. 2022;68(1):210–15. doi: 10.1177/0020764020988881.
5. Gupte HA, Mandal G, Jagiasi D. How has the COVID-19 pandemic affected tobacco users in India:

lessons from an ongoing tobacco cessation program. *Tob Prev Cessat.* 2020;6:53. doi: 10.18332/tpc/127122.

6. Kumar P C P, Murthy P, Lohit RP, Hegde S, Chand P, Sethuraman L. Impact of Covid -19 on caller characteristics and quit rates: an experience from regional tobacco Quitline from India. *Nicotine Tob Res.* 2022;ntac013. doi: 10.1093/ntr/ntac013.

#### 4.1 All-cause mortality and tobacco use in India

7. Gupta PC, Pednekar MS, Parkin DM, Sankaranarayanan R. Tobacco associated mortality in Mumbai (Bombay) India. Results of the Bombay Cohort Study. *Int J Epidemiol.* 2005;34(6):1395–402. doi: 10.1093/ije/dyi196.
8. Yang JJ, Yu D, Wen W, Shu XO, Saito E, Rahman S, et al. Tobacco smoking and mortality in Asia: a pooled meta-analysis. *JAMA Netw Open.* 2019;2(3):e191474. doi: 10.1001/jamanetworkopen.2019.1474.
9. Ramadas K, Sauvaget C, Thomas G, Fayette JM, Thara S, Sankaranarayanan R. Effect of tobacco chewing, tobacco smoking and alcohol on all-cause and cancer mortality: a cohort study from Trivandrum, India. *Cancer Epidemiol.* 2010;34(4):405–12. doi: 10.1016/j.canep.2010.04.006.
10. Gajalakshmi V, Kanimozhi V. Tobacco chewing and adult mortality: a case-control analysis of 22,000 cases and 429,000 controls, never smoking tobacco and never drinking alcohol, in South India. *Asian Pac J Cancer Prev.* 2015;16(3):1201–6. doi: 10.7314/apjcp.2015.16.3.1201.
11. Sinha DN, Palipudi KM, Gupta PC, Singhal S, Ramasundarahettige C, Jha P, et al. Smokeless tobacco use: a meta-analysis of risk and attributable mortality estimates for India. *Indian J Cancer.* 2014;51 Suppl 1:S73–7. doi: 10.4103/0019-509X.147477.
12. International Institute for Population Sciences. Global Adult Tobacco Survey India (GATS India), 2009–10. Ministry of Health and Family Welfare, Government of India; 2010. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-India-2009-2010-Report.pdf>, accessed 30 August 2022.
13. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Personal habits and indoor combustions. Volume 100 E. A review of human carcinogens. *IARC Monogr Eval Carcinog Risks Hum.* 2012;100(Pt E):1–538. PMID: 23193840; PMCID: PMC4781577.
14. Three-Year Report of Population Based Cancer Registries (2012–2014). Bangalore: National Cancer Registry Programme (NCRP), Indian Council of Medical Research; 2016. Available from: [https://main.icmr.nic.in/sites/default/files/reports/Preliminary\\_Pages\\_Printed1.pdf](https://main.icmr.nic.in/sites/default/files/reports/Preliminary_Pages_Printed1.pdf), accessed 30 August 2022.
15. India State-Level Disease Burden Initiative Cancer Collaborators. The burden of cancers and their variations across the states of India: the Global Burden of Disease Study 1990–2016. *Lancet Oncol.* 2018;19(10):1289–1306. doi: 10.1016/S1473-2045(18)30447-9.
16. Ramadas K, Sauvaget C, Thomas G, Fayette JM, Thara S, Sankaranarayanan R. Effect of tobacco chewing, tobacco smoking and alcohol on all-cause and cancer mortality: a cohort study from Trivandrum, India. *Cancer Epidemiol.* 2010;34(4):405–12. doi: 10.1016/j.canep.2010.04.006.
17. Pednekar MS, Gupta PC, Yeole BB, Hébert JR. Association of tobacco habits, including *bidi* smoking, with overall and site-specific cancer incidence: results from the Mumbai cohort study. *Cancer Causes Control.* 2011;22(6):859–68. doi: 10.1007/s10552-011-9756-1.
18. Jayalekshmy PA, Akiba S, Nair MK, Gangadharan P, Rajan B, Nair RK, Sugahara T. *Bidi* smoking and lung cancer incidence among males in Karunagappally cohort in Kerala, India. *Int J Cancer.* 2008;123(6):1390–7. doi: 10.1002/ijc.23618.
19. Jayalekshmi PA, Gangadharan P, Akiba S, Nair RR, Tsuji M, Rajan B. Tobacco chewing and female oral cavity cancer risk in Karunagappally cohort, India. *Br J Cancer.* 2009;100(5):848–52. doi: 10.1038/sj.bjc.6604907.
20. Jayalekshmi PA, Gangadharan P, Akiba S, Koriyama C, Nair RR. Oral cavity cancer risk in relation to tobacco chewing and *bidi* smoking among men in Karunagappally, Kerala, India: Karunagappally cohort study. *Cancer Sci.* 2011;102(2):460–7. doi: 10.1111/j.1349-7006.2010.01785.x.
21. Jayalekshmi PA, Nandakumar A, Akiba S, Gangadharan P, Koriyama C. Associations of tobacco use and alcohol drinking with laryngeal and hypopharyngeal cancer risks among men in Karunagappally, Kerala, India – Karunagappally cohort study. *PLoS One.* 2013;8(8):e73716. doi: 10.1371/journal.pone.0073716.
22. Jayalekshmi PA, Hassani S, Nandakumar A, Koriyama C, Sebastian P, Akiba S. Gastric cancer risk in relation to tobacco use and alcohol drinking in Kerala, India – Karunagappally cohort study. *World J Gastroenterol.* 2015;21(44):12676–85. doi: 10.3748/wjg.v21.i44.12676.
23. Gajalakshmi V, Kanimozhi V. Tobacco chewing and adult mortality: a case-control analysis of 22,000 cases and 429,000 controls, never smoking tobacco and never drinking alcohol, in South India. *Asian Pac J Cancer Prev.* 2015;16(3):1201–6. doi:10.7314/apjcp.2015.16.3.1201
24. Basu R, Mandal S, Ghosh A, Poddar TK. Role of tobacco in the development of head and neck

- squamous cell carcinoma in an eastern Indian population. *Asian Pac J Cancer Prev*. 2008;9(3):381–6. PMID: 18990006.
25. Subapriya R, Thangavelu A, Mathavan B, Ramachandran CR, Nagini S. Assessment of risk factors for oral squamous cell carcinoma in Chidambaram, Southern India: a case-control study. *Eur J Cancer Prev*. 2007;16(3):251–6. doi: 10.1097/01.cej.0000228402.53106.9e.
  26. Muwonge R, Ramadas K, Sankila R, Thara S, Thomas G, Vinoda J, et al. Role of tobacco smoking, chewing and alcohol drinking in the risk of oral cancer in Trivandrum, India: a nested case-control design using incident cancer cases. *Oral Oncol*. 2008;44(5):446–54. doi: 10.1016/j.oraloncology.2007.06.002.
  27. Madani AH, Dikshit M, Bhaduri D. Risk for oral cancer associated to smoking, smokeless and oral dip products. *Indian J Public Health*. 2012;56(1):57–60. doi: 10.4103/0019-557X.96977.
  28. Mahapatra S, Kamath R, Shetty BK, Binu VS. Risk of oral cancer associated with gutka and other tobacco products: a hospital-based case-control study. *J Cancer Res Ther*. 2015;11(1):199–203. doi: 10.4103/0973-1482.143332.
  29. Gupta B, Bray F, Kumar N, Johnson NW. Associations between oral hygiene habits, diet, tobacco and alcohol and risk of oral cancer: a case-control study from India. *Cancer Epidemiol*. 2017;51:7–14. doi: 10.1016/j.canep.2017.09.003.
  30. Chetia A, Baruah R. Tobacco and risk of oral cancer: a case control study in a tertiary care centre of Dibrugarh district. *Int J Community Med Public Health*. 2020;7(6):2105–9. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20202041>.
  31. Kapil U, Singh P, Bahadur S, Dwivedi SN, Singh R, Shukla N. Assessment of risk factors in laryngeal cancer in India: a case-control study. *Asian Pac J Cancer Prev*. 2005;6(2):202–7. PMID: 16101334.
  32. Sapkota A, Gajalakshmi V, Jetly DH, Roychowdhury S, Dikshit RP, Brennan P, et al. Smokeless tobacco and increased risk of hypopharyngeal and laryngeal cancers: a multi-centric case-control study from India. *Int J Cancer*. 2007;121(8):1793–8. doi: 10.1002/ijc.22832.
  33. Ganesh B, Talole SD, Dikshit R. Tobacco, alcohol and tea drinking as risk factors for esophageal cancer: a case-control study from Mumbai, India. *Cancer Epidemiol*. 2009;33(6):431–4. doi: 10.1016/j.canep.2009.09.002.
  34. Sehgal S, Kaul S, Gupta BB, Dhar MK. Risk factors and survival analysis of the esophageal cancer in the population of Jammu, India. *Indian J Cancer*. 2012;49(2):245–50. doi:10.4103/0019-509X.102921.
  35. Phukan RK, Zomawia E, Narain K, Hazarika NC, Mahanta J. Tobacco use and stomach cancer in Mizoram, India. *Cancer Epidemiol Biomarkers Prev*. 2005;14(8):1892–6. doi: 10.1158/1055-9965.EPI-05-0074.
  36. Gajalakshmi V, Hung RJ, Mathew A, Varghese C, Brennan P, Boffetta P. Tobacco smoking and chewing, alcohol drinking and lung cancer risk among men in southern India. *Int J Cancer*. 2003;107(3):441–7. doi:10.1002/ijc.11377.
  37. Ganesh B, Sushama S, Monika S, Suvarna P. A case-control study of risk factors for lung cancer in Mumbai, India. *Asian Pac J Cancer Prev*. 2011;12(2):357–62. PMID: 21545194.
  38. Nair S, Datta S, Thiagarajan S, Chakrabarti S, Nair D, Chaturvedi P. Squamous cell carcinoma of the upper aerodigestive tract in exclusive smokers, chewers, and those with no habits. *Indian J Cancer*. 2016;53(4):538–41. doi: 10.4103/0019-509X.204759.
  39. Ghosh A. Dead son face of anti-cancer fight, family lives in penury. *The Indian Express*, 25 December 2012. Journalism of Courage, Archive. Available from: <http://archive.indianexpress.com/news/dead-son-face-of-anticancer-fight-family-lives-in-penury/1049922/>, accessed 30 August 2022.
  40. India – Tobacco Control – Mukesh (English video), 14 Mar 2011. Vital Strategies; 2021. Available from: <https://www.vitalstrategies.org/resources/india-mukesh-english/>, accessed 30 August 2022.
  41. Rapiti E, Jindal SK, Gupta D, Boffetta P. Passive smoking and lung cancer in Chandigarh, India. *Lung Cancer*. 1999;23(3):183–9. Doi: 10.1016/s0169-5002(99)00013-6.
  42. Gupta D, Aggarwal A, Jindal S. Pulmonary effects of passive smoking: the Indian experience. *Tob Induc Dis*. 2002;1(2):129–36. doi: 10.1186/1617-9625-1-2-129.
  43. Malik A, Jeyaraj PA, Shankar A, Rath GK, Mukhopadhyay S, Kamal VK. Passive smoking and breast cancer – a suspicious link. *Asian Pac J Cancer Prev*. 2015;16(14):5715–9. doi: 10.7314/apjcp.2015.16.14.5715.
  44. Sobti RC, Kaur S, Kaur P, Singh J, Gupta I, Jain V, et al. Interaction of passive smoking with GST (GSTM1, GSTT1, and GSTP1) genotypes in the risk of cervical cancer in India. *Cancer Genet Cytogenet*. 2006;166(2):117–23. doi: 10.1016/j.cancergencyto.2005.10.001.
  45. Sinha DN, Abdulkader RS, Gupta PC. Smokeless tobacco-associated cancers: a systematic review and meta-analysis of Indian studies. *Int J Cancer*. 2016;138(6):1368–79. doi:10.1002/ijc.29884.
  46. Murthy NS, Rajaram D, Gautham MS, Shivaraj NS, Nandakumar BS, Pruthvish S. Risk of cancer development in India. *Asian Pac J Cancer Prev*. 2011;12(2):387–91. PMID: 21545200.

### 4.3 Tobacco and risk of cardiovascular and metabolic diseases

47. Sharma A, Mittal S, Aggarwal R, Chauhan MK. Diabetes and cardiovascular disease: inter-relation of risk factors and treatment. *Futur J Pharm Sci.* 2020;6:130. <https://doi.org/10.1186/s43094-020-00151-w>.
48. Tripathy JP. Burden and risk factors of diabetes and hyperglycemia in India: findings from the Global Burden of Disease Study 2016. *Diabetes Metab Syndr Obes.* 2018;11:381–7. doi: 10.2147/DMSO.S157376.
49. Roth GA, Mensah GA, Johnson CO, Addolorato G, Ammirati E, Baddour LM, et al.; GBD-NHLBI-JACC Global Burden of Cardiovascular Diseases Writing Group. Global Burden of Cardiovascular Diseases and Risk Factors, 1990–2019: Update from the GBD 2019 Study. *J Am Coll Cardiol.* 2020;76(25):2982–3021. doi: 10.1016/j.jacc.2020.11.010.
50. Gupta PC, Pednekar MS, Parkin DM, Sankaranarayanan R. Tobacco associated mortality in Mumbai (Bombay) India. Results of the Bombay Cohort Study. *Int J Epidemiol.* 2005;34(6):1395–402. doi: 10.1093/ije/dyi196.
51. Kaur P, Ramachandra Rao S, Venkatachalam R, Kangusamy B, Radhakrishnan E, Kaliaperumal K, et al. Risk factors for cardiovascular disease in rural South India: cohort study. *BMJ Open.* 2019;9(10):e029759. doi: 10.1136/bmjopen-2019-029759.
52. Koshy L, Easwer HV, Premkumar S, Alapatt JP, Pillai AM, Nair S, et al. Risk factors for aneurysmal subarachnoid hemorrhage in an Indian population. *Cerebrovasc Dis.* 2010;29(3):268–74. doi: 10.1159/000275501.
53. Gajalakshmi V, Kanimozhi V. Tobacco chewing and adult mortality: a case-control analysis of 22,000 cases and 429,000 controls, never smoking tobacco and never drinking alcohol, in South India. *Asian Pac J Cancer Prev.* 2015;16(3):1201–6. doi: 10.7314/apjcp.2015.16.3.1201.
54. WHO SEARO. The fatal link between tobacco and cardiovascular diseases in the WHO South-East Asia Region, May 2018. India Factsheet. Available from: [https://apps.who.int/iris/bitstream/handle/10665/272672/wntd\\_2018\\_india\\_fs.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/272672/wntd_2018_india_fs.pdf?sequence=1), accessed 30 August 2022.
55. India State-Level Disease Burden Initiative CVD Collaborators. The changing patterns of cardiovascular diseases and their risk factors in the states of India: the Global Burden of Disease Study 1990–2016. *Lancet Glob Health.* 2018;6(12):e1339–e1351. doi: 10.1016/S2214-109X(18)30407-8.
56. Hernandez AM, Jia P, Kim HY, Cuadros DF. Geographic variation and associated covariates of diabetes prevalence in India. *JAMA Netw*

Open. 2020;3(5):e203865. doi: 10.1001/jamanetworkopen.2020.3865.

### 4.4 Tobacco smoking and lung disease

57. WHO. Factsheets, Asthma. Geneva, Switzerland: WHO; 2022a. Available from: <https://www.who.int/news-room/fact-sheets/detail/asthma>, accessed 31 August 2022.
58. WHO. Factsheets, Chronic Obstructive Pulmonary Disease Geneva, Switzerland: WHO; 2022b. Available from: [https://www.who.int/news-room/fact-sheets/detail/chronic-obstructive-pulmonary-disease-\(copd\)](https://www.who.int/news-room/fact-sheets/detail/chronic-obstructive-pulmonary-disease-(copd)), accessed 31 August 2022.
59. Koul PA, Hakim NA, Malik SA, Khan UH, Patel J, Gnatiuc L, et al. Prevalence of chronic airflow limitation in Kashmir, North India: results from the BOLD study. *Int J Tuberc Lung Dis.* 2016;20(10):1399–404. doi: 10.5588/ijtld.15.0968.
60. Sinha B, Vibha, Singla R, Chowdhury R. An epidemiological profile of chronic obstructive pulmonary disease: a community-based study in Delhi. *J Postgrad Med.* 2017;63(1):29–35. doi: 10.4103/0022-3859.194200.
61. Singh SK, Gupta J, Sharma H, Pedgaonkar SP, Gupta N. Socio-economic correlates and Spatial Heterogeneity in the Prevalence of Asthma among Young Women in India. *BMC Pulm Med.* 2020;20(1):190. doi: 10.1186/s12890-020-1124-z.
62. Jindal SK, Aggarwal AN, Gupta D, Agarwal R, Kumar R, Kaur T, et al. Indian study on epidemiology of asthma, respiratory symptoms and chronic bronchitis in adults (INSEARCH). *Int J Tuberc Lung Dis.* 2012;16(9):1270–7. doi: 10.5588/ijtld.12.0005.
63. Vardavas CI, Nikitara K. COVID-19 and smoking: a systematic review of the evidence. *Tob Induc Dis.* 2020;18:20. doi: 10.18332/tid/119324.
64. Rodgers A, Nadkarni M, Indreberg EK, Alfallaj L, Kabir Z. Smoking and COVID-19: a literature review of cohort studies in non-Chinese population settings. *Tob Use Insights.* 2021;14:1179173X20988671. doi: 10.1177/1179173X20988671.
65. McFadden DD, Bornstein SL, Vassallo R, Salonen BR, Bhuiyan MN, Schroeder DR, et al. Symptoms COVID-19 positive vapers compared to COVID-19 positive non-vapers. *J Prim Care Community Health.* 2022;13:21501319211062672. doi: 10.1177/21501319211062672.
66. Singh RB, Singh S, Chattopadhyaya P, Singh K, Singh V, Kulshrestha SK, et al. Tobacco consumption in relation to causes of death in an urban population of north India. *Int J Chron Obstruct Pulmon Dis.* 2007;2(2):177–85. PMID: 18044690.
67. GBD 2015 Chronic Respiratory Disease Collaborators. Global, regional, and national deaths, prevalence, disability-adjusted life years, and years lived with



disability for chronic obstructive pulmonary disease and asthma, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet Respir Med.* 2017;5(9):691–706. doi: 10.1016/S2213-2600(17)30293-X.

68. Gupta D, Aggarwal A, Jindal S. Pulmonary effects of passive smoking: the Indian experience. *Tob Induc Dis.* 2002;1(2):129–36. doi: 10.1186/1617-9625-1-2-129.

## 4.5 Smoking and pulmonary tuberculosis

69. Cui Y, Shen H, Wang F, Wen H, Zeng Z, Wang Y, et al. A long-term trend study of tuberculosis incidence in China, India and United States 1992–2017: a joinpoint and age-period-cohort analysis. *Int J Environ Res Public Health.* 2020;17(9):3334. doi: 10.3390/ijerph17093334.
70. Gupta PC, Pednekar MS, Parkin DM, Sankaranarayanan R. Tobacco associated mortality in Mumbai (Bombay) India. Results of the Bombay Cohort Study. *Int J Epidemiol.* 2005;34(6):1395–402. doi: 10.1093/ije/dyi196.
71. Pednekar MS, Gupta PC. Prospective study of smoking and tuberculosis in India. *Prev Med.* 2007;44(6):496–8. doi: 10.1016/j.ypmed.2007.02.017.
72. Jha P, Jacob B, Gajalakshmi V, Gupta PC, Dhingra N, Kumar R, et al.; RGI-CGHR Investigators. A nationally representative case-control study of smoking and death in India. *N Engl J Med.* 2008;358(11):1137–47. doi: 10.1056/NEJMsa0707719.
73. Shetty N, Shemko M, Vaz M, D'Souza G. An epidemiological evaluation of risk factors for tuberculosis in South India: a matched case control study. *Int J Tuberc Lung Dis.* 2006;10(1):80–6. PMID: 16466042.
74. Dhamgaye TM. Tobacco smoking and pulmonary tuberculosis: a case-control study. *J Indian Med Assoc.* 2008;106(4):216–9. PMID: 18828338.
75. Prasad R, Suryakant, Garg R, Singhal S, Dawar R, Agarwal GG. A case-control study of tobacco smoking and tuberculosis in India. *Ann Thorac Med.* 2009;4(4):208–10. doi: 10.4103/1817-1737.56007.
76. Gambhir HS, Kaushik RM, Kaushik R, Sindhvani G. Tobacco smoking-associated risk for tuberculosis: a case-control study. *Int Health.* 2010;2(3):216–22. doi: 10.1016/j.inhe.2010.07.001.
77. Rao VG, Bhat J, Yadav R, Sharma RK, Muniyandi M. A comparative study of the socio-economic risk factors for pulmonary tuberculosis in the Saharia tribe of Madhya Pradesh, India. *Trans R Soc Trop Med Hyg.* 2018 Jun 1;112(6):272–278. doi: 10.1093/trstmh/try052. PMID: 29931208
78. Tewatia P, Kaushik RM, Kaushik R, Kumar S. Tobacco smoking as a risk factor for tuberculous pleural effusion: a case-control study. *Glob Health Epidemiol Genom.* 2020;5:e1. doi: 10.1017/gheg.2020.1.
79. Kolappan C, Gopi PG, Subramani R, Narayanan PR. Selected biological and behavioural risk factors associated with pulmonary tuberculosis. *Int J Tuberc Lung Dis.* 2007;11(9):999–1003. PMID: 17705978.
80. Rao VG, Gopi PG, Bhat J, Yadav R, Selvakumar N, Wares DF. Selected risk factors associated with pulmonary tuberculosis among Saharia tribe of Madhya Pradesh, central India. *Eur J Public Health.* 2012;22(2):271–3. doi: 10.1093/eurpub/ckr009.
81. Rao VG, Bhat J, Yadav R, Muniyandi M, Bhondeley MK, Sharada MA, et al. Tobacco smoking: a major risk factor for pulmonary tuberculosis—evidence from a cross-sectional study in central India. *Trans R Soc Trop Med Hyg.* 2014;108(8):474–81. doi: 10.1093/trstmh/tru082.
82. Thomas A, Gopi PG, Santha T, Chandrasekaran V, Subramani R, Selvakumar N, et al. Predictors of relapse among pulmonary tuberculosis patients treated in a DOTS programme in South India. *Int J Tuberc Lung Dis.* 2005;9(5):556–61. PMID: 15875929.
83. Thomas BE, Thiruvengadam K, Rani S, Kadam D, Ovung S, Sivakumar S, et al.; CTRIUMPH-REPORT India Study. Smoking, alcohol use disorder and tuberculosis treatment outcomes: a dual co-morbidity burden that cannot be ignored. *PLoS One.* 2019;14(7):e0220507. doi: 10.1371/journal.pone.0220507. Erratum in: *PLoS One.* 2019;14(11):e0224914. PMID: 31365583; PMCID: PMC6668833.
84. Gajalakshmi V, Kanimozhi V. Tobacco chewing and adult mortality: a case-control analysis of 22,000 cases and 429,000 controls, never smoking tobacco and never drinking alcohol, in South India. *Asian Pac J Cancer Prev.* 2015;16(3):1201–6. doi: 10.7314/apjcp.2015.16.3.1201.
85. Patra J, Bhatia M, Suraweera W, Morris SK, Patra C, Gupta PC, et al. Exposure to second-hand smoke and the risk of tuberculosis in children and adults: a systematic review and meta-analysis of 18 observational studies. *PLoS Med.* 2015;12(6):e1001835; discussion e1001835. doi: 10.1371/journal.pmed.1001835.
86. Ramachandran R, Indu PS, Anish TS, Nair S, Lawrence T, Rajasi RS. Determinants of childhood tuberculosis—a case control study among children registered under revised national tuberculosis control programme in a district of South India. *Indian J Tuberc.* 2011;58:204–7. PMID: 22533171
87. Patra S, Sharma S, Behera D. Passive smoking, indoor air pollution and childhood tuberculosis: a case control study. *Indian J Tuberc.* 2012;59:151–55. PMID: 23362712

## 4.6 Tobacco and reproductive outcomes

88. Pratinidhi A, Gandham S, Shrotri A, Patil A, Pardeshi S. Use of 'Mishri' A smokeless form of tobacco during pregnancy and its perinatal outcome. *Indian J Community Med.* 2010;35(1):14–8. Doi: 10.4103/0970-0218.62547.
89. Deshpande PS, Gupta AS. Causes and prevalence of factors causing infertility in a public health facility. *J Hum Reprod Sci.* 2019;12(4):287–93. Doi: 10.4103/jhrs.JHRS\_140\_18.
90. Subramoney S, Gupta PC. Anemia in pregnant women who use smokeless tobacco. *Nicotine Tob Res.* 2008;10(5):917–20. Doi: 10.1080/14622200802027206.
91. Mistry R, Jones AD, Pednekar MS, Dhumal G, Dasika A, Kulkarni U, et al. Antenatal tobacco use and iron deficiency anemia: integrating tobacco control into antenatal care in urban India. *Reprod Health.* 2018;15(1):72. Doi: 10.1186/s12978-018-0516-5.
92. Gupta PC, Subramoney S. Smokeless tobacco use and risk of stillbirth: a cohort study in Mumbai, India. *Epidemiology.* 2006;17(1):47–51. Doi: 10.1097/01.ede.0000190545.19168.c4.
93. Altijani N, Carson C, Choudhury SS, Rani A, Sarma UC, Knight M, et al. Stillbirth among women in nine states in India: rate and risk factors in study of 886,505 women from the annual health survey. *BMJ Open.* 2018;8(11):e022583. Doi: 10.1136/bmjopen-2018-022583.
94. Suliankatchi RA, Sinha DN. The human cost of tobacco chewing among pregnant women in India: a systematic review and meta-analysis. *J Obstet Gynaecol India.* 2016;66(Suppl 1):161–6. Doi: 10.1007/s13224-015-0821-7.
95. Chanda S, Dogra V, Hazarika N, Bambrab H, Sudke AK, Vig A, et al. Prevalence and predictors of gestational diabetes mellitus in rural Assam: a cross-sectional study using mobile medical units. *BMJ Open.* 2020;10(11):e037836. Doi: 10.1136/bmjopen-2020-037836.
96. Christian P, West KP Jr, Katz J, Kimbrough-Pradhan E, LeClerq SC, Khatri SK, et al. Cigarette smoking during pregnancy in rural Nepal. Risk factors and effects of beta-carotene and vitamin A supplementation. *Eur J Clin Nutr.* 2004;58(2):204–11. doi: 10.1038/sj.ejcn.1601767.
97. Khattar D, Awasthi S, Das V. Residential environmental tobacco smoke exposure during pregnancy and low birth weight of neonates: case control study in a public hospital in Lucknow, India. *Indian Pediatr.* 2013;50(1):134–8. doi: 10.1007/s13312-013-0035-y.
98. Subramoney S, Tursan D'Espaignet E, Chandra Gupta P. Higher risk of stillbirth among lower and middle income women who do not use tobacco, but live with smokers. *Acta Obstet Gynecol Scand.* 2010;89(4):572–7. doi: 10.3109/00016341003801656.
99. Jayaraj NP, Rath A, Taneja DK. Exposure to household air pollution during pregnancy and birthweight. *Indian Pediatr.* 2019;56(10):875–6. PMID: 31724545.
100. Jackson C, Huque R, Satyanarayana V, Nasreen S, Kaur M, Barua D, et al. "He doesn't listen to my words at all, so I don't tell him anything" – A qualitative investigation on exposure to second hand smoke among pregnant women, their husbands and family members from Rural Bangladesh and Urban India. *Int J Environ Res Public Health.* 2016;13(11):1098. doi: 10.3390/ijerph13111098.
101. Radhika AG, Bhaskaran S, Kaur J, Singla A, Sharma T, Banerjee BD. Assessment of urinary cotinine levels in women with gynecological complaints at a tertiary care hospital: a pilot study. *Indian J Public Health.* 2017;61(Suppl 1):S63–S65. doi: 10.4103/ijph.IJPH\_266\_17.
102. Said TM, Ranga G, Agarwal A. Relationship between semen quality and tobacco chewing in men undergoing infertility evaluation. *Fertil Steril.* 2005;84(3):649–53. doi: 10.1016/j.fertnstert.2005.03.052.
103. Kalyani R, Basavaraj PB, Kumar ML. Factors influencing quality of semen: a two year prospective study. *Indian J Pathol Microbiol.* 2007;50(4):890–5. PMID: 18306599.
104. Kumar S, Murarka S, Mishra VV, Gautam AK. Environmental and lifestyle factors in deterioration of male reproductive health. *Indian J Med Res.* 201;140 Suppl(Suppl 1):S29–35. PMID: 25673539.
105. Deshpande PS, Gupta AS. Causes and prevalence of factors causing infertility in a public health facility. *J Hum Reprod Sci.* 2019;12(4):287–93. doi: 10.4103/jhrs.JHRS\_140\_18.
106. Singh S, Mini GK, Thankappan KR. Tobacco use during pregnancy in rural Jharkhand, India. *Int J Gynaecol Obstet.* 2015;131(2):170–3. doi: 10.1016/j.ijgo.2015.05.021.
107. Nair S, Schensul JJ, Begum S, Pednekar MS, Oncken C, Bilgi SM, et al. Use of smokeless tobacco by Indian women aged 18–40 years during pregnancy and reproductive years. *PLoS One.* 2015;10(3):e0119814. doi: 10.1371/journal.pone.0119814.
108. Begum S, Schensul JJ, Nair S, Donta B. Initiating smokeless tobacco use across reproductive stages. *Asian Pac J Cancer Prev.* 2015;16(17):7547–54. doi: 10.7314/apjcp.2015.16.17.7547.
109. Dherani M, Zehra SN, Jackson C, Satyanarayana V, Huque R, Chandra P, et al. Behaviour change interventions to reduce second-hand smoke exposure at home in pregnant women – a systematic review and intervention appraisal. *BMC Pregnancy Childbirth.* 2017;17(1):378. doi: 10.1186/s12884-017-1562-7.



110. Sardesai SP, Shinde NS, Patil SB, Rayate MN, Muley B. Tobacco handling by pregnant *Bidi* workers: as hazardous as smoking during pregnancy. *J Obstet Gynecol India* 2007;57:335-8. Available from: <https://jogi.co.in/article/q284d484/tabacco-handling-by-pregnant-bidi-workers-as-hazardous-as-smoking-during-pregnancy->, accessed 31 August 2022.
  111. Shenoy RD, Sindgikar SP, Shenoy V, Uppoor R, Rao R, Singh S. Pregnancy outcome in occupational tobacco exposure: a cohort study from south India. *Indian J Community Med.* 2020;45(1):54-9. doi: 10.4103/ijcm.IJCM\_195\_19.
  112. Rehman AM, Gladstone BP, Verghese VP, Muliyl J, Jaffar S, Kang G. Chronic growth faltering amongst a birth cohort of Indian children begins prior to weaning and is highly prevalent at three years of age. *Nutr J.* 2009;8:44. doi: 10.1186/1475-2891-8-44.
- ## 4.7 Tobacco-induced oral diseases
113. Reibel J. Tobacco and oral diseases. Update on the evidence, with recommendations. *Med Princ Pract.* 2003;12 Suppl 1:22-32. doi: 10.1159/000069845.
  114. Sharma A, Ranga P. Prevalence of Periodontitis in Nuh (Haryana State): the most backward district of India. *Contemp Clin Dent.* 2019;10(2):344-8. doi: 10.4103/ccd.ccd\_594\_18.
  115. Sridharan G. Epidemiology, control and prevention of tobacco induced oral mucosal lesions in India. *Indian J Cancer.* 2014;51(1):80-5. doi: 10.4103/0019-509X.134651.
  116. Sahoo PK, Sarkar S, Ghosh D, Mahata S, Pal R, Mistry T, et al. Premalignant and malignant lesions of oral cavity in eastern India: a hospital-based study. *Eur J Cancer Prev.* 2021;30(5):393-9. doi: 10.1097/CEJ.0000000000000640.
  117. Burungale SU, Durge PM, Burungale DS, Zambare M. Epidemiological study of premalignant and malignant lesions of the oral cavity. *Journal of Academia and Industrial Research (JAIR).* 2014;2(9):519-23. Available from: <http://jairjp.com/FEBRUARY%202014/07%20BURUNGAL.pdf>, accessed 1 September 2022.
  118. Narasannavar DA, Wantamutte DA. Prevalence of oral precancerous lesions and conditions among tobacco consumers in rural population around Belgaum. A community based cross sectional study. *IOSR J Dent Med Sci.* 2014;13(4):31-4. Available from: <https://www.iosrjournals.org/iosr-jdms/papers/Vol13-issue4/Version-3/J013433134.pdf>, accessed 1 September 2022.
  119. Kumar S, Debnath N, Ismail MB, Kumar A, Kumar A, Badiyani BK, et al. Prevalence and risk factors for oral potentially malignant disorders in Indian population. *Adv Prev Med.* 2015;2015:208519. doi: 10.1155/2015/208519.
  120. Pahwa V, Nair S, Shetty RS, Kamath A. Prevalence of oral premalignant lesions and its risk factors among the adult population in Udupi taluk of coastal Karnataka, India. *Asian Pac J Cancer Prev.* 2018;19(8):2165-70. doi: 10.22034/APJCP.2018.19.8.2165.
  121. Sivakumar TT, Sam N, Joseph AP. Prevalence of oral potentially malignant disorders and oral malignant lesions: a population-based study in a municipal town of southern Kerala. *J Oral Maxillofac Pathol.* 2018;22(3):413-14. doi: 10.4103/jomfp.JOMFP\_202\_17.
  122. Reddy SS, Prashanth R, Yashodha Devi BK, Chugh N, Kaur A, et al. Prevalence of oral mucosal lesions among chewing tobacco users: a cross-sectional study. *Indian J Dent Res.* 2015;26(5):537-41. doi: 10.4103/0970-9290.172083.
  123. Krishna Priya M, Srinivas P, Devaki T. Evaluation of the prevalence of oral mucosal lesions in a population of eastern coast of south India. *J Int Soc Prev Community Dent.* 2018;8(5):396-401. doi: 10.4103/jispcd.JISPCD\_207\_17.
  124. Nigam NK, Aravinda K, Dhillion M, Gupta S, Reddy S, Srinivas Raju M. Prevalence of oral submucous fibrosis among habitual gutkha and areca nut chewers in Moradabad district. *J Oral Biol Craniofac Res.* 2014;4(1):8-13. doi: 10.1016/j.jobcr.2013.10.005.
  125. Warnakulasuriya S, Kashyap R, Dasanayake AP. Is workplace screening for potentially malignant oral disorders feasible in India? *J Oral Pathol Med.* 2010;39(9):672-6. doi: 10.1111/j.1600-0714.2010.00915.x.
  126. Shetty P, Khargekar NC, Debnath A, Khargekar NR, Srivastava BK, Hakeen NEF. Determinants of tobacco use and prevalence of oral precancerous lesions in cab drivers in Bengaluru City, India. *Int J Prev Med.* 2017;8:100. doi: 10.4103/ijpvm.IJPVM\_225\_17.
  127. Bhat PK, Kumar A, Aruna CN, Badiyani BK, Jayachandra MY. Assessment of oral mucosal conditions among beedi workers residing in beedi workers colonies in Karnataka, India. *J Oral Maxillofac Pathol.* 2018;22(3):298-302. doi: 10.4103/jomfp.JOMFP\_140\_18.
  128. Baishya B, Satpathy A, Nayak R, Mohanty R. Oral hygiene status, oral hygiene practices and periodontal health of brick kiln workers of Odisha. *J Indian Soc Periodontol.* 2019;23(2):163-7. doi: 10.4103/jisp.jisp\_383\_18.
  129. Uplap P, Mishra G, Majumdar P, Gupta S, Rane P, Sadalge P, et al. Oral cancer screening at workplace in India-One-year follow-up. *Indian J Community Med.* 2011;36(2):133-8. doi: 10.4103/0970-0218.84133.
  130. Mishra GA, Shastri SS, Uplap PA, Majmudar PV, Rane PS, Gupta SD. Establishing a model workplace tobacco cessation program in India. *Indian J Occup Environ Med.* 2009a;13(2):97-103. doi: 10.4103/0019-5278.55129.

131. Mishra GA, Majmudar PV, Gupta SD, Rane PS, Uplap PA, Shastri SS. Workplace tobacco cessation program in India: a success story. *Indian J Occup Environ Med.* 2009;13(3):146–53. doi: 10.4103/0019-5278.58919.
132. Srivastava VK. To study the prevalence of premalignancies in teenagers having betel, gutkha, khaini, tobacco chewing, beedi and ganja smoking habit and their association with social class and education status. *Int J Clin Pediatr Dent.* 2014;7(2):86–92. doi: 10.5005/jp-journals-10005-1243.
133. Patil S, Doni B, Maheshwari S. Prevalence and distribution of oral mucosal lesions in a geriatric Indian population. *Can Geriatr J.* 2015;18(1):11–4. doi: 10.5770/cgj.18.123.
134. Cheruvathoor DD, Thomas V, Kumar NR, Jose M. High prevalence of oral mucosal lesions in elderly: call for revolutionizing geriatric dental care strategies. *J Family Med Prim Care.* 2020;9(8):4375–80. doi: 10.4103/jfmpc.jfmpc\_51\_20.
135. Yadav NR, Jain M, Sharma A, Yadav R, Pahuja M, Jain V. Distribution and prevalence of oral mucosal lesions in residents of old age homes in Delhi, India. *Nepal J Epidemiol.* 2018;8(2):727–34. doi: 10.3126/nje.v8i2.18708.
136. Agarwal A, Chandel S, Singh N, Singhal A. Use of tobacco and oral sub mucous fibrosis in teenagers. *J Dent Sci Res.* 2018;3(3):1–4.
137. Singh P, Mittal R, Chandak S, Bhondey A, Rath A, Chandwani M. Prevalence of oral submucous fibrosis in children of rural area of Nagpur, Maharashtra, India. *Int J Prev Clin Dent Res.* 2016;3(4):243–5. Available from: [http://www.ijpcdr.com/pdf/2016/October-December/10743\\_ORIGINAL%20ARTICLE.pdf](http://www.ijpcdr.com/pdf/2016/October-December/10743_ORIGINAL%20ARTICLE.pdf), accessed 1 September 2022.
138. Hazarey VK, Erlewad DM, Mundhe KA, Ughade SN. Oral submucous fibrosis: study of 1000 cases from central India. *J Oral Pathol Med.* 2007;36(1):12–17. doi: 10.1111/j.1600-0714.2006.00485.x.
139. Mehrotra R, Pandya S, Chaudhary AK, Kumar M, Singh M. Prevalence of oral pre-malignant and malignant lesions at a tertiary level hospital in Allahabad, India. *Asian Pac J Cancer Prev.* 2008;9(2):263–5. PMID: 18712970.
140. Sharma R, Raj SS, Miahra G, Reddy YG, Shenava S, Narang P. Prevalence of oral submucous fibrosis in patients visiting dental college in rural area of Jaipur, Rajasthan. *J Indian Acad Oral Med Radiol.* 2012;24(1):1–4.

## 4.8 Green tobacco sickness

141. Parikh JR, Gokani VN, Doctor PB, Kulkarni PK, Shah AR, Saiyed HN. Acute and chronic health effects due to green tobacco exposure in agricultural workers. *Am J Ind Med.* 2005;47(6):494–9. doi: 10.1002/ajim.20162.

142. Acharya D, Lee K. How to prevent and manage green tobacco sickness? *Indian J Occup Environ Med.* 2018;22(2):115. doi: 10.4103/ijoom.IJOEM\_93\_18.
143. Achalli S, Shetty SR, Babu SG. The green hazards: a meta-analysis of green tobacco sickness. *International Journal of Occupational Safety and Health.* 2012;2(1):11–14. DOI: <https://doi.org/10.3126/ijosh.v2i1.4963>.
144. Fotedar S, Fotedar V. Green tobacco sickness: a brief review. *Indian J Occup Environ Med.* 2017;21(3):101–104. doi: 10.4103/ijoom.IJOEM\_160\_17.

## 4.9 Health effects of electronic nicotine delivery system

145. Chakma JK, Kumar H, Bhargava S, Khanna T. The e-cigarettes ban in India: an important public health decision. *Lancet Public Health.* 2020;5(8):e426. doi: 10.1016/S2468-2667(20)30063-3.
146. Bhatt JM, Ramphul M, Bush A. An update on controversies in e-cigarettes. *Paediatr Respir Rev.* 2020;36:75–86. doi: 10.1016/j.prrv.2020.09.003.
147. Bhavé SY, Chadi N. E-cigarettes and vaping: a global risk for adolescents. *Indian Pediatr.* 2021;58(4):315–19. PMID: 33883308.
148. Truth Initiative. Colliding crises: youth mental health and nicotine use. 19 September 2021. Available from: <https://truthinitiative.org/research-resources/emerging-tobacco-products/colliding-crises-youth-mental-health-and-nicotine-use>, accessed 1 September 2022.
149. Grant JE, Lust K, Fridberg DJ, King AC, Chamberlain SR. E-cigarette use (vaping) is associated with illicit drug use, mental health problems, and impulsivity in university students. *Ann Clin Psychiatry.* 2019;31(1):27–35. PMID: 30699215.
150. Oh H, Banawa R, Lee JO, Zhou S, Huh J. Vaping and psychotic experiences among college students in the United States. *Drug Alcohol Depend.* 2021;227:108987. doi: 10.1016/j.drugalcdep.2021.108987.
151. Hua M, Sadah S, Hristidis V, Talbot P. Health effects associated with electronic cigarette use: automated mining of online forums. *J Med Internet Res.* 2020;22(1):e15684. doi: 10.2196/15684.
152. Ralho A, Coelho A, Ribeiro M, Paula A, Amaro I, Sousa J, et al. Effects of electronic cigarettes on oral cavity: a systematic review. *J Evid Based Dent Pract.* 2019;19(4):101318. doi: 10.1016/j.jebdp.2019.04.002.
153. Vishal Rao US, Arakeri G, Ravishankar S, Kar A, Thakur S, Li RJ, et al. The E-cigarette ban in India-A step in the right direction? *J Oral Pathol Med.* 2020;49(7):617–20. doi: 10.1111/jop.13012.

154. Yadav A, Yadav N. Ban on electronic nicotine delivery systems in India. RGNUL Student Research Review. 2020;6(62):62–87. Available from: <http://rsrr.in/wp-content/uploads/2020/07/BAN-ON-ELECTRONIC-NICOTINE-DELIVERY.pdf>, accessed 1 September 2022.

#### 4.10 Tobacco, alcohol, drugs: interlinkages

155. Ministry of Agriculture and Farmers Welfare. Agricultural Statistics at a Glance 2020. Directorate of Economics and Statistics, Government of India; 2021. Available from: [https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20\(English%20version\).pdf](https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20(English%20version).pdf), accessed 1 September 2022.

156. La Costa LG, Giordano G, Aschner M. Ethanol. In: Aminoff MJ, Daroff R, editors. Encyclopedia of the Neurological Sciences, Second Edition. Academic Press; 2014: pp 216–18.

157. Jacob BJ, Straif K, Thomas G, Ramadas K, Mathew B, Zhang ZF, et al. Betel quid without tobacco as a risk factor for oral precancers. Oral Oncol. 2004;40(7):697–704. doi: 10.1016/j.oraloncology.2004.01.005.

158. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Betel-quid and areca-nut chewing and some areca-nut derived nitrosamines. IARC Monogr Eval Carcinog Risks Hum. 2004;85:1–334. PMID: 15635762.

159. Arora M, Shrivastava S, Mishra VK, Mathur MR. Use of betel quid in India from 2009 to 2017: an epidemiological analysis of the Global Adult Tobacco Survey (GATS). Subst Use Misuse. 2020;55(9):1465–71. doi: 10.1080/10826084.2020.1726393.

160. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Personal habits and indoor combustions. Volume 100 E. A review of human carcinogens. IARC Monogr Eval Carcinog Risks Hum. 2012;100(Pt E):1–538. PMID: 23193840.

161. Muwonge R, Ramadas K, Sankila R, Thara S, Thomas G, Vinoda J, et al. Role of tobacco smoking, chewing and alcohol drinking in the risk of oral cancer in Trivandrum, India: a nested case-control design using incident cancer cases. Oral Oncol. 2008;44(5):446–54. doi: 10.1016/j.oraloncology.2007.06.002.

162. Mahapatra S, Kamath R, Shetty BK, Binu VS. Risk of oral cancer associated with gutka and other tobacco products: a hospital-based case-control study. J Cancer Res Ther. 2015;11(1):199–203. doi:10.4103/0973-1482.143332.

163. Madani AH, Dikshit M, Bhaduri D. Risk for oral cancer associated to smoking, smokeless and oral dip products. Indian J Public Health. 2012;56(1):57–60. doi:10.4103/0019-557X.96977.

164. Zhang LN, Yang YM, Xu ZR, Gui QF, Hu QQ. Chewing substances with or without tobacco and risk of cardiovascular disease in Asia: a meta-analysis. J Zhejiang Univ Sci B. 2010;11(9):681–9. doi: 10.1631/jzus.B1000132.

165. Tsai WC, Wu MT, Wang GJ, Lee KT, Lee CH, Lu YH, et al. Chewing areca nut increases the risk of coronary artery disease in Taiwanese men: a case-control study. BMC Public Health. 2012;12:162. doi: 10.1186/1471-2458-12-162.

166. Javed F, Al-Hezaimi K, Warnakulasuriya S. Areca-nut chewing habit is a significant risk factor for metabolic syndrome: a systematic review. J Nutr Health Aging. 2012;16(5):445–8. doi: 10.1007/s12603-011-0353-5.

167. Shafique K, Zafar M, Ahmed Z, Khan NA, Mughal MA, Imtiaz F. Areca nut chewing and metabolic syndrome: evidence of a harmful relationship. Nutr J. 2013;12:67. doi: 10.1186/1475-2891-12-67.

168. Garg A, Chaturvedi P, Gupta PC. A review of the systemic adverse effects of areca nut or betel nut. Indian J Med Paediatr Oncol. 2014;35(1):3–9. doi: 10.4103/0971-5851.133702.

169. La Torre G, Sferrazza A, Gualano MR, de Waure C, Clemente G, De Rose AM, et al. Investigating the synergistic interaction of diabetes, tobacco smoking, alcohol consumption, and hypercholesterolemia on the risk of pancreatic cancer: a case-control study in Italy. Biomed Res Int. 2014;2014:481019. doi: 10.1155/2014/481019.

170. Gupta PC, Maulik PK, Pednekar MS, Saxena S. Concurrent alcohol and tobacco use among a middle-aged and elderly population in Mumbai. Natl Med J India. 2005;18(2):88–91. PMID: 15981446.

171. Sinha DN, Gupta PC, Pednekar MS. Prevalence of smoking and drinking among students in north-eastern India. Natl Med J India. 2003;16(1):49–50. PMID: 12715962.

172. Hernandez AM, Jia P, Kim HY, Cuadros DF. Geographic variation and associated covariates of diabetes prevalence in India. JAMA Netw Open. 2020;3(5):e203865. doi: 10.1001/jamanetworkopen.2020.3865.

173. Health Effects of Marijuana. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (CDC); 2021. Available from: <https://www.cdc.gov/marijuana/health-effects/index.html>, accessed 1 September 2022.

174. Cohen N, Fedewa S, Chen AY. Epidemiology and demographics of the head and neck cancer population. Oral Maxillofac Surg Clin North Am. 2018;30(4):381–95. doi: 10.1016/j.coms.2018.06.001.

175. Bhavé SY, Chadi N. E-cigarettes and vaping: a global risk for adolescents. Indian Pediatr. 2021;58(4):315–9. PMID: 33883308.

176. Dwivedi S, Purohit P, Nebhinani N, Sharma P. Effect of severity of opiate use on cardiometabolic profile of chronic opiate dependents of Western Rajasthan. *Indian J Clin Biochem.* 2019;34(3):280–7. doi: 10.1007/s12291-018-0759-5.

#### 4.11 Research gaps in health effects of tobacco in India

177. Chakma JK, Kumar H, Bhargava S, Khanna T. The e-cigarettes ban in India: an important public health decision. *Lancet Public Health.* 2020;5(8):e426. doi: 10.1016/S2468-2667(20)30063-3.
178. Parikh S. We need to fill the gap between what we know and don't know about e-cigarettes. *Health Affairs Forefront*; 5 May 2016. Available from: <https://www.healthaffairs.org/doi/10.1377/forefront.20160505.054779/full/>, accessed 1 September 2022.
179. Mishra VK, Kim KH, Samaddar P, Kumar S, Aggarwal ML, Chacko KM. Review on metallic components released due to the use of electronic cigarettes. *Environ Eng Res.* 2017;22(2):131–40. DOI: <https://doi.org/10.4491/eer.2017.056>.
180. Gaur S, Agnihotri R. Health effects of trace metals in electronic cigarette aerosols—a systematic review. *Biol Trace Elem Res.* 2019;188(2):295–315. doi: 10.1007/s12011-018-1423-x.
181. Williams M, Bozhilov K, Ghai S, Talbot P. Elements including metals in the atomizer and aerosol of disposable electronic cigarettes and electronic hookahs. *PLoS One.* 2017;12(4):e0175430. doi: 10.1371/journal.pone.0175430.
182. Ali M, Jawad M. Health Effects of Waterpipe Tobacco Use: Getting the Public Health Message Just Right. *Tob Use Insights.* 2017;10:1179173X17696055. doi: 10.1177/1179173X17696055.
183. Pandey P. Rising popularity of “tobacco-free” hookah among youth: A burgeoning public health challenge for India! *Int J Non-Commun Dis.* 2017;2(2):30–5. Available from: <https://www.ijncd.org/text.asp?2017/2/2/30/211073>, accessed 1 September 2022.
184. Aslam HM, Saleem S, German S, Qureshi WA. Harmful effects of shisha: literature review. *Int Arch Med.* 2014;7:16. doi: 10.1186/1755-7682-7-16.
185. Mehrotra R, Yadav A, Sinha DN, Parascandola M, John RM, Ayo-Yusuf O, et al. Smokeless tobacco

control in 180 countries across the globe: call to action for full implementation of WHO FCTC measures. *Lancet Oncol.* 2019;20(4):e208–e217. doi: 10.1016/S1470-2045(19)30084-1.

186. Dandona R, Mathur MR, Kumar GA, Dandona L. Improving utility of data on cancer mortality risk associated with smokeless tobacco: recommendations for future research. *Asian Pac J Cancer Prev.* 2019;20(2):581–88. doi: 10.31557/APJCP.2019.20.2.581.
187. Gupta PC, Arora M, Sinha DN, Asma S, Parascandola M, editors; *Smokeless Tobacco and Public Health in India.* Ministry of Health and Family Welfare, Government of India; New Delhi; 2016. Available from: <https://untobaccocontrol.org/kh/smokeless-tobacco/smokeless-tobacco-public-health-india/>, accessed 1 September 2022.
188. Sinha DN, Abdulkader RS, Gupta PC. Smokeless tobacco-associated cancers: a systematic review and meta-analysis of Indian studies. *Int J Cancer.* 2016;138(6):1368–79. doi: 10.1002/ijc.29884.
189. Katuri KK, Alluri JK, Chintagunta C, Tadiboina N, Borugadda R, Loya M, et al. Assessment of periodontal health status in smokers and smokeless tobacco users: a cross-sectional study. *J Clin Diagn Res.* 2016;10(10):ZC143–ZC146. doi: 10.7860/JCDR/2016/22160.8700.
190. Mohan P, Lando HA, Panneer S. Assessment of tobacco consumption and control in India. *Integr Med Insights.* 2018;9:117991611875928.

### Additional resources

1. Study Designs (Cross-sectional, Case-control, Cohort), Statistics Tutorial, MarinStatsLectures, Sep 24, 2019; Available from: <https://www.youtube.com/watch?v=gXwI9W5wqjc>, accessed 26 October 2022.
2. Odds Ratio, Relative Risk, Risk Difference, Statistics Tutorial #30, MarinStatsLectures, Oct 23, 2018; Available from: [https://www.youtube.com/watch?v=JmuciUfCJ\\_w](https://www.youtube.com/watch?v=JmuciUfCJ_w)
3. Ressing M, Blettner M, Klug SJ. Data analysis of epidemiological studies: part 11 of a series on evaluation of scientific publications. *Dtsch Arztebl Int.* 2010;107(11):187–92. doi: 10.3238/arztebl.2010.0187.





---

# Economics of tobacco control in India

---

**Rijo M. John, Mark Goodchild, Sarit K. Rout**





The tobacco industry in India comprises the production, distribution and consumption of leaf tobacco, smoking tobacco and a variety of smokeless tobacco (SLT) products. On the one hand, it is a source of employment and export earnings, and provides tax revenues to the Central and state governments; while on the other, it causes considerable economic loss due to tobacco-attributable diseases.<sup>1</sup> This chapter presents a brief account of the total output produced, employment created and revenue generated by the tobacco industry, as well as the economic cost of tobacco-attributable diseases in India.

## Tobacco cultivation, production, employment and revenue

India is the second-largest producer of tobacco after China, accounting for 13% of the total global production of tobacco in 2020.<sup>2</sup> Unlike the other tobacco-growing countries, it produces a large variety of tobacco crops, e.g. flue-cured virginia, *natu*, *bidi*, *cigar*, *hookah*, chewing and snuff. The main tobacco-growing states in India are Gujarat, Andhra Pradesh, Karnataka, Uttar Pradesh, West Bengal and Bihar, with the first three accounting

for 85% of the land under tobacco cultivation and 83% of the total production in 2018–2019.<sup>3</sup> In 2020, the total land under tobacco cultivation was 4.5 lakh hectares, and the total production was 7.6 lakh tonnes.<sup>2</sup> It should be noted that tobacco occupies a meagre 0.26% of India's total arable land.<sup>3</sup>

There have been fluctuating trends in the area under tobacco cultivation and the production of raw tobacco over the past 20 years. The area under cultivation and the average production was 4.2 lakh hectares and 6 lakh tonnes, respectively in 1990–1999, and declined to 3.6 lakh hectares and 5.2 lakh tonnes, respectively in 2000–2009. The average yield per hectare, however, increased from 1408 kg per hectare to 1443 kg per hectare over the same period. During 2010–2020, on average, the area under cultivation has gone up to 4.5 lakh hectares and the production has increased to 7.6 lakh tonnes. The yield has gone up to 1705 kg per hectare (Table 5.1). Of the total land area under tobacco cultivation, virginia tobacco (grown in Andhra Pradesh and Karnataka) has the greatest share, followed by *bidi* tobacco (grown in Andhra Pradesh and Gujarat). Most of the varieties of tobacco that are grown are used for the manufacture of both smoked and SLT products.

**Table 5.1: Area under cultivation and production of tobacco in India**

Year	Area harvested (hectares)	Production (tonnes)	Yield (kg/hectare)
2010	444,280	690,000	1,553.1
2011	490,000	830,000	1,693.9
2012	460,000	820,000	1,782.6
2013	445,873	765,154	1,716.1
2014	424,511	719,420	1,694.7
2015	430,962	738,029	1,712.5
2016	435,530	747,977	1,717.4
2017	435,071	752,480	1,729.6
2018	441,617	773,530	1,751.6
2019	444,869	757,996	1,703.9
2020	448,063	761,335	1,699.2

Source: Crop Statistics, Food and Agriculture Organization (2022)<sup>2</sup>

The production activities can be classified into three broad categories: processing of tobacco leaf (stemming and redrying); manufacturing of smoking tobacco (cigarettes, *bidis*, cheroots, etc.); and manufacturing of SLT products (*zarda*, snuff, *paan masala*, *gutkha*, etc.). The gross value added (GVA) from tobacco manufacturing was INR 28,796 crore in 2018–2019, accounting for about 1% of the total manufacturing GVA in that year.<sup>4</sup> An earlier study had shown that the share of smoking tobacco in the total value of the manufacture of tobacco was 82%, followed by SLT and processing.<sup>5</sup> Further, *bidi* contributed 58% of the total output in the smoking segment in 2010–2011.<sup>5</sup> *Bidi* industry data showed that unregistered manufacturing units constituted 99.31% of the total manufacturing units in 2010–2011 – an indication of the extent of informality in the industry. A study published in 2020, using the Annual Survey of Industries (2000–2001 to 2011–2012) and the Enterprises Survey (2000–2001, 2005–2006 and 2010–2011), showed that in 2010–2011, the *bidi* industry accounted for only 0.65% of the total GVA contributed by the entire manufacturing sector in India.<sup>6</sup>

There is no single source of data on employment in the tobacco industry, as the sector is quite diverse – engaging farmers for growing tobacco; and workers for manufacturing, processing, *bidi* rolling, trade and business. A recent study that combined various reports suggests that around 72.5 lakh workers are engaged in the tobacco sector, with a majority employed as *bidi* rollers and *tendu* leaf pluckers.<sup>7</sup> The study estimates the number of *bidi* rollers as 36 lakh. However, the recent data from the Government of India (Gol)<sup>8</sup> show that 50 lakh people are employed in the *bidi* industry. Using this updated figure for *bidi* rollers, the total employment in the tobacco sector maybe revised to 86.5 lakh. An earlier study reported that only 0.2% of the rural and 0.1% of the urban male population in the age group of 15–59 years and 1.1% of the rural and 0.8% of the urban female population in the same age group is employed in tobacco manufacturing.<sup>9</sup>

Tobacco generates revenue through indirect taxation and foreign exchange earnings from exports. The average annual revenue collection from tobacco products, including the goods and services tax (GST) and excise duty, for the three financial years from 2018–2019 to 2020–2021 stands at INR 53,750 crore.<sup>10</sup> Prior to the introduction of the GST, cigarettes made the greatest contribution to the total excise tax revenue from tobacco, accounting for more than 80% of it, while the share of *bidis* was less than 2% and that of SLT products was 17%.<sup>11</sup> The export of tobacco and manufactured tobacco substitutes stood at US\$ 877 million (INR 6510 crore) during the financial year 2020–2021 according to the Ministry of Commerce and Industry, Gol.

## Economic burden of tobacco use

Tobacco use imposes a heavy economic burden not only on the users, but also their families and the society at large. Smokers cause losses to their employers by taking smoking breaks during work and by taking leave from work for hospital visits. Those who avail themselves of subsidized healthcare to get treated for tobacco-related diseases place a burden on the public exchequer. Deforestation on account of tobacco cultivation and curing can have adverse environmental impacts. The type of costs considered for the estimation of the economic burden of tobacco could vary depending on the perspective of the affected entities. A societal perspective would be the most comprehensive.

Estimates of the costs of tobacco use usually present the economic burden from a macroeconomic perspective, using a cost-of-illness approach.<sup>12</sup> It aggregates the impact of tobacco consumption across all economic agents to derive a societal assessment and classify the estimated costs into direct and indirect costs.

A study<sup>13</sup> on the cost of smoking-attributable diseases in 152 countries, representing 97% of the world's smokers estimated that the worldwide healthcare cost of smoking in 2012 was US\$ 422 billion (INR 20,22,346 crore), accounting for 5.7% of global health expenditure. It also found that the total economic cost of smoking (health expenditures and productivity losses taken together) was US\$ 1436 billion (INR 68,81,727 crore) in 2012, accounting for 1.8% of the world's annual gross domestic product (GDP). Nearly 40% of the cost was incurred in developing countries. This section discusses the different types of costs that tobacco use entails and the estimated cost of each of the components incurred in India.

One common method employed to categorize the costs of tobacco use is to classify them into direct and indirect costs.<sup>12</sup> Direct costs can be either direct healthcare costs or direct non-healthcare costs.<sup>12</sup> Direct healthcare costs include expenditures on hospitalization and outpatient visits, physician services, medications, diagnostic tests and patient transportation. Non-healthcare costs include expenditures incurred on transportation other than ambulance and lodging of caregivers during patient's hospitalization and outpatient visits. Certain other costs,<sup>12</sup> such as property losses from fires caused by smoking, business expenses in hiring and training replacements for sick smokers, and insurance premiums for fire and accident insurance can also be treated as additional components of direct non-healthcare costs.

Indirect costs include morbidity costs and premature mortality costs. The former is the value of the lost productivity of persons who are ill or disabled from diseases related to tobacco use, while the latter is the present value of lives lost prematurely on account of tobacco use.

## Economic burden of tobacco use in India

A recent study<sup>1</sup> in India estimated the direct and indirect costs of smoking and SLT use for people of the age of 35 years or more for the year 2017–2018. Table 5.2 provides details of the components of economic costs of tobacco use by gender, age and type of tobacco use reported by the study, according to which the total economic burden attributable to tobacco use amounted to INR 1,77,341 crore, that is more than 1% of the country's GDP in that year. The study also found that the direct healthcare costs of treating tobacco-related diseases accounted for 5.3% of the total private and public health expenditures in a year. It was observed that for every INR 100 received as excise taxes from tobacco products, INR 816 of costs is imposed on society through its consumption. Another recent study estimated<sup>14</sup> that the annual direct economic costs attributable to second-hand smoking (SHS) among non-smokers of the age of 15 years or above in 2017 amounted to INR 56,670 crore, or 0.33% of the country's GDP that year.

Another study<sup>15</sup> found that the total economic cost of diseases and deaths attributable to *bidi* smoking among persons in the age group of 30–69 years amounted to INR 80,550 crore, or 0.5% of India's GDP in 2017.

## Taxation of tobacco products

Of the many public policies to regulate the use of tobacco, taxation is widely accepted as one of the most cost-effective.<sup>16</sup> In addition to regulating the use of tobacco, it also helps in raising revenue. Studies from around the world show that increased tax on tobacco products reduces overall tobacco use, leads current users to quit, prevents the youth from taking up tobacco, and

**Table 5.2: Annual economic burden from tobacco by type of tobacco used, age and gender in India (INR crore)**

		Direct costs		Indirect costs		Total costs
Age	Gender	Medical	Non-medical	Morbidity	Mortality	
Smoked tobacco						
35–69	Male	18,302	640	3,796	97,447	1,20,186
	Female	1,868	78	216	1,570	3,732
70+	Male	3,285	123	369	1,609	5,386
	Female	1,431	49	105	34	1,618
35+	Male	21,587	763	4,165	99,056	1,25,572
	Female	3,299	127	320	1,604	5,350
Subtotal		24,886	891	4,485	1,00,660	1,30,922
Smokeless tobacco (SLT)						
35–69	Male	3,744	131	777	28,406	33,058
	Female	5,088	214	587	2,538	8,427
70+	Male	1,708	64	192	801	2,765
	Female	1,918	65	140	46	2,169
35+	Male	5,452	195	968	29,208	35,823
	Female	7,006	279	727	2,584	10,596
Subtotal		12,458	474	1,696	31,792	46,419
All tobacco						
35–69	Male	22,045	771	4,573	1,25,854	1,53,244
	Female	6,956	292	803	4,108	12,159
70+	Male	4,994	187	560	2,410	8,151
	Female	3,349	114	245	80	3,788
35+	Male	27,039	958	5,133	1,28,264	1,61,395
	Female	10,305	406	1,048	4,188	15,947
Grand total		37,344	1,364	6,181	1,32,452	1,77,341

Source: John et al. (2021)<sup>1</sup>

reduces health and economic consequences.<sup>17</sup> Estimates of the price elasticity of demand for cigarettes in low- and middle-income countries tend to cluster around -0.5 within a range of -0.2 and -0.8, indicating that a 10% price increase reduces tobacco consumption by around 5% in these countries.<sup>18</sup> Estimates for India tend to show a similar range and clustering, although

traditional tobacco products such as *bidis* and SLT tend to be at the higher end, closer to -1.<sup>19–21</sup> Interestingly, studies in India tend to suggest that different tobacco products are complementary goods rather than substitute goods.<sup>19,22</sup> This section discusses the structure of tobacco taxation and the affordability of different tobacco products in India.

## Structure of tobacco taxation in India

The structure of indirect taxes on all commodities (including tobacco products) and services were overhauled with the introduction of the GST, which was implemented from 1 July 2017. The control of taxation became centralized under the GST council, unlike under the earlier system in which indirect taxes were partly controlled by the Central Government through excise taxes and partly by the states through a sales tax known as value-added tax (VAT).

In the case of tobacco products, a national calamity contingent duty (NCCD), which was part of the pre-GST tax system, continued to apply even after the implementation of the GST.

All tobacco products in India were included in the highest GST slab of 28%. An additional component of compensation cess was applied on cigarettes and SLT products. *Bidis*, which are the most popular form of tobacco smoking in India, were excluded from this cess. Central excise taxes were a major part of the pre-GST system of taxes. They were subsumed into GST, but were reinstated in the financial year 2019–2020, although at a nominal rate.

Table 5.3 shows that the rate of taxation varies across tobacco products and even within a particular class of products. For cigarettes, it varies in accordance with the length, as well as the presence of the filter. For SLT products too, the compensation cess varies significantly across different varieties. Adding the current

**Table 5.3: Structure of taxes on tobacco products in India (2021–2022)**

Product	GST	NCCD (INR per 1000 sticks)	Compensation cess		Excise (INR per 1000 sticks)
			Specific (INR per 1000 sticks)	Ad valorem	
<b>Cigarettes</b>					
Non-filter <65 cm	28%	200	2,076	5%	5
Non-filter 65–70 cm	28%	250	3,668	5%	5
Filter <65 cm	28%	440	2,076	5%	5
Filter 65–70 cm	28%	440	2,747	5%	5
Filter 70–75 cm	28%	545	3,668	5%	5
Filter 75–85 cm	28%	735	4,170	36%	10
Other	28%	735	4,170	36%	10
<b>Bidis</b>	28%	1.02	0	0	0.05
<b>Smokeless tobacco (SLT)</b>	28%	25%	0	104%	0.50%

Note: The taxes on SLT products vary widely, and the rates provided in the table are a simple average across different varieties. Similarly, the taxes on *bidis* are an average of the rates on hand-made and machine-made *bidis*. The specific tax rates are per 1000 sticks of cigarettes or *bidis*, while it is a percentage rate for SLT products.

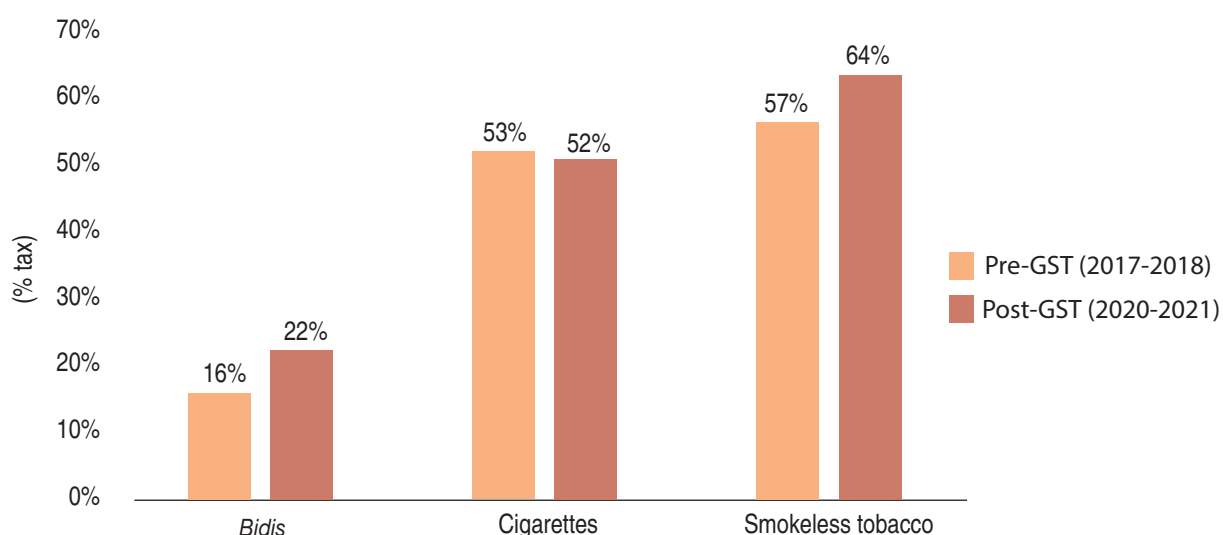
Source: Central Board of Indirect Taxes and Customs, Ministry of Finance, Government of India

GST rate, compensation cess, NCCD, and the central excise, the total tax burden (taxes as a percentage of the final tax-inclusive retail price) in the year 2020–2021 can be estimated to be about 52% on average for cigarettes, 22% for *bidis*, and 64% for SLT products (Box 5.1).<sup>11</sup> This is way below the WHO recommendation

of at least 75% of the retail price. In 2018, WHO estimated the share of tax on the most popular brand of cigarettes in each country to an average 60.8% globally and 58.3% across all middle-income countries. The relevant brand level comparator for India was Gold Flake, with a total tax share of 54%.<sup>23</sup>

### BOX 5.1: Tax burden of tobacco products before and after the introduction of GST

The tax burden of a tobacco product estimates the total tax as a percentage of the retail price of the tobacco product. WHO recommends that the total tax burden of a tobacco product should be at least 75% of the retail price of the product. At the time of introduction of the GST, the tax burden was 16%, 53% and 57% for *bidis*, cigarettes and smokeless tobacco (SLT) products, respectively. This has changed since then, and it is estimated that the current tax burden is 22%, 52% and 64% for *bidis*, cigarettes and SLT products, respectively.



Source: John et al. (2019)<sup>11</sup>

### Affordability of tobacco products and trends

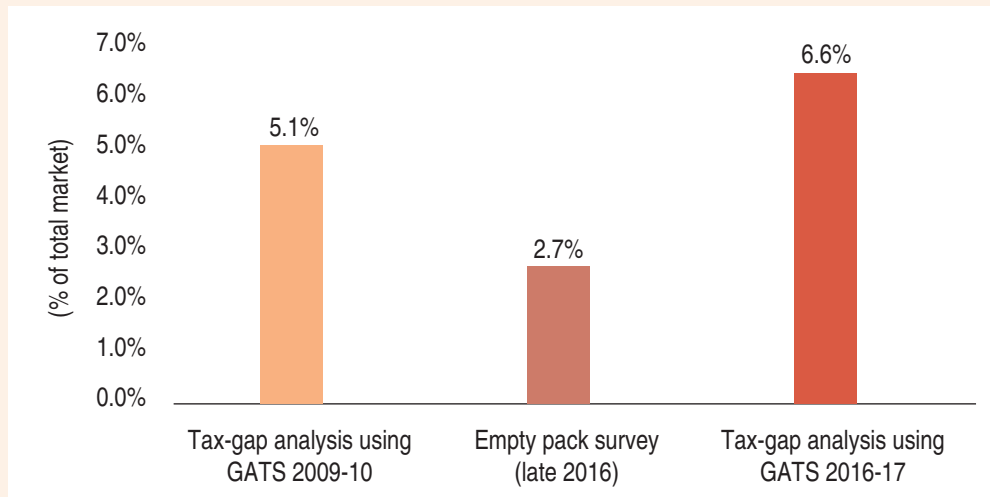
While increased taxation has the effect of increasing the prices of tobacco products, the growth in people's income increases their purchasing power. Intuitively, the sale of tobacco products shows that the income elasticity of their demand is positive in India and other countries.<sup>19</sup> Hence, for both the prevalence and consumption of tobacco products to decrease, they must become less affordable so that the price effect dominates the income effect. This highlights the need to increase tobacco taxes regularly. India has experienced an average annual growth of about 4.8% in the per capita GDP over the past 10 years.<sup>24</sup> Any increase in the tax on tobacco products must be high enough to more than compensate for the growth in the purchasing power of the people for it to have an impact on consumption.

Different methods have been employed to examine the affordability of tobacco products. The most widely used approach has been that of relative income price (RIP),<sup>25</sup> which measures affordability as the percentage of per capita GDP required to purchase a given quantity of tobacco products. Several studies have examined the affordability of different tobacco products in India. Using data from different periods between 2007 and 2018, these studies<sup>26–29</sup> generally concluded that all tobacco products had become more affordable. A recent study,<sup>30</sup> using data from 2007–2008 to 2017–2018, concluded that while chewing tobacco had become more affordable, the affordability of *bidis* and cigarettes remained unchanged. Another study,<sup>24</sup> which examined the affordability of tobacco products post-GST, concluded that the GST had accentuated the increase in the affordability of cigarettes and SLT products and had not significantly altered the high affordability of *bidis*.



### BOX 5.2: Illicit trade in cigarettes

The tobacco industry in India has maintained that increased tobacco taxes would lead to increased illicit trade in tobacco products. The industry has also made the misleading claim that illicit trade in cigarettes constitutes 25% of the cigarette market in India. However, scientific studies on illicit trade in cigarettes in India have estimated the illicit market to be only about 3% to 6%, largely dismissing the industry's claims.<sup>29,30</sup> It is known that a weak tax administration and geographical factors play a far greater role in determining illicit trade than tax increases do. In fact, increases in tax have only a minimal impact, if at all, on illicit trade.



Tobacco taxation in India has not been high enough to make tobacco products sufficiently unaffordable. The absence of regular tax increases on tobacco products after the introduction of the GST would continue to make tobacco products more affordable, which may be detrimental to tobacco control (Box 5.2). Tax design can also be important, with specific rates being associated with higher prices and tax yields than *ad valorem* rates.

### Conclusion

The contribution of tobacco to the national economy may appear to be large in terms

of the GVA or employment generated when considered in absolute terms. However, when taken as a proportion of the total GVA and as a percentage of the total indirect taxes from all products, the relative share of tobacco is not high or indispensable. On the other hand, the consumption of tobacco causes enormous economic losses, and the resulting economic burden can be huge for the national exchequer. Taxation policy is one of the most cost-effective ways of regulating the consumption of tobacco. Hence, it is important for the government to make good use of this public policy tool, not only to contain the consumption of tobacco, but also to generate tax revenue for development projects.



## Key messages

- The tobacco industry in India comprises production, distribution and consumption of smoking and SLT products.
- India being the second-largest producer and consumer of tobacco in the world, the tobacco industry is a source of employment, export earnings and tax revenue for the Central and state governments.
- The *bidi* sector, with nearly 50 lakhs (5 million) workers, constitutes a significant proportion of the estimated 86.5 lakh workers in the tobacco sector.
- Tobacco use and exposure to SHS imposes a heavy economic burden on individuals, families, the society and the public health system, together amounting to more than 1.3% of India's annual GDP.
- Tobacco taxation is the most cost-effective policy to regulate the consumption of tobacco. It also generates significant tax revenue which can fund development projects.
- Despite the introduction of GST and the fact that tobacco products attract the highest tax rate of 28%, the total tax burden in 2020–2021 was estimated to be about 52% for cigarettes, 22% for *bidis*, and 64% for SLT products. This is far less than the WHO recommendation of at least 75%.
- Worrying trends include the increasing affordability of tobacco products; the economic burden of tobacco use; the absence of regular tax increases post-GST; and a complex tax structure that causes roadblocks in the successful implementation of tobacco control strategies.

## REFERENCES

1. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res.* 2021;23(2):294–301. doi: 10.1093/ntr/ntaa154.
2. Food and Agriculture Organization of the United Nations (FAO). *Crop Statistics*. Rome, Italy; 2022. Available from: <http://www.fao.org/faostat/en/#data>, accessed 23 February 2022.
3. Department of Agriculture, Cooperation and Farmers Welfare, Directorate of Economics and Statistics. *Agricultural Statistics at a Glance 2020*. New Delhi, India: Ministry of Agriculture, Cooperation and Farmers Welfare, Government of India; 2021. Available from: [https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20\(English%20version\).pdf](https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20(English%20version).pdf), accessed 4 July 2022
4. Ministry of Statistics and Programme Implementation. *National Accounts Statistics 2020*. New Delhi, India: Ministry of Statistics and Programme Implementation, Government of India; 2020. Available from: <https://www.mospi.gov.in/web/mospi/reports-publications/-/reports/view/templateFive/901?q=RPCAT>, accessed 26 November 2020.
5. Rout SK, Hooda SK, Dutta P. *Tobacco taxes in India: an empirical analysis*. New Delhi, India: Public Health Foundation of India and Institute for Studies in Industrial Development. Supported by MoHFW and WHO India; 2016. Report No.: Unpublished Report.
6. Arora M, Datta P, Barman A, Sinha P, Munish VG, Bahl D, et al. The Indian *bidi* industry: trends in employment and wage differentials. *Front Public Health.* 2020;8:572638. doi: 10.3389/fpubh.2020.572638.
7. Nayak NS. Estimates of tobacco-dependent employment in India. *Econ Polit Wkly.* 2018;53(40):58–62.
8. Ministry of Labour and Employment. Lok Sabha Unstarred Question No. 4357 Answered on 22 March 2021 on *Bidi Workers*. Government of India; 2021.
9. Rawal V, Saha P. Women's employment in India. What do recent NSS surveys of employment and unemployment show? New Delhi, India: Society for Social and Economic Research; 2015. Available from: [http://archive.indianstatistics.org/misc/women\\_work.pdf](http://archive.indianstatistics.org/misc/women_work.pdf), accessed 7 December 2020.
10. Ministry of Finance. Rajya Sabha Unstarred Question No. 156 Answered on 3 August 2021 on Additional

- Tax on Tobacco Products. Ministry of Finance, Government of India; 2021.
11. John RM, Dauchy E, Goodchild M. Estimated impact of the GST on tobacco products in India. *Tob Control*. 2019;28(5):506–12. doi: 10.1136/tobaccocontrol-2018-054479.
  12. World Health Organization. Economics of tobacco toolkit: assessment of the economic costs of smoking. Geneva, Switzerland: World Health Organization; 2011. Available from: [http://whqlibdoc.who.int/publications/2011/9789241501576\\_eng.pdf](http://whqlibdoc.who.int/publications/2011/9789241501576_eng.pdf), accessed 4 October 2018.
  13. Goodchild M, Nargis N, Tursan d'Espaignet E. Global economic cost of smoking-attributable diseases. *Tob Control*. 2018;27(1):58–64. doi: 10.1136/tobaccocontrol-2016-053305.
  14. John RM, Dauchy EP. Healthcare costs attributable to secondhand smoke exposure among Indian adults. *Nicotine Tob Res*. 2022;ntac048. doi: 10.1093/ntr/ntac048.
  15. John RM. Economic costs of diseases and deaths attributable to *bidi* smoking in India, 2017. *Tob Control*. 2019;28(5):513–8. doi: 10.1136/tobaccocontrol-2018-054493.
  16. World Health Organization. WHO report on the global tobacco epidemic, 2015: raising taxes on tobacco. Geneva: World Health Organization; 2015. Available from: <https://apps.who.int/iris/handle/10665/178574>, accessed 4 July 2022.
  17. IARC. Effectiveness of Tax and Price Policies for Tobacco Control. IARC Handbooks of Cancer Prevention in Tobacco Control, Volume 14. Lyon, France: IARC Publications; 2011. Available from: <https://publications.iarc.fr/Book-And-Report-Series/Iarc-Handbooks-Of-Cancer-Prevention/Effectiveness-Of-Tax-And-Price-Policies-For-Tobacco-Control-2011>, accessed 4 July 2022.
  18. U.S. National Cancer Institute and World Health Organization. The Economics of Tobacco and Tobacco Control. National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization; 2016.
  19. John RM. Price elasticity estimates for tobacco products in India. *Health Policy Plan*. 2008;23(3):200–9. doi: 10.1093/heapol/czn007.
  20. Guindon GE, Nandi A, Chaloupka FJ, Jha P. Socioeconomic differences in the impact of smoking tobacco and alcohol prices on smoking in India. Working Paper 17580. National Bureau of Economic Research; 2011. Available from: <https://www.nber.org/papers/w17580DOI> 10.3386/w17580, accessed 4 July 2022.
  21. Selvaraj S, Srivastava S, Karan A. Price elasticity of tobacco products among economic classes in India, 2011–2012. *BMJ Open*. 2015;5(12):e008180. doi: 10.1136/bmjopen-2015-008180.
  22. Jawad M, Lee JT, Glantz S, Millett C. Price elasticity of demand of non-cigarette tobacco products: a systematic review and meta-analysis. *Tob Control*. 2018;27(6):689–95. doi: 10.1136/tobaccocontrol-2017-054056.
  23. World Health Organization. WHO Report on the Global Tobacco Epidemic, 2019. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789241516204>, accessed 4 July 2022.
  24. John RM, Dauchy E. Trends in affordability of tobacco products before and after the transition to GST in India. *Tob Control*. 2021;30(2):155–9. doi: 10.1136/tobaccocontrol-2019-055525.
  25. Blecher EH, van Walbeek CP. An international analysis of cigarette affordability. *Tob Control*. 2004;13(4):339–46. doi: 10.1136/tc.2003.006726.
  26. John RM, Rao RK, Rao MG, Moore J, Deshpande R, Sengupta J, et al. The economics of tobacco and tobacco taxation in India. Paris: International Union Against Tuberculosis and Lung Disease; 2010. Available from: [https://www.tobaccofreekids.org/assets/global/pdfs/en/India\\_tobacco\\_taxes\\_report\\_en.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/India_tobacco_taxes_report_en.pdf), accessed 4 July 2022.
  27. Rout SK, Arora M. Taxation of smokeless tobacco in India. *Indian J Cancer*. 2014;51 Suppl 1:S8–12. doi: 10.4103/0019-509X.147420.
  28. Guindon GE, Fatima T, Li DX, Joukova A, Sudhir J, Mishra S, et al. Visualizing data: trends in smoking tobacco prices and taxes in India. *Gates Open Res*. 2019;3:8. doi: 10.12688/gatesopenres.12894.1.
  29. Rout SK, Parhi A. Has tax reforms in India been effective in tobacco control: evidences on affordability of cigarette after introduction of Goods and Service Tax. *J Family Med Prim Care*. 2020;9(12):5927–32. doi: 10.4103/jfmprc.jfmprc\_1169\_20.
  30. Goodchild M, Sinha P, Gill Munish V, Tullu FT. Changes in the affordability of tobacco products in India during 2007/2008 to 2017/2018: a price-relative-to-income analysis. *WHO South East Asia J Public Health*. 2020;9(1):73–81. doi: 10.4103/2224-3151.283001.





---

# Ecological and environmental effects of tobacco use

---

**Natarajan Ramalingam, Pragati B. Hebbar, Pranay Lal, Sanjay Seth,  
Prakash C. Gupta, Pankaj Chaturvedi**



Tobacco was introduced in India by the Portuguese in the 1600s. In 2020, the total land under tobacco cultivation was 4.5 lakh hectares, and the total production was 7.6 lakh tonnes.<sup>1</sup> This makes India the second in the world in tobacco production, after China. The main tobacco-growing states in India are Gujarat, Andhra Pradesh, Karnataka, Uttar Pradesh, West Bengal and Bihar.<sup>2</sup>

Though awareness of the impact of tobacco use on health has increased, awareness of the other impacts of tobacco production and use, such as ecological and environmental impacts, and impacts on economic growth and equality remain low. This chapter reviews the impact of tobacco on the environment as a whole.

## The tobacco cycle

Globally, tobacco threatens the earth's resources in a major way. Let us take the case of a smoker who smokes a pack of 20 cigarettes every day. Over 20 years, this would amount to:<sup>3-5</sup>

- 5 litres of carbon dioxide emissions

- 1355 litres of water use, equalling the basic water needs of three people for roughly 60 years
- 1.3 tonnes of petroleum, or about 15 years of electricity use of an average Indian household

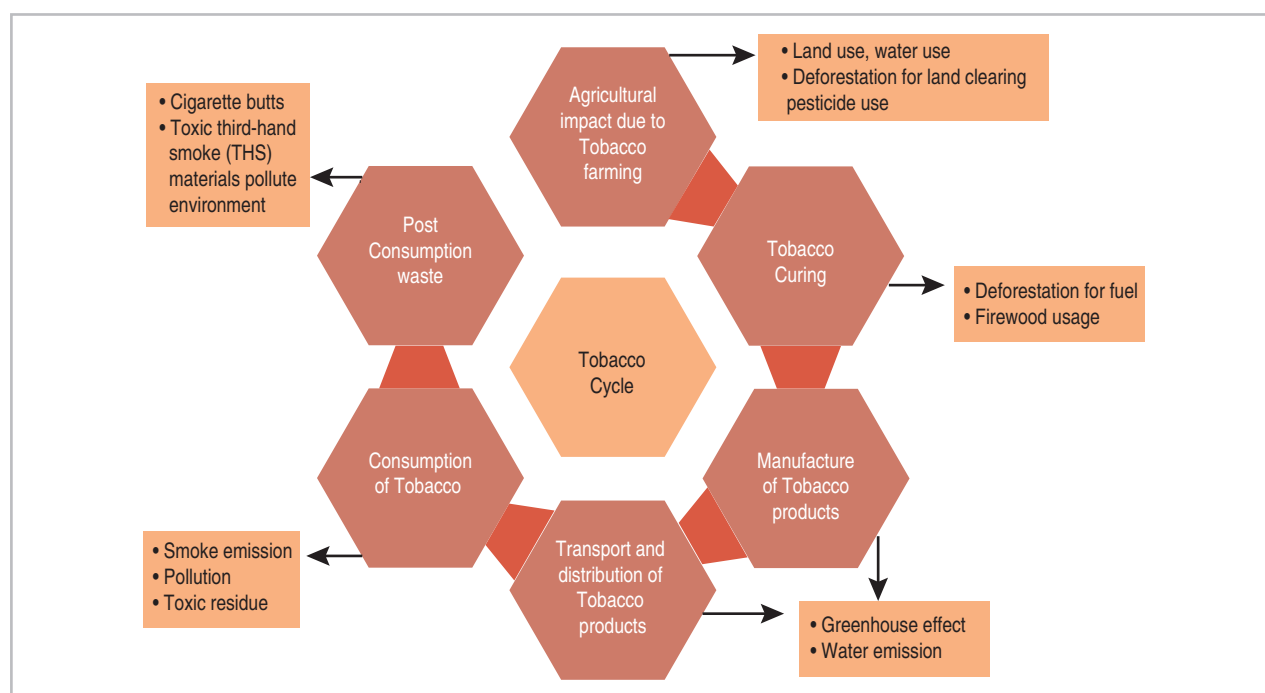
It has been estimated that by 2025, cigarette consumption will increase to 9 lakh crore, which will amount to the use of 79 lakh hectares of land and 34,000 litres of water, the depletion of 50 lakh tonnes of fossil fuel and the emission of 1300 lakh tonnes of carbon dioxide.<sup>3,4</sup>

The long-term environmental impact of the stages of the tobacco cycle on the environment has been highlighted in a review by the World Health Organization (WHO).<sup>5</sup> The five stages of the tobacco cycle (Figure 6.1) are: (i) farming and curing; (ii) manufacture; (iii) distribution and transportation; (iv) consumer use; and (v) post-consumption waste disposal.<sup>6</sup>

## Farming and curing

Global commercial tobacco farming takes place on a large scale, e.g. around 66 lakh metric

**Figure 6.1: Tobacco cycle**



Source: Novotry et al. (2015)<sup>6</sup>

tonnes of tobacco leaf were produced on 41 lakh hectares of agricultural land in 2018–2019.<sup>2</sup> China and India are the worlds' largest tobacco leaf growers with China alone accounting for 32 lakh metric tonnes.<sup>7</sup>

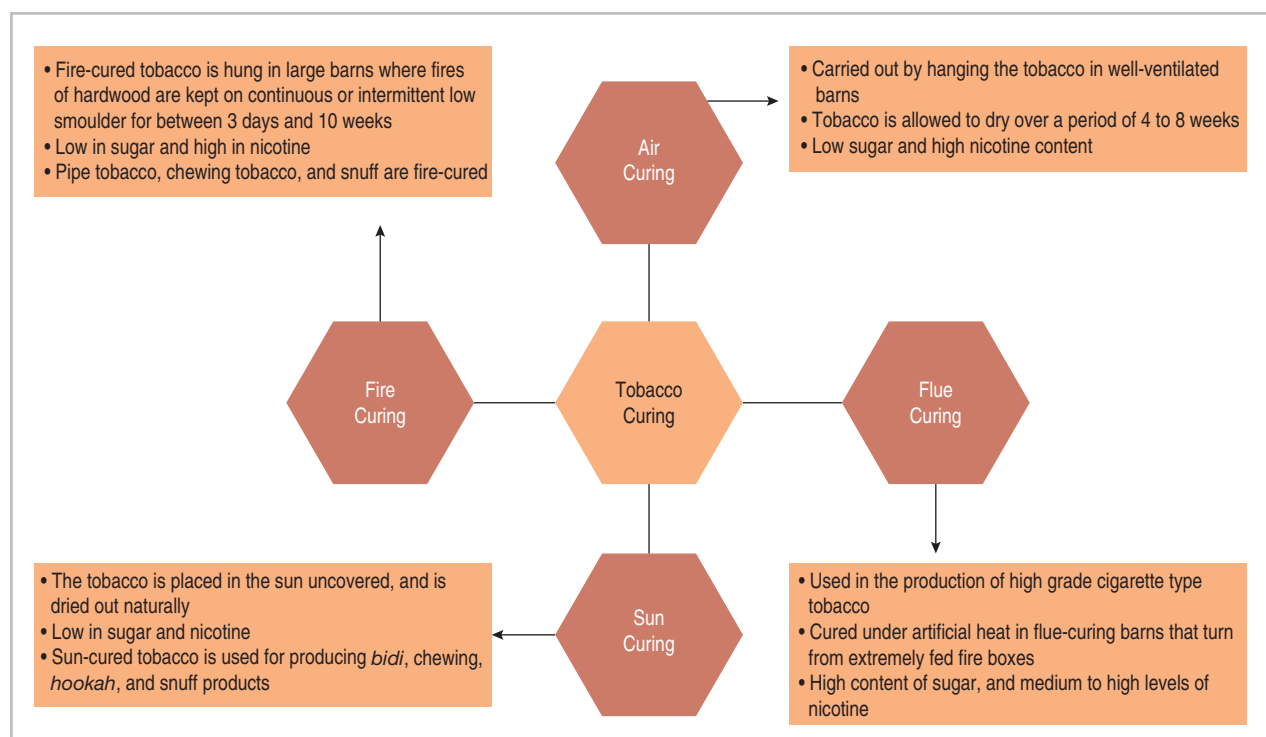
Tobacco is mostly grown as a monocrop, though monocrop cultivation is known to reduce soil fertility and give rise to pest problems. The main temptation for farmers to continue with tobacco farming is the large profits. Tobacco is a sensitive plant needing multiple applications of pesticides (around 16) during the growing period. Aldrin, dieldrin and DDT are the commonly used chemicals, especially in Africa and India. The indiscriminate use of pesticides and monocrop cultivation make tobacco plants and the soil they are grown on more vulnerable to pests and diseases, thus necessitating the use of large quantities of pesticides and growth regulators to control pests or disease outbreaks.<sup>8</sup> The excessive use of pesticides causes resistance to pesticides among mosquitoes and flies, as seen in Gujarat, Bihar, Maharashtra and Andhra Pradesh.<sup>9</sup> As they absorb more nitrogen,

phosphorus and potassium, tobacco plants also need more fertilizers than other major food and cash crops.<sup>10,11</sup> Incentives encourage the indiscriminate use of pesticides and fertilizers by tobacco farmers, with disastrous ecological consequences.

Around 150 crore hectares of forests have been lost to tobacco worldwide in the last 50 years.<sup>4</sup> Tobacco cultivation and curing are direct causes of deforestation. The first is obvious, and the second because wood is needed to cure the tobacco leaves.<sup>11</sup> In India, 68,000 hectares of forest was lost between 1962 and 2002 – an average of 1700 hectares per annum.<sup>12</sup> In India, data on the share of tobacco cultivation and industry-induced deforestation are scarce. This is because forests are part of revenue land meant to be used for local area development, and utilization of forest land for agriculture is permitted.

There are four main ways of curing or drying tobacco (Figure 6.2).<sup>5</sup> About half of the tobacco leaves produced in Africa and Asia are cured with wood. A hectare of forest may be needed

**Figure 6.2: Tobacco curing**



Source: World Health Organization (2017)<sup>5</sup>



to cure 1 tonne of tobacco, which is the same as 7.8 kg of wood being needed to cure 1 kg of tobacco.<sup>13</sup>

The cultivation of tobacco as a monocrop causes the loss of topsoil as the plants do not offer much protection from eroding agents such as the wind and rain.<sup>14</sup> This has been observed in countries such as Jordan, India, Cuba and Brazil. In general, monocrop cultivation causes selective loss of nutrients and organic substances. In particular, tobacco depletes the soil of nitrogen, phosphorus and potassium at a much faster rate than many other crops, thus rapidly decreasing the fertility of the soil.<sup>15</sup> The Indian Agricultural Research Institute reports that tobacco as a monocrop causes a loss of 45 kg of topsoil per acre per year. Comparative figures for cotton, grapes and groundnut are 7.5 kg, 11 kg and 12.5 kg, respectively.<sup>16</sup>

Biodiversity is defined as the variety of living organisms within a given habitat, an ecosystem, or in the world as a whole. It is vital for the sustainability of ecosystems and environments. Planting a single crop like tobacco for several successive seasons is detrimental to the local biological diversity. It may disrupt the food web and disturb the equilibrium of the predator-prey relationship, causing the disappearance of several animal and plants species, as seen in Tanzania.<sup>17</sup> The introduction of tobacco in India caused non-indigenous viral, fungal and insect pest diseases to cross over to local vegetable crops as evident in a survey conducted in Andhra Pradesh which found 12 fungal and viral diseases, and 29 insect pests in three tobacco-

growing regions as compared to tobacco non-growing regions.<sup>18</sup>

## Manufacture and transport

The manufacturing and packaging of cigarettes are resource-intensive processes. Dry ice expanded tobacco (DIET) equipment and supplies, fuel energy used for curing and artificially expanding the surface area of the tobacco, rolling paper and packaging paper, plastic wrap and aluminium foil are some factors that contribute to environmental impacts caused by tobacco.

The energy usage reported by some of the largest tobacco companies in the world is shown in Table 6.1.<sup>13</sup> Taken together, their energy consumption would be equivalent to that used for building around 20 lakh automobiles. The DIET treatment, processing of tobacco pulp and preparing inks and dyes for packaging require a lot of water (Table 6.2). This can put severe stress on local water reserves, especially in arid regions.<sup>13</sup>

Table 6.3 shows the emissions reported by some tobacco companies.<sup>13</sup> British American Tobacco alone reported emissions of 795,000 metric tonnes of carbon dioxide equivalent, which is equivalent to the emissions from nearly 30 lakh transatlantic flights.

## Consumption

There are two types of tobacco smoke: mainstream and sidestream. Mainstream smoke is what the smoker inhales from the filter end of a cigarette on other smoking products, whereas

**Table 6.1: Global energy use reported by some of the largest tobacco companies**

Company	Gigawatt hours/year	Kilowatts per million cigarettes
Imperial Tobacco (2015)	1,004	2,051
Altria (2014)	1,380	Unknown
British American Tobacco (2011)	2,504	2,864
Japan Tobacco Incorporated (2014)	2,804	1,832
Philip Morris International (2015)	2,539	Unknown

Source: Geist et al. (2009)

**Table 6.2: Global water consumption during cigarette manufacturing**

Company	Thousand cubic metres per year	Cubic metres per million cigarettes
Imperial Tobacco (2015)	1,675	3,970
Altria (2014)	11,247	Unknown
British American Tobacco (2011)	4,621	3,890
Japan Tobacco Incorporated (2012)	10,330	2,720
Philip Morris International (2015)	3,886	5,140

Source: Geist et al. (2009)

**Table 6.3: Global carbon dioxide equivalent emissions from cigarette manufacturing**

Company	Thousand metric tonnes per year	Metric tonnes per million cigarettes
Imperial Tobacco (2015)	218	0.513
Altria (2014)	406	Unknown
British American Tobacco (2015)	795	0.717 (down from 1.4 in 2000)
Japan Tobacco Incorporated (2014)	5,304	0.59
Philip Morris International (2014)	627	0.66

Source: Geist et al. (2009)

sidestream smoke is the smoke that goes into the air from the burning end, between puffs. Sidestream smoke is the main component of second-hand smoke (SHS). It is inhaled by the smoker as well as by non-smokers present in the vicinity of the smoker. It contains approximately four times more toxic chemicals compared to mainstream smoke and its condensate is two to six times more carcinogenic than that of mainstream smoke.<sup>5</sup>

Third-hand smoke is the long-lasting residue from SHS that accumulates on dust and surfaces in indoor environments where tobacco has been smoked.<sup>5</sup> This results in involuntary and unnoticed exposure of the people staying in these places to tobacco smoke. Third-hand smoke ages chemically and compounds present in it can react with common indoor air pollutants to produce carcinogenic compounds. For example, nicotine can produce nicotine-derived nitrosamine ketone. Infants and very young children are more vulnerable to these substances due to their immature immune systems and organs, developmental behaviours

(e.g. mouthing), and time spent indoors. These substances also pose an environmental pollution risk when they are incinerated or disposed of in landfills without a proper protocol.

### Post-consumption waste

The last stage in the tobacco cycle is the generation of tobacco product waste and cigarette butts as well as *bidi* butts, which are by far the commonest type of litter in public places.<sup>19</sup> Between 3400 and 6800 lakh kg of tobacco product waste are produced every year globally. Recent estimates reveal that cigarette butt wastes would increase by 50% by 2025 (12 lakh tonnes).<sup>20</sup> The National Centre for Biotechnology Information (NCBI) in its report in 2015 said that around 31 lakh butts constituted the daily litter in Bengaluru and only around 40% degraded in two years.<sup>21</sup> Torkashvand *et al.*<sup>20</sup> in their systematic review looked at various countries' rates of cigarette butts waste reported in the literature – roughly amounting to 20–30% of the debris of major cities. According to the Toxics Release Inventory database (2008),

over 456,000 kg of toxic chemicals such as ammonia, nicotine, hydrochloric acid, methanol and nitrates were released into the environment in 2008 by tobacco manufacturing plants.<sup>22</sup> The economic burden of cleaning of littered tobacco falls on the user rather than the manufacturer. For India (2021 data), the proportion of tobacco product waste among all product waste was estimated to be 9.5% amounting to a disposal cost of US\$ 766 million.<sup>23</sup>

## Other environmental effects

Though *bidis* started being used only in the 1900s,<sup>24</sup> they are now the most frequently smoked tobacco product in India. *Bidi* leaf, called *tendu* or *kendu* (*Diospyros melanoxylon*), comes from a tree that now grows abundantly in the dry deciduous forests of central India. However, this was not always the case. In the early 1900s, sal (*Shorea robusta*) and teak trees were illicitly felled to grow *tendu* trees to provide a means of livelihood for tribal and forest-based communities.

The *tendu* leaf is extracted in the beginning of summer, when the canopy cover is the least. Then the base of the trees is scorched with fire because it is believed that this practice improves the quantity and quality of leaves for the next harvest, though there is little scientific evidence

to validate this practice. Uncontrolled forest fires are frequently reported in states where *tendu* harvesting takes place. This destroys wildlife, increases carbon emission, exposes the soil to greater erosion and reduces its water capturing potential. Since the 1990s, several legal suits have challenged *tendu* plucking in protected forests, but their implementation has been poor.<sup>24</sup> A March 2021 petition before the National Green Tribunal sought the implementation of the 2012 commitment made by the Maharashtra government to ban fires in forests and seek a comprehensive ban on the perverse practice of *tendu* leaf extraction and subsequent forest burning.<sup>25</sup>

## Conclusion

In the past decade, tobacco farming has moved from high-income countries to low- and middle-income countries because farmers see tobacco as a revenue generator. The problem is that the immediate benefits of growing this cash crop do not allow farmers to view the threat to the biodiversity and ecology and hence to their future prosperity in the correct perspective. It is time to understand the long-term impact of growing tobacco and work towards protecting the health of the people and of the planet.

## Key messages

- Tobacco cultivation, manufacturing and distribution have severe environmental consequences, including deforestation, massive consumption of water and fossil fuels and dumping or leaking of waste products into the natural environment.
- The cultivation of tobacco has shifted from high-income to low- and middle-income countries, where tobacco is viewed as a cash crop that may bring economic benefits.
- Curing tobacco leaves requires large amounts of fuelwood, which leads to deforestation and soil degradation.
- Cigarette butts are the commonest toxic waste found in public places, which would increase by 50% by 2025.
- There is a need for extensive and systematic reporting on the environmental and health risks of tobacco and tobacco products throughout the process of production and distribution.

## REFERENCES

1. Food and Agriculture Organization of the United Nations (FAO). Crop Statistics. Rome, Italy; 2022. Available from: <http://www.fao.org/faostat/en/#data>, accessed 23 February 2022.
2. Department of Agriculture, Cooperation and Farmers Welfare, Directorate of Economics and Statistics. Agricultural Statistics at a Glance 2020. New Delhi, India: Ministry of Agriculture, Cooperation and Farmers Welfare, Government of India; 2021. Available from: [https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20\(English%20version\).pdf](https://eands.dacnet.nic.in/PDF/Agricultural%20Statistics%20at%20a%20Glance%20-%202020%20(English%20version).pdf), accessed 4 July 2022
3. Zafeiridou M, Hopkinson NS, Voulvoulis N. Cigarette smoking: an assessment of tobacco's global environmental footprint across its entire supply chain, and policy strategies to reduce it. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://fctc.who.int/publications/m/item/cigarette-smoking>, accessed 8 August 2022.
4. Zafeiridou M, Hopkinson NS, Voulvoulis N. Cigarette smoking: an assessment of tobacco's global environmental footprint across its entire supply chain. *Environ Sci Technol*. 2018;52(15):8087–94. doi: 10.1021/acs.est.8b01533.
5. Tobacco and its environmental impact: an overview. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://apps.who.int/iris/bitstream/handle/10665/255574/9789241512497-eng.pdf>, accessed 8 August 2022.
6. Novotny TE, Bialous SA, Burt L, Curtis C, da Costa VL, Iqtidar SU, et al. The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption. *Bull World Health Organ*. 2015;93(12):877–80. doi: 10.2471/BLT.15.152744.
7. Eriksen M, Mackay J, Schluger N, Gomeshtapeh FI, Drope J. The Tobacco Atlas, Fifth edition (Revised, Expanded and Updated). Atlanta, GA: American Cancer Society, 2015. Available from: [https://ncdalliance.org/sites/default/files/resource\\_files/TA5\\_2015\\_WEB.pdf](https://ncdalliance.org/sites/default/files/resource_files/TA5_2015_WEB.pdf), accessed 8 August 2022.
8. Arcury TA, Quandt SA. Health and social impacts of tobacco production. *J Agromedicine*. 2006;11(3–4):71–81. doi: 10.1300/J096v11n03\_08.
9. Chapin G, Wasserstrom R. Pesticide use and malaria resurgence in Central America and India. *Soc Sci Med*. 1983;17(5):273–90. doi: 10.1016/0277-9536(83)90329-5.
10. Golden leaf barren harvest, the costs of tobacco farming, Technical report. Washington DC: Campaign for Tobacco Free Kids; 2001. Available from: <https://www.escholarship.org/uc/item/0h15327w.pdf;origin=repeccitec>, accessed 8 August 2022.
11. Geist HJ, Lambin EF. Proximate causes and underlying driving forces of tropical deforestation: tropical forests are disappearing as the result of many pressures, both local and regional, acting in various combinations in different geographical locations. *BioScience*. 2002;52(2):143–50. Available from: [https://doi.org/10.1641/0006-3568\(2002\)052\[0143:PCAUDF\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2002)052[0143:PCAUDF]2.0.CO;2).
12. Environment: Your cigarette continues to harm environment long after it is extinguished. *DownToEarth*; 2017. Available from: <https://www.downtoearth.org.in/news/environment/long-after-your-cigarette-is-extinguished-it-continues-to-harm-environment-57981#:~:text=Impact%20on%20a%20global%20scale&text=In%20India%2C%2068%2C000%20ha%20of,producing%20and%20in%20the%20continent>, accessed 30 March 2022).
13. Geist HJ, Chang K-T, Etges V, Abdallah JM. Tobacco growers at the crossroads: towards a comparison of diversification and ecosystem impacts. *Land Use Policy*. 2009;26(4):1066–79. Available from: <https://doi.org/10.1016/j.landusepol.2009.01.003>, accessed 8 August 2022.
14. Shiva V, Sharatchandra HC, Bandyopadhyay J. Social, economic and ecological impact of social forestry in Kolar. Bangalore: Indian Institute of Management; 1981. Available from: <https://hdl.handle.net/10535/3735>, accessed 8 August 2022.
15. Goodland JA, Watson C, Ledec G. Environmental management in tropical agriculture. Boulder, Colorado: Westview Press; 1984.
16. Prasad VM. Case study of tobacco cultivation and alternate crops in India. Study conducted as a technical document for the first meeting of the Ad Hoc Study Group on Alternative Crops established by the Conference of the Parties to the WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2007. Available from: [https://www.who.int/docs/default-source/searo/india/tobacco/india-case-study.pdf?sfvrsn=143f1fae\\_2](https://www.who.int/docs/default-source/searo/india/tobacco/india-case-study.pdf?sfvrsn=143f1fae_2), accessed 8 August 2022.
17. Olenga S. Biodiversity losses due to tobacco cultivation – a case study of deciduous forest ecosystems in Tanzania. *Oxford Forestry Review*. 11:4.34–4.39.
18. Gopalachari NC, Mahgaraddy MC. Effects of season and soil type on the yield and quality of flue cured tobacco. *Indian Journal of Agricultural Sciences* 197;41:365–73.
19. Novotny TE, Slaughter E. Tobacco product waste: an environmental approach to reduce tobacco consumption. *Curr Environ Health Rep*. 2014;1(3):208–16. doi: 10.1007/s40572-014-0016-x.

20. Torkashvand J, Farzadkia M, Sobhi HR, Esrafil A. Littered cigarette butt as a well-known hazardous waste: a comprehensive systematic review. *J Hazard Mater.* 2020;383:121242. DOI:10.1016/j.jhazmat.2019.121242
21. When even the butt pollutes. *The Statesman*; 2022. Available from: <https://www.thestatesman.com/opinion/even-butt-pollutes-1503077361.html>, accessed 8 August 2022.
22. The Right to Know Network. Toxic release inventory database 312229: Other tobacco product manufacturing.
23. WHO raises alarm on tobacco industry environmental impact. World Health Organization; 2022. Available from: <https://www.who.int/news/item/31-05-2022-who-raises-alarm-on-tobacco-industry-environmental-impact>, accessed 8 August 2022.
24. Lal P. Estimating the size of *tendu* leaf and *bidi* trade using a simple back-of-the-envelope method. *Ambio.* 2012;41(3):315–8. doi: 10.1007/s13280-011-0181-1.
25. Affidavit. Applicant: Mrs Smita Sandesh Singalkar. Respondent: The Chief Conservator of Forest. Available from: [https://greentribunal.gov.in/sites/default/files/news\\_updates/Affidavit%20by%20Applicant%20in%20O.A.No\\_.%20102-2017%20\(page%20nos.%20288-302\).pdf](https://greentribunal.gov.in/sites/default/files/news_updates/Affidavit%20by%20Applicant%20in%20O.A.No_.%20102-2017%20(page%20nos.%20288-302).pdf), accessed 8 August 2022.





# Progress in tobacco control: The Indian experience

7.1: Tobacco industry interference	105	7.5: Alternative livelihoods for <i>bidi</i> rollers and tobacco farmers	144
Upendra Bhojani, Sonu Goel, Sitanshu Sekhar Kar, Pranay Lal, Aastha Chugh		Nayanatara S. Nayak, E. Vidhubala, Radhika Khajuria, Praveen Sinha	
7.2: Tobacco cessation in India	112	7.6: Legal challenges	154
Pratima Murthy, Raj Kumar, Vikrant Mohanty, Rakesh Gupta, Prabhat Chand, Pradeep Joshi, Ankita Piplani		Ranjit Singh, Amit Yadav, Purva Singh, Kashish Aneja, Vidushi Chaturvedi	
7.3: Progress in tobacco control for smokeless tobacco	123	7.7: National Tobacco Testing Laboratories	159
Prakash C. Gupta, Cecily S. Ray, Mansi Chopra, Ravi Mehrotra, Poonam Khattar, Shalini Singh, Pankaj Chaturvedi, Ranjit Singh, Gauravi Mishra, Narendra Singh, Deepak Mishra, Satish Tripathi		L. Swasticharan, H.M. Chawla, Ransi Abraham, Ruby Gupta, Raman Mohan Singh	
7.4: Progress in tobacco control for <i>bidis</i>	136	7.8: Electronic nicotine delivery systems	166
Prakash C. Gupta, Cecily S. Ray, Mansi Chopra, Bhavna B. Mukhopadhyay, Stuti S. Bhargava, Pranay Lal		Preeti Sudan, Vikas Sheel, Joy Chakma, Monika Arora, Rakesh Gupta, Purva Singh, Prachi Kathuria	
		7.9: Public perceptions of tobacco and nicotine products	173
		Pratima Murthy, B.N. Subodh, Abhijit Nadkarni, Stuti S. Bhargava	





## 7.1: Tobacco industry interference

Tobacco industry interference (TII) refers to the tobacco industry's use of a range of strategies to interfere with public policies related to tobacco control and their implementation.<sup>1</sup> TII involves not only entities engaged in growing, manufacturing and selling tobacco, but also those working to further the industry's interest. The potential of TII varies with the interests of and power vested in the range of entities constituting the industry.

### Tactics of tobacco industry

#### Overplaying the importance for economy and employment

The tobacco industry in India routinely overplays its contribution to the national economy and the generation of employment. While India is among the largest producers and exporters of tobacco, the economic equation ought to account for the cost of tobacco consumption on human lives. It has been estimated that the total cost of tobacco-attributable diseases and deaths for 2017–2018 (for people aged 35 years and above) was INR 1,77,340 crore, which accounted for more than 1% of the country's gross domestic product (GDP).<sup>2</sup> The excise revenues from tobacco in 2016–2017 were just 12.2% of this cost.<sup>2</sup> The tobacco industry often runs mass media campaigns that feature images of poor farmers and selectively highlights inflated estimates of its contributions, ignoring the health costs as well as exploitative labour practices prevalent in the sector.<sup>3</sup>

#### Corporate social responsibility

Tobacco companies have been partnering with public agencies at various levels, from supporting municipal agencies to collaborating with national opinion-makers.<sup>4</sup> Given that the core business of the industry causes significant loss of life and damage to health, WHO considers that

there is an “inherent contradiction” between the tobacco industry and the fulfilment of corporate social responsibility (CSR).<sup>5</sup> Through CSR, the industry promotes its marketing and public relations, creating a favourable public image for a business that is “lethal”. Such means are used to get access to decision-makers. During the COVID-19 pandemic, within a short span of time in early 2020, the tobacco industry was estimated to have contributed US\$ 36.7 million (about INR 280 crore) through CSR.<sup>6</sup> The Companies Act, 2013 stipulates that large companies must make mandatory CSR contributions.<sup>7</sup> To prevent the tobacco industry from exploiting this norm, a litigation in the Madras High Court sought to exclude tobacco companies from doing CSR (Box 7.1).

#### Use of front groups

There is an increasing number of entities referred to as front groups, which do not appear to be a part of the tobacco industry, but are associated with it and work to further its interests. Many such front groups are now documented globally, including in India.<sup>11</sup> At times, these organizations are called out, for example, when WHO made a statement about the Foundation for a Smoke-Free World (FSFW), funded by Philip Morris International (PMI), one of the large tobacco companies in the world.<sup>12</sup> The Foundation operates in India too, through its affiliates and grantees (Box 7.2).

#### Litigation

The tobacco industry is known to use litigation to resist, dilute or delay the implementation of stringent regulations for tobacco control, intimidating the public authorities. The tobacco industry has challenged just about every regulation, ranging from the provisions of COTPA (e.g. pictorial health warnings) to the ban

### BOX 7.1: CSR and tobacco companies in India

Section 135 of the Companies Act, 2013 requires companies “having a net worth of INR 500 crore or more, or a turnover of INR 1000 crore or more or a net profit of INR 5 crore or more during any financial year” to constitute a CSR committee, which should recommend to the company’s board the kind of CSR activities and spending to be done by the company, and also monitor such CSR. It also requires the board of such companies to ensure that spending on CSR in each financial year is at least 2% of their average net profit over the three preceding years. Thus, the Act mandated large tobacco companies to engage in CSR activities. The Tamil Nadu People’s Forum for Tobacco Control filed a writ petition in the Madras High Court, demanding that the Ministry of Corporate Affairs Government of India (GoI) exclude the tobacco industry from the purview of the CSR rules under the Companies Act 2013, to prevent the industry from seeking goodwill through direct and indirect advertising of their products. The forum also urged the Ministry of Health and Family Welfare (MoHFW), GoI, to devise a scheme whereby tobacco companies are required to pay the money they were to spend on CSR to the GoI, to be used for the treatment of people affected by tobacco or for the National Tobacco Control Programme (NTCP). The High Court opined that the issue was a matter of government policy and suggested that the government authorities concerned coordinate to see “how best the CSR scheme of the tobacco trade can be met and what model has to be framed for the same”. In May 2016, the Ministry of Corporate Affairs (GoI) issued a circular stating that while fulfilling CSR, companies “shall not contravene any other prevailing laws of the land, including the Cigarettes and Other Tobacco Products Act (COTPA) 2003”. While this partially addressed the concerns related to the CSR of tobacco companies (especially regarding potential advertising of tobacco products), other concerns remained. Tobacco Industry Interference Index reports over the years suggest that tobacco companies continue to be involved in CSR activities in India.<sup>8–10</sup>

on *gutkha*/smokeless tobacco (SLT) products imposed under the Food Safety and Standards Act, in various High Courts and the Supreme Court.<sup>13,14</sup>

#### Refuting good science

The tobacco industry, as the “merchant of doubts”, creates confusion and casts a shadow on science that might not be favourable to the tobacco trade. This trend has continued, thanks to the strategic use of the media and the influence of the credible “high-profile” messengers deployed by the tobacco industry. Lately, research funded and/or commissioned by the tobacco industry has been used to create narratives about how tobacco tax hikes (and other tobacco control

regulations) are promoting illicit trade. For example, the tobacco industry used the findings of a study commissioned by the FICCI Committee Against Smuggling and Counterfeiting Activities Destroying the Economy, headed by a senior tobacco industry representative, which highlighted high levels of illicit trade in cigarettes. The industry used paid advertisements in major national dailies citing this study. The industry claimed that tobacco control measures were leading to illicit trade. The industry has also made the misleading claim that illicit trade in cigarettes constitutes 25% of the cigarette market in India. However, scientific studies on illicit trade in cigarettes in India have estimated the illicit market to be only about 3% to 6%, largely dismissing the industry’s claims.

## BOX 7.2: Foundation for a Smoke-Free World in India

In 2017, the Philip Morris International (PMI) set up the Foundation for a Smoke-Free World (FSFW) by committing to contribute about US\$ 80 million (about INR 632.84 crore) every year for 12 years. Several public health organizations and tobacco control advocates raised concerns over the independence of the foundation. They rejected its mandate, as well its offer for funding. In keeping with PMI's interest, the FSFW has aggressively promoted the cigarette-makers' agenda of advancing novel nicotine delivery devices in South Asia as a safer alternative and a harm-reduction strategy. Since its inception, the FSFW has awarded the highest number of grants to the USA and Malawi, followed by India and the South Asia region. It has also funded an organization based in the USA and the UK to support the establishment of a centre of excellence. It is not clear what was supposed to be the mandate of such a centre in India (<https://tobaccotactics.org/wiki/foundation-for-a-smoke-free-world-centres-of-excellence/>). FSFW grants in the region further PMI's interest in promoting electronic cigarettes and non-combustible tobacco in India. In particular, with the help of grants to engage with policy-makers, the FSFW has actively supported and presented groups of consumers who vape as front groups involved in harm reduction. To advance their agenda, these groups have advocated for the reversal of the regulations and the ban on the use of nicotine novel tobacco products by moulding public opinion through the use of the media and public relations firms. They have also threatened to take legal action. The FSFW has continued to support front groups, despite the government ban of electronic cigarettes since September 2018, as well as similar products. PMI's larger strategy appears to be to use the FSFW to displace the local dominant cigarette-makers (its main cigarette rival is BAT's affiliate, ITC) and increasingly push for stronger regulations against indigenous smoked products, such as *bidis*, and smokeless tobacco (SLT) products. The existing and potential new tobacco users in the rapidly growing urban markets have been targeted through and offered novel products, such as heated tobacco products, which are purported to be a safer and more attractive option for smoking. This naturally drove up sales for PMI. Both the FSFW and PMI commissioned studies on the attitudes to smoking and tobacco use (PMI's UnSmoke surveys and the FSFW's Country Reports) in India. The findings and recommendations of both surveys are aligned. Given that the FSFW has ample funding and that its mandate has been extended until 2030, the foundation is expected to challenge India's regulatory landscape and adopt tactics from the tobacco industry playbook.

## Monitoring interference by the industry

Unlike certain countries which have tobacco industry observatories, India has no nationwide comprehensive initiative to monitor TII in real time. Civil society organizations (CSOs) have monitored and exposed TII to varying extents. Since 2017, tobacco control professionals have been using the Tobacco Industry Interference Index of the Southeast Asia Tobacco Control Alliance (SEATCA), a standardized tool to assess the implementation of the WHO FCTC Article

5.3, in India. The TII Index for India indicates a high degree of industry interference and some progress in the implementation of the WHO FCTC Article 5.3 over time<sup>8-10</sup> (Box 7.3).

## Regulations to prevent TII

Article 5.3 of the WHO FCTC, which India has signed and ratified, says, "In setting and implementing their public health policies with respect to tobacco control, Parties shall Act to protect these policies from commercial and other vested interests of the tobacco industry

### BOX 7.3: Tobacco industry interference index in India

To assess the level of implementation of the WHO FCTC Article 5.3 in India, three consecutive monitoring exercises were conducted between 2018 and 2021 to measure the TII Index. This monitoring exercise was based on SEATCA's TII Index. A review of the literature was undertaken to collate the incidents of TII, which were defined by the frequency (number) and severity (intensity) of TIIs and the government's response to them. To gather data on the incidents of TII, a predefined search strategy, using keywords such as "tobacco company", "tobacco industry", "Article 5.3 of FCTC", "government agencies", together with synonyms, was utilized. Newspaper articles, websites and social media platforms (such as Facebook, Twitter and Instagram) were searched to obtain data. The incidents collated were then reviewed for scoring under seven themes, with 20 indicators. The themes were: (i) level of industry participation; (ii) corporate social responsibility (CSR); (iii) benefits to the tobacco industry; (iv) forms of unnecessary interaction; (v) transparency; (vi) conflict of interest; and (vii) preventive measure. Scoring was done to compare the level of implementation of Article 5.3 with respect to different countries and within India over time. A lower score on the Index denoted better implementation of Article 5.3, while a high score indicated poor implementation. The results of the first India TII Index have been included in the Asia TII Index 2018 India, with a score of 72, ranked fourth from the bottom (of 14 Asian countries). In the second India TII Index, which was included in the Global TII Index conducted by SEATCA for 33 countries across the globe, the score declined to 69. India was ranked eleventh from the bottom in the Global TII Index. The most recent India TII Index, conducted in 2021, showed marked progress in the level of the implementation of Article 5.3, the score being 57. Among the factors that have contributed to this progress are the various efforts made by the states to issue guidelines on Article 5.3 at the sub-national level and the Code of Conduct issued by the MoHFW.

in accordance with national law." In a Public Interest Litigation in the Karnataka High Court that challenged the sponsorship of a global tobacco industry event by a public agency, the Gol submitted that it would develop a code of conduct for public officers to prevent TII (Box 7.4). At the sub-national level, in 2015, Punjab adopted a protocol in line with Article 5.3, prescribing a code of conduct for public officials, as well as the prevention of partnerships and exchange of favours between public agencies and the tobacco industry. So far, 14 states/Union Territories in India have adopted similar protocols.<sup>16</sup> In 2020, the MoHFW adopted a Code of Conduct for public officials within the ministry and the institutions governed by the ministry to prevent TII. Table 7.1 provides a summary of the regulatory measures taken both at the state and national levels so far to curb TII.

There is room to expand and improve these protocols and work towards better implementation. The protocols address a part of the problem, and not necessarily all the tactics employed by the tobacco industry.

### The way forward

It is imperative to enhance the capacity for countering TII in India and increase the efforts to monitor it. Some measures that merit consideration are the periodic compilation of a TII index and the establishment of an observatory to monitor the tobacco industry and report the violations of Article 5.3 at the national and state levels. There is a need to broaden the prevailing protocols and Code of Conduct to include all the provisions of the WHO FCTC Article 5.3. It is also necessary to expand the scope of the code of conduct at the national level so that it may be

### BOX 7.4: Preventing conflicts of interest among public agencies/officers for tobacco control

In October 2010, the Tobacco Reporter, a tobacco industry magazine, decided to organize a Global Tobacco Networking Forum in Bengaluru (India). A tobacco industry event, included a conference and a visit by the delegates to tobacco fields and auction platforms in the country. Participation in the event was limited to representatives of the tobacco industry and the items on the agenda of the conference clearly indicated that the event was aimed at promoting the tobacco market/tobacco trade. The Tobacco Board, a statutory agency under the Ministry of Commerce and Industry (GoI), was listed as one of the sponsors of the event, alongside many tobacco companies. The Institute of Public Health, Bengaluru filed a litigation in the Karnataka High Court, demanding that the Tobacco Board shall not sponsor or participate in an event promoting tobacco as this would amount to a violation of the COTPA and the WHO FCTC. In its interim order, the Court interpreted this arrangement as amounting to the indirect promotion of tobacco, and ordered the Board to withdraw its sponsorship of the event and to avoid participating in it. *The Court further observed that "...the board can continue to promote the tobacco industry in other areas, but not related to human consumption of tobacco leading to affecting the health of the general public..."*

The petitioner proposed a Code of Conduct for public officials to prevent such partnerships between public agencies/officers and the tobacco industry in the future, and to prevent TII in the development and implementation of tobacco control programmes/policies, in line with the WHO FCTC Article 5.3. The Court recorded this submission and the representative of the GoI submitted that the government would duly consider the petitioner's proposal while framing such a Code of Conduct.

Starting from Punjab in 2015, 14 states and Union Territories in India have adopted a protocol and a Code of Conduct for public officials so far to prevent TII. In 2020, the MoHFW (GoI) adopted such a code for the officers of the ministry and the institutions governed by it. The Tobacco Board, meanwhile, continues with various activities to promote the cultivation of/trade in flue-cured virginia (FCV) tobacco and has now adopted a policy excluding the horizontal expansion (in terms of new land area) of FCV tobacco cultivation. The Global Tobacco Networking Forum, now called the Global Tobacco and Nicotine Forum, also continues to hold events. In fact, the Tobacco Board received two awards from the Forum (in 2014 and in 2019). More recently, a senior officer of the Board withdrew from participating in a Forum event at the last moment, following concerns regarding conflict of interest.

applied to all departments of the government. In addition, states that have not adopted a Code of Conduct should adopt a similar policy. Such norms concerned should also be followed by the civil society, including, healthcare professionals, medical bodies and associations, funders, academia, private stakeholders, and other actors engaged in efforts to control tobacco use.

A policy framework should be developed to put an end to the so-called CSR of the tobacco

industry, as well as the industry's financial contributions to public agencies and political parties. There is a need for governments to align policies in non-health sectors (finance, commerce, industry, agriculture, etc.) with the health ministry's public health goals related to tobacco control. Tobacco control must be seen as an issue which is linked to development and is crucial for achieving the National NCD targets and Sustainable Development Goals (SDGs).

**Table 7.1: Chronology and summary of regulatory measures taken at state and national levels in India**

S.No.	Measure	Year	Key highlights
<b>National level</b>			
1.	National level Code of Conduct	July 2020	On 7 July 2020, Union Secretary, MoHFW, Government of India announced a Code of Conduct to be followed by the ministry and all its institutions, departments, agencies, affiliates and contractors throughout the country. Emphasis was laid on strict compliance with the code.
<b>State/Union Territory level</b>			
1.	Punjab	May 2015	Since 2015, 14 states/Union Territories have issued Article 5.3 notifications, which consist of guidelines for government officials (health and non-health departments) on limiting interactions with the tobacco industry. Various measures, such as those related to regulating CSR activities, ensuring transparency of interactions and avoiding conflict of interest, have been listed in these notifications.
2.	Mizoram	May 2016	
3.	West Bengal (14 districts have adopted guidelines)	December 2016	
4.	Himachal Pradesh	May 2017	
5.	Bihar	June 2017	
6.	Jammu and Kashmir	July 2017	
7.	Maharashtra	October 2017	
8.	Tamil Nadu	November 2017	
9.	Jharkhand	October 2018	
10.	Karnataka	January 2019	
11.	Kerala	May 2019	
12.	Meghalaya	June 2019	
13.	Uttar Pradesh	September 2019	
14.	Puducherry	December 2021	

## Key messages

- TII is a serious threat to effective tobacco control in India.
- Sophisticated TII tactics range from CSR to litigation and undermining of scientific evidence.
- India has already assessed TII for the years 2018–2021.
- 14 states and Union Territories have made several efforts to curb the interference of the tobacco industry at the sub-national level. The MoHFW (GoI) has adopted a Code of Conduct to prevent TII.



## REFERENCES

1. World Health Organization. Tobacco Industry Interference with tobacco control. WHO; 2008. Available from: <https://www.who.int/publications/item/9789241597340>, accessed 6 July 2022.
2. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res.* 2021;23(2):294–301. doi: 10.1093/ntr/ntaa154.
3. Nayak NS. Estimates of tobacco-dependent employment in India. *Econ Polit Wkly.* 2018;53(40):58–62.
4. Amin A, Bhojani U, Tobacco Control Working Group. India Tobacco Industry Interference Index 2020: a report on implementation of the WHO Framework Convention on Tobacco Control Article 5.3. 2020. Available from: <https://globaltobaccoindex.org/upload/assets/3Z3etsFtAPNhMM3sovQgfULM4uTjafVS7mLvQe2He5CHQOmy49.pdf>, accessed 6 July 2022.
5. World Health Organization. Tobacco Industry and Corporate Social Responsibility ... an Inherent Contradiction. UCSF: Center for Tobacco Control Research and Education; 2004. Available from: <https://escholarship.org/uc/item/6kf7q7v9>, accessed 6 July 2022.
6. Yadav A, Lal P, Sharma R, Pandey A, Singh RJ. Tobacco industry corporate social responsibility activities amid COVID-19 pandemic in India. *Tob Control.* 2021;tobaccocontrol-2020-056419. doi: 10.1136/tobaccocontrol-2020-056419.
7. Ministry of Corporate Affairs. The Companies Act, 2013. Ministry of Corporate Affairs, Government of India. Available from: <https://www.mca.gov.in/MinistryV2/companies+act+2013.html>, accessed 6 July 2022.
8. Chugh A, Bassi S, Nazar GP, Bhojani U, Alexander C, Lal P, et al. Tobacco Industry Interference Index: implementation of the World Health Organization's Framework Convention on Tobacco Control Article 5.3 in India. *Asia Pac J Public Health.* 2020;32(4):172–8. doi: 10.1177/1010539520917793.
9. HRIDAY. Tobacco Industry Interference Index. India report on Implementation of WHO FCTC Article 5.3. New Delhi: HRIDAY; 2019. Available from: <https://globaltobaccoindex.org/upload/assets/Er8klWfdERBxBGMyoU6sQ3gkoe56pGh2wrYE36lIMRXCfBxZ5Q.pdf>, accessed 6 July 2022.
10. Global Tobacco Industry Interference Index 2021 India. STOP: Global Tobacco Industry Watchdog. Available from: <https://globaltobaccoindex.org/upload/assets/KKNfX4kx8OXqujplCnJYIBqH2X0rXSRn4k0Oz2jKZaw7Kc3eDN.pdf>, accessed 6 July 2022.
11. Shining the Light on Tobacco Industry Allies. STOP: A Global Tobacco Industry Watchdog. Available from: <https://exposetobacco.org/tobacco-industry-allies/>, accessed 6 July 2022.
12. World Health Organization. WHO Statement on Philip Morris funded Foundation for a smoke-free world. WHO; 2017. Available from: <https://www.who.int/news/item/28-09-2017-who-statement-on-philip-morris-funded-foundation-for-a-smoke-free-world>, accessed 6 July 2022.
13. Yadav A, Singh A, Khadka BB, Amarasinghe H, Yadav N, Singh R. Smokeless tobacco control: litigation & judicial measures from Southeast Asia. *Indian J Med Res.* 2018;148(1):25–34. doi: 10.4103/ijmr.IJMR\_2063\_17.
14. Dsouza R, Bhojani U. Strategic and contested use of food laws to ban smokeless tobacco products in India: a qualitative analysis of litigation. *Tob Control.* 2021. doi: 10.1136/tobaccocontrol-2020-056241.
15. Goodchild M, Sinha P, Gill Munish V, Tullu FT. Changes in the affordability of tobacco products in India during 2007/2008 to 2017/2018: a price-relative-to-income analysis. *WHO South East Asia J Public Health.* 2020;9(1):73–81. doi: 10.4103/2224-3151.283001.
16. ICMR National Institute of Cancer Prevention and Research. Orders and Notifications: Notifications on Article 5.3 of WHO FCTC. Available from: <http://smokelesstobaccocontrolindia.com/orders-notifications/#1592559640120-7af65f67-5bae>, accessed 6 July 2022.

## 7.2: Tobacco cessation in India

Nicotine is a highly addictive substance and quitting tobacco can be extremely challenging once nicotine addiction has developed. Studies suggest that only 1%–2% of quitters stop using tobacco on their own.<sup>1</sup> This underscores the need to establish support for those seeking to quit tobacco, as well as to discourage tobacco use in the community.

Article 14 of the WHO FCTC<sup>2</sup> mandates Member States to develop and disseminate guidelines on tobacco cessation. About 32% of the world's population now has some form of cessation coverage, while 26 countries, including India, have relatively more comprehensive coverage than the others.<sup>3,4</sup>

### Historical development of tobacco cessation in India

In India, efforts to promote tobacco cessation began in the context of primary, community-

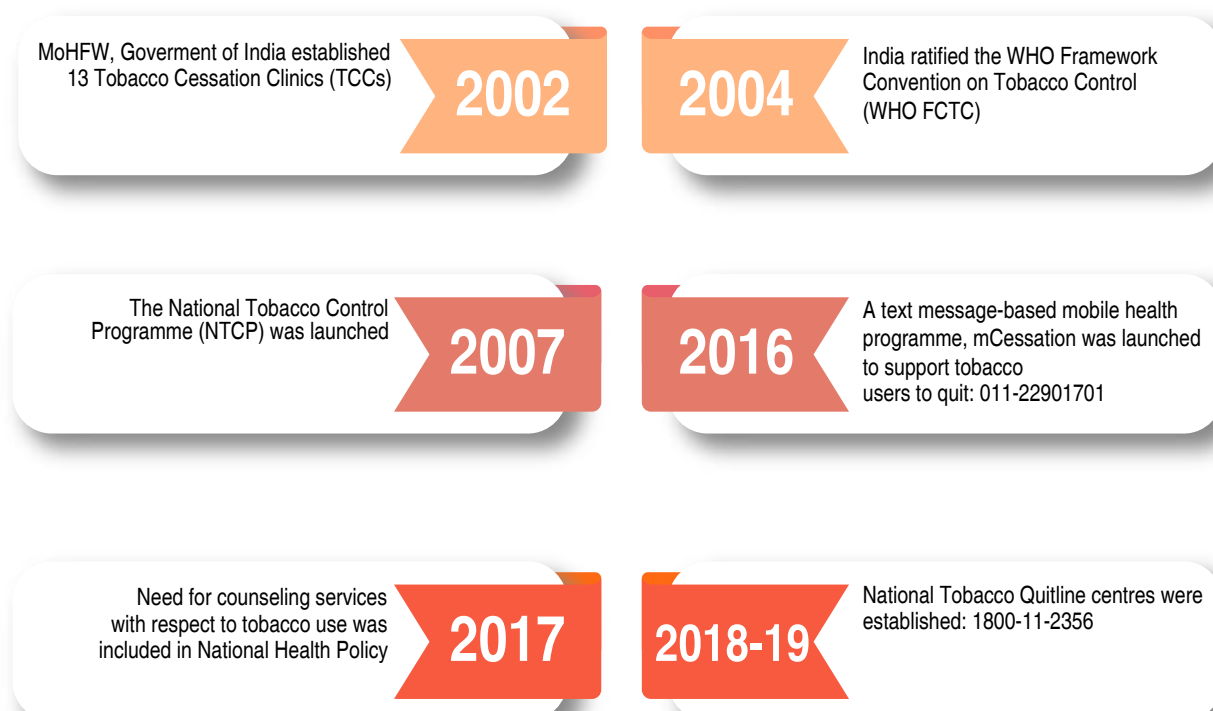
based interventions for the control of cancer in the 1980s and 1990s. Later, the MoHFW began establishing tobacco cessation clinics and developing tobacco cessation programmes (Figure 7.1).

### Tobacco cessation clinics

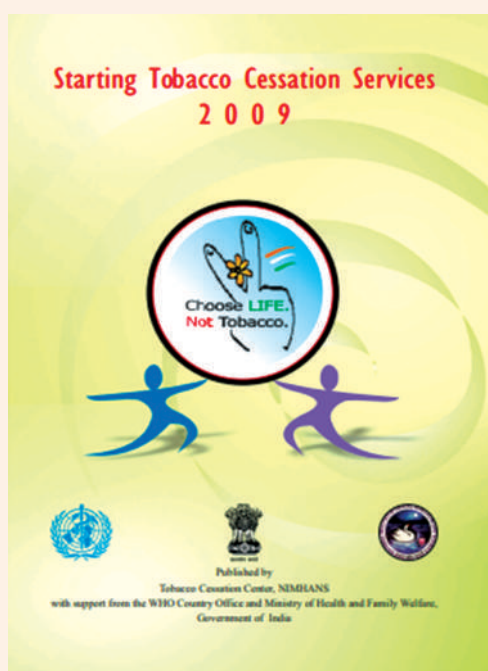
In collaboration with the MoHFW (GoI), WHO established 13 tobacco cessation clinics (TCCs) across the country in 2002. Subsequently, this number rose to 19. A common training programme in counselling was held for the staff of all the TCCs (Box 7.5).<sup>5</sup>

In the first 5 years after the TCCs began functioning, people received simple tips for quitting. Of those attending the clinics (N=23, 320), 68.9% received behaviour counselling and 31% received adjunct pharmacotherapy (mainly nicotine replacement). At 6 weeks follow-up, 14% had quit tobacco, and 22% reported that their tobacco use had decreased by 50%

**Figure 7.1: Milestones in tobacco cessation services in India**



### Box 7.5: Training module for starting a tobacco cessation clinic (TCC)



#### Requirements of a tobacco cessation clinic (TCC)

- Trained staff to provide cessation support
- Appropriate location
- Supporting equipment – blood pressure monitor, carbon monoxide monitor (optional)
- Provision of brief interventions, behavioural counselling and pharmacological support to quit tobacco use
- Patient education material
- Follow-up and after-care services
- Creation of awareness in the public on the availability of services
- Documentation

Source: NIMHANS<sup>6</sup>

or more. In the longitudinal follow-ups among 12,813 attendees for whom data were available, 26% were in the improved category at the first follow-up (3 months), 21% at the second follow-up (6 months) and 18% at the third follow-up (9 months).<sup>7</sup>

While brief counselling was found to be effective for reducing tobacco use and/or quitting,<sup>7</sup> the addition of pharmacotherapy was shown to achieve a higher rate of abstinence.<sup>8,9</sup>

As the TCCs began to impart training, conduct awareness programmes and carry out advocacy activities, they were redesignated as tobacco cessation centres (TCCs) and subsequently, in 2005, Regional Centres for Tobacco Control.

#### Tobacco cessation under the National Tobacco Control Programme

Strengthening of tobacco cessation services is an important pillar of the NTCP. Owing to the continuous efforts made over the years, India has

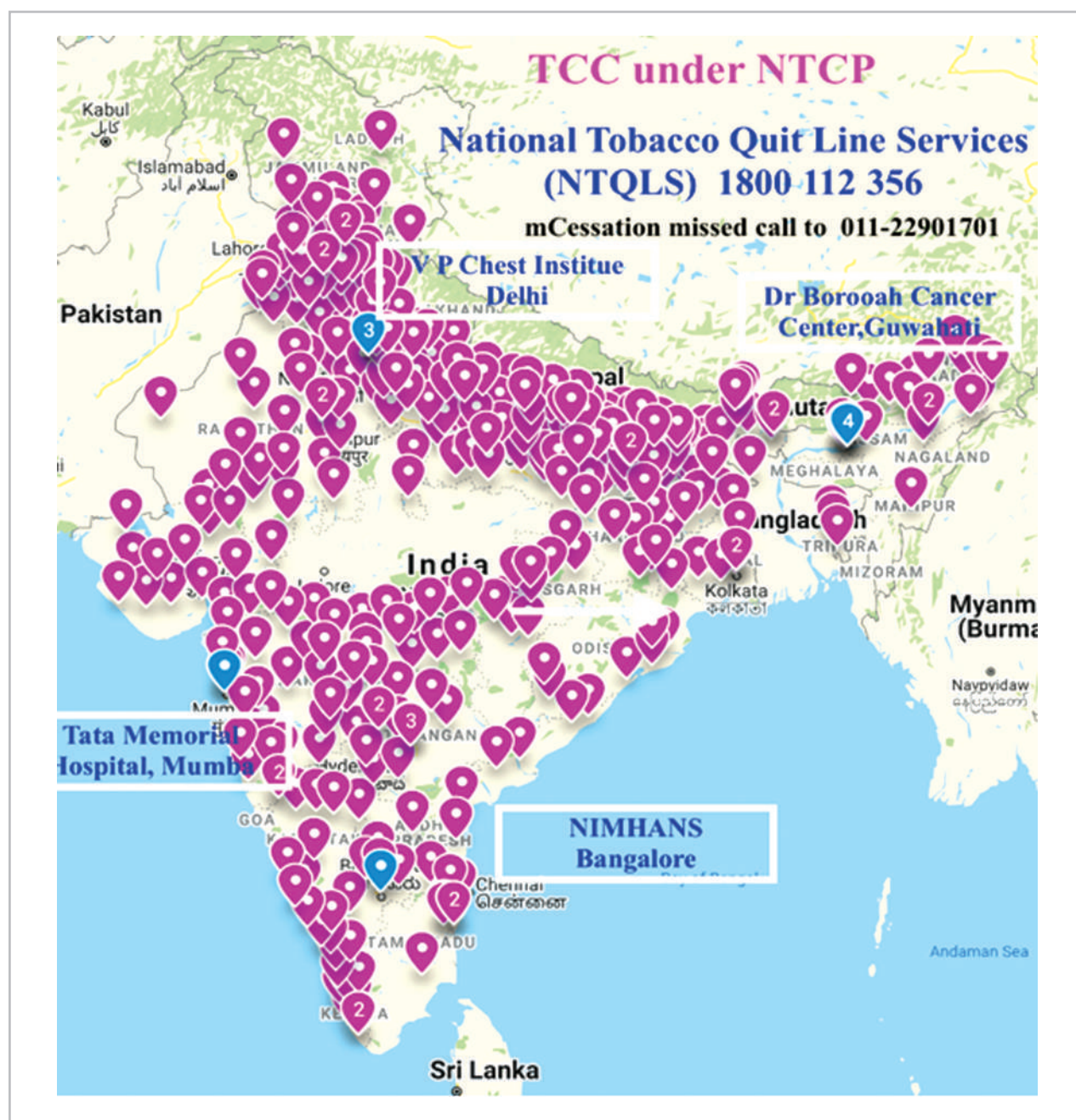
been successful in establishing comprehensive cessation services in accordance with the MPOWER policies. M: monitor tobacco use and prevention policies; P: protect people from tobacco smoke; O: offer help to quit tobacco; W: warn about the dangers of tobacco; E: enforce bans on tobacco advertising, promotion and sponsorship; and R: raise taxes on tobacco.

The NTCP, launched by the GoI in 2007–2008, includes components related to community awareness, as well as to the provision of support for cessation through the district TCCs. States are also given support to set up and strengthen cessation facilities, including those offering pharmacological treatment, at the level of the district hospital and below (community health centres, primary health centres and sub-centres). Under the NTCP, states are encouraged to offer comprehensive community-based counselling for primordial prevention of tobacco use. The establishment of a robust referral system has also been recommended to facilitate the referral of

patients/tobacco users from peripheral areas to the district hospital. The National Health Mission (NHM) has given a greater thrust to the NTCP and the programme is being implemented in 612 districts, most of which have TCCs.<sup>10</sup> Figure 7.2 provides a visual representation of the TCCs and other facilities under the Central Government.

The National Health Policy, 2017 emphasizes the need for counselling services to promote health and behaviour change in the context of tobacco and alcohol use. The Ayushman Bharat Health and Wellness Centres adopt the same approach. The strategies followed by these centres are aimed at identifying high-risk individuals, such as tobacco users or persons with any chronic

**Figure 7.2: Tobacco cessation centres (in purple) and four quitlines (in blue – one national and three regional) under the National Tobacco Control Programme (NTCP)**





diseases, through door-to-door screening, and providing appropriate support for counselling as well as services for lifestyle management closer to the community through mid-level healthcare providers.

The Tobacco Free Initiative in India has attempted to address the missing “O” (offer help to quit tobacco) of MPOWER through the use of mobile technology.<sup>11</sup>

## **mCessation**

In 2016, as part of its “Be Healthy, Be Mobile” initiative, the MoHFW, in partnership with WHO and the International Telecommunications Union, developed a text message-based mobile phone health programme, mCessation, to support tobacco users in quitting.<sup>11</sup> Any tobacco user desirous of quitting tobacco can contact the programme’s specialists by making a missed call to the toll-free number 011-22901701. Callers are sent structured, time-specific text messages on their mobile phones. These messages focus on the impact of tobacco, ways to reduce the craving, quitting completely, etc., and are delivered to the person every day.

A review of the mCessation programme revealed that in the first year itself, there had been 20 lakh calls. An evaluation of the programme, 4–6 months after registration (excluding callers to mDiabetes) showed that the self-reported quit status in the past 30 days was 19%. The programme was found to be useful by 77% of the respondents.<sup>12</sup> In their feedback, the respondents mentioned, among other things, that they had faced some technical difficulties in contacting the programme’s specialists. They also mentioned the need to supplement the text service with interactive voice recording, video messages and direct counselling.

## **Tobacco quitline services in India**

India has gained experience in the operation of quitlines for tobacco cessation through interventions such as the American Cancer Society’s quitline for people in Indian workplaces

(2008–2010); a Mumbai-based Johnson & Johnson quitline (2012); and the Population Services International quitline in India, based in Chennai (2012–2013). Since 2013, a unique public–private partnership has been operating a quitline in Rajasthan. It has serviced more than 4500 callers and recorded a self-reported quit rate of 18–20% at year 1.<sup>13</sup>

The MoHFW established the National Tobacco Quitline Service (NTQLS) in the Vallabhbhai Patel Chest Institute in Delhi in 2016. The quitline has been expanded, and now includes three regional quitlines, one at the National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, another at the Dr B. Borooah Cancer Centre, Guwahati, and the third at the Tata Memorial Hospital, Mumbai (2019 onwards) (Box 7.6). In 2018, it was made mandatory for the designated toll-free number (1800-11-2356) to be carried on tobacco product packaging along with the pictorial health warning. The quitline protects confidentiality and offers personalized and tailored support to motivate the caller to quit tobacco. The NTQLS achieved a 38.8% quit rate during the first year of its operation.<sup>14</sup> The quitlines presently provide counselling in 15 Indian languages.

## **Linkages between tobacco cessation and other programmes**

In 2017, the GoI developed the National Framework for Joint TB–Tobacco Collaborative Activities<sup>15</sup> to help tuberculosis (TB) patients to stop tobacco use. Under the collaboration between the National Tuberculosis Eradication Programme (NTEP) and the NTCP, every TB patient who is a tobacco user is entitled to receive support for tobacco cessation. Further, these patients are made aware of the adverse consequences of exposure to second-hand smoke. Finally, those who access tobacco cessation services through TCCs or quitlines are given an opportunity to get themselves screened for the symptoms of TB.

## BOX 7.6: Launch of the National tobacco quitline service at the Vallabhbhai Patel Chest Institute in May 2016



Tobacco cessation is identified as an important strategy in the National Multisectoral Action Plan for Prevention and Control of Common Noncommunicable Diseases (NCDs) (2017-2022).<sup>16</sup> The National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS) has brought out a health counsellor handbook to enable the staff in clinics dealing with NCDs to offer evidence-based and structured counselling services. One of the main aims is to help with tobacco cessation. The handbook also addresses other risk factors for NCDs, such as alcohol use, unhealthy diet, lack of exercise and stress.

People with severe mental illness tend on average 10–20 years earlier than the general population, for which tobacco use, particularly smoking, has been recognized as a contributory risk factor. There are several opportunities to offer tobacco cessation services within the National Mental Health Programme (NMHP), and to develop

linkages between the NTCP and the NMHP, as well as with other national programmes focusing on illnesses for which tobacco use is a preventable risk factor.

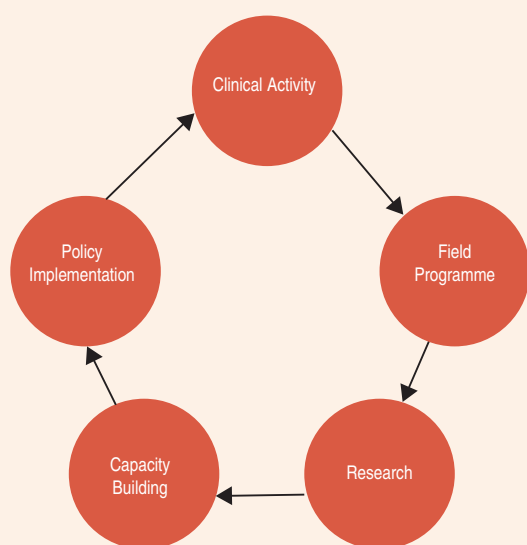
The National Oral Health Programme (NOHP) focuses on the provision of tobacco cessation services through more than 1800 NOHP dental care units at the district level and below, as well as through the Health and Wellness Centres. TCCs have been established in 310 dental colleges. In November 2020, the Maulana Azad Institute of Dental Sciences (MAIDS), New Delhi<sup>17</sup> was identified as the National Resource Centre for Oral Health and Tobacco Cessation (Box 7.7). It addresses patient care, research, capacity-building and dental education under the NOHP.

### Opportunities for training healthcare professionals in digital health

In addition to mCessation and quitlines, which offer direct services to the public, it is important

### BOX 7.7: TCC services at Maulana Azad Institute of Dental Sciences

The TCC at MAIDS was established as a pilot project in July 2011 and has since been expanded into an ongoing programme.



Source: Maulana Azad Dental Institute of Dental Sciences (2011)<sup>17</sup>

to empower all healthcare professionals to offer tobacco cessation support. This can be done effectively through digital platforms and well-established programmes, such as Extension for Community Healthcare Outcomes (ECHO).<sup>18</sup> The NIMHANS Digital Academy's ECHO clinics and sessions, through the hub (NIMHANS)-and-spoke (all healthcare professionals) model, offer an opportunity to exponentially increase the capacity to provide tobacco cessation services in the country.<sup>19</sup>

### Resources for supporting tobacco cessation

Since the inception of TCCs in the country, a range of resources have been developed, such as on how to start a TCC,<sup>6</sup> maintenance of a tobacco cessation diary and how to prevent relapse.<sup>6</sup> In addition, there are tips for patients on how to manage withdrawal. Many of these resources are available on the National Health Portal.<sup>11</sup>

Among the major resources developed are the national treatment guidelines for tobacco cessation,<sup>20</sup> a counsellors' manual for addressing the risk factors for NCDs, including tobacco use, a guidebook for nurses, doctors and dentists on tobacco cessation,<sup>21-24</sup> and operational guidelines for the NOHP. The Indian Psychiatric Society has also issued guidelines for tobacco cessation (Box 7.8).<sup>25</sup> A manual on tobacco cessation for doctors and dentists as well as for nurses and community workers was developed for the South-East Asia Region,<sup>22,23</sup> in addition to operational guidelines on the establishment of tobacco cessation centres in dental institutions.<sup>24</sup>

Two activities central to the effort to achieve tobacco control are training and capacity building. Under the NTCP, states and Union Territories are encouraged to organize training programmes for the various stakeholders in the districts. These include doctors, nurses, community health workers, accredited social health activists, members of CSOs, the Indian



### **BOX 7.8: Brief summary of the clinical practice guidelines for the management of tobacco use disorders (Indian Psychiatric Society 2015)**

- Use the 5 A's model (Ask, Assess, Advise, Assist, Arrange) as brief intervention.
- Add a few components of motivational interviewing to engage the tobacco user.
- Conduct intensive and frequent counselling sessions to further improve the outcome.
- Prevent relapse by identifying people with a high risk of relapse, teach them how to manage craving, increase their ability to cope and solve problems, encourage lifestyle changes, teach them cognitive ways to motivate and change themselves.
- Use evidence-based pharmacotherapy:
  1. Nicotine replacement therapy – gums and patch
    - Dose depends on severity of tobacco addiction
    - Adequate dose associated with better outcome
    - Increases likelihood of quitting by about 1.5 times compared to placebo.
  2. Non-nicotine pharmacotherapy – choice may be determined on the basis of availability and affordability, and the presence of comorbidity
    - Bupropion: 150 mg/day for 3 days, then 150 mg twice daily
    - Varenicline: 0.5 mg/day for first 3 days, 0.5 mg twice a day from 4th to 7th day, 1 mg twice daily thereafter

Source: Chand and Murthy (2015)<sup>25</sup>

Medical Association (IMA), and Indian Dental Association (IDA), teachers, officials from enforcement departments such as the police, food authorities and municipal officers. Efforts are being made to provide training in tobacco control and integrate it into the curricula of dental and nursing courses.

### **Obstacles to achievement of tobacco cessation**

Despite a 6% reduction in tobacco use between GATS-1 and GATS-2, the burden of current tobacco use remains high. This is due not only to the very low self-reported quit rates (2%, GATS-2), but also the diverse types of

tobacco products used and the variations in their nicotine content.<sup>26</sup> This is compounded by the yearly increase in the country's population (by ~1% in 2020)<sup>27</sup> and the addition of over 2 million (20 lakh) new users annually from the late 1990s.<sup>28</sup>

The obstacles to the achievement of tobacco cessation include:

- Absence of TCCs at the secondary and tertiary levels of healthcare, including large private healthcare settings
- Inadequate participation of doctors and nurses
- Lack of strong intent on the part of tobacco users to quit even in the short term

- Lack of reimbursement of the expenses for tobacco dependence under insurance schemes
- Covert influence exerted by the tobacco industry to promote tobacco use<sup>29</sup>

Various measures can be taken to overcome these challenges, such as by:

- Actively encouraging all tobacco users to quit, especially those attending any health facilities every time
- Promoting awareness of the benefits of quitting and incentivizing quitting
- Adopting a systems approach of screening, treatment and follow-up of the treated tobacco users, besides coding them in their health records for the use of and dependence on tobacco and nicotine, according to International Classification of Diseases (ICD-11)
- Making long overdue amendments to Sections 4, 6a and b, 7, 10, 24 and 28 of the Cigarettes and Other Tobacco Products Act (COTPA) 2003<sup>29,30</sup> to increase the demand for cessation

Support for tobacco cessation must also be provided by solo practitioners and counsellors in educational institutions and workplaces. Further, support for cessation needs to be strengthened in the private sector.<sup>29–31</sup> Research conducted in different settings suggests successful quit rates,<sup>32,33</sup> which vary from setting to setting depending on the type of interventions, their intensity and the expertise available. In a vast country like India, where it is difficult to provide individual interventions, community-based interventions are a satisfactory option, as various studies have shown their effectiveness in achieving tobacco cessation.

There is a need to focus on special categories, such as pregnant women,<sup>34</sup> the elderly,<sup>35</sup> adolescents,<sup>36</sup> and those with co-occurring conditions, including other substance use disorders.<sup>37</sup> The dual use of smoking and SLT presents a challenge to successful cessation outcomes because of a relatively greater dependence, a complex consumption pattern, evasion of indoor smoke-free policies, a high probability of a relapse and no proven cessation strategy.<sup>38</sup> The ability to stay off tobacco during a longer term follow-up (of at least 6 months) leads to greater success.<sup>39</sup>

It is important to have a robust referral system that facilitates the referral of patients/tobacco users from the periphery to the district hospital.

The present curriculum for healthcare professionals does not include training of medical, dental and nursing graduates in tobacco cessation.<sup>40,41</sup>

Additional challenges are posed by the country's sociodemographic heterogeneity, as well as the inadequate participation of tobacco users and their communities in cessation programmes. The lack of resources and the slow implementation of the national programme in many parts of the country also pose a problem. Although activities for tobacco cessation have been consistently scaled up in India, there is not enough support on the ground.<sup>42</sup> While promoting efforts for cessation at the population level, it is necessary to improve access to cessation treatment as an integral part of universal health coverage; launch mass media campaigns to spread awareness and de-normalize tobacco use; and assist people to quit and to stay off tobacco in the community, in workplaces and at all levels of healthcare.

## Key messages

- Nicotine in various forms of tobacco is highly addictive; therefore, habituated users need support to quit.
- The important responsibilities of the health sector include the implementation of two components of the WHO MPOWER strategy, i.e. Warning people about the harms of tobacco use and Offering them help to stop using tobacco.
- In the past two decades, the GoI has taken many steps to promote tobacco cessation through the establishment of TCCs, and the provision of support for cessation at the district level through the NTCP, mCessation and tobacco quitlines.
- Tobacco cessation has been integrated into several programmes, including the NTCP, NPCDCS and NOHP, and needs to be integrated into several others.
- Resources for tobacco cessation services, including for training of personnel and for making pharmacotherapy are available, and need to be enhanced at all levels of care.
- Digital technology can be utilized to train healthcare professionals and to provide an array of online services along with face-to-face services to help more people quit tobacco.

## REFERENCES

1. Global Adult Tobacco Survey, India 2009–2010. Ministry of Health and Family Welfare, Government of India. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-India-2009-2010-Report.pdf>, accessed 7 July 2022.
2. WHO. Guidelines for implementation of Article 14. WHO Framework Convention on Tobacco Control; 2013. Available from: <https://fctc.who.int/publications/m/item/guidelines-for-implementation-of-article-14>, accessed 7 July 2022.
3. WHO Report on the Global Tobacco Epidemic 2019. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789241516204>, accessed 7 July 2022.
4. WHO. WHO report on the global tobacco epidemic 2021: addressing new and emerging products. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789240032095>, accessed 7 July 2022.
5. World Health Organization. Effective implementation of the WHO framework convention on tobacco control through the MPOWER policy package 2009. Available from: <https://apps.who.int/iris/bitstream/handle/10665/205972/B4474.pdf?sequence=1&isAllowed=y>, 15 August 2022.
6. National Institute of Mental Health and Neuro Sciences (NIMHANS). Starting tobacco cessation services. Zacharias J, Raghavendra S, Murthy P, Benegal V, Chand PK. Tobacco Cessation Center, NIMHANS; 2009. Available from: <https://nimhans.ac.in/cam/> 4 February 2022.
7. Varghese C, Kaur J, Desai NG, Murthy P, Malhotra S, Subbakrishna DK, Prasad VM, Munish VG. Initiating tobacco cessation services in India: challenges and opportunities. WHO South East Asia J Public Health. 2012;1(2):159–68. doi: 10.4103/2224-3151.206929.
8. Vijayan VK, Kumar R. Tobacco cessation in India. Indian J Chest Dis Allied Sci. 2005;47(1):5–8. PMID: 15704708.
9. Kumar R, Saroj SK, Kumar M, Mahakud GC. Demographic profile, smoking cessation interventions and continuous abstinence of tobacco users at two years. Indian J Chest Dis Allied Sci. 2019;61(1):31–7.
10. National Health Mission. National Tobacco Control Programme (NTCP). Ministry of Health and Family Welfare, Government of India. Available from: <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1052&lid=607>, accessed 7 July 2022.
11. National Health Portal India. mCessation Programme - Quit tobacco for life. Ministry of Health and Family Welfare, Government of India. Available from: <https://www.nhp.gov.in/quit-tobacco>, accessed 3 February 2022.

12. Gopinathan P, Kaur J, Joshi S, Prasad VM, Pujari S, Panda P, et al. Self-reported quit rates and quit attempts among subscribers of a mobile text messaging-based tobacco cessation programme in India. *BMJ Innovations*. 2018;4(4):147–54. doi: 10.1136/bmjinnov-2018-000285.
13. Gupta R, Verma V, Mathur P. Quitline activity in Rajasthan, India. *Asian Pac J Cancer Prev*. 2016;17(S2):19–24. doi: 10.7314/apjcp.2016.17.s2.19.
14. Raj Kumar, Jha AK, Munish VG, Pusp A, Sinha P, Gupta P, et al. National Tobacco Quitline: the preliminary Indian experience. *Indian J Chest Dis Allied Sci*. 2018;60(1):7–12.
15. Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. National framework for Joint TB-Tobacco collaborative activities. New Delhi, India: Ministry of Health and Family Welfare, Government of India; 2017. Available from: <https://tbcindia.gov.in/WriteReadData/TB-Tobacco.pdf>, accessed 7 July 2022.
16. Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India. National multisectoral action plan for prevention and control of common NCDs (2017–2022). Ministry of Health and Family Welfare, Government of India; 2017. Available from: [https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29\\_1.pdf](https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29_1.pdf), accessed 7 July 2022.
17. Maulana Azad Institute of Dental Sciences (MAIDS). Tobacco cessation clinic (TCC). 2011. Available from: <http://maids.ac.in/tobacco-cessation-clinic.php>, accessed 13 November 2020.
18. Nethan ST, Hariprasad R, Babu R, Kumar V, Sharma S, Mehrotra R. Project ECHO: a potential best-practice tool for training healthcare providers in oral cancer screening and tobacco cessation. *J Cancer Educ*. 2020;35(5):965–71. Doi: 10.1007/s13187-019-01549-8.
19. Sagi MR, Chand P, Narasimha VL, Murthy P, Mamatha M, Karthick C, et al. A pilot from the virtual knowledge network (VKN) NIMHANS ECHO. 5th National Conference on E-Learning & E-Learning Technologies (ELELTECH); 2017. doi: 10.1109/ELELTECH.2017.8075000.
20. National Tobacco Control Programme. Tobacco Dependence Treatment Guidelines. New Delhi: Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India; 2011. Available from: [https://nhm.gov.in/NTCP/Manuals\\_Guidelines/Tobacco\\_Dependence\\_Treatment\\_Guidelines.pdf](https://nhm.gov.in/NTCP/Manuals_Guidelines/Tobacco_Dependence_Treatment_Guidelines.pdf), accessed 13 November 2020.
21. Ministry of Health and Family Welfare, Government of India. Guidebook for nurses on Tobacco Cessation and Drug Dependence Treatment. New Delhi, India: MoHFW; 2019.
22. World Health Organization, South-East Asia Region. Helping people quit tobacco: a manual for doctors and dentists. WHO Regional Office for South-East Asia; 2010. Available from: <https://apps.who.int/iris/handle/10665/205266>, accessed 13 November 2020.
23. World Health Organization, South-East Asia Region. Tobacco cessation: a manual for nurses, health workers and other health professionals. WHO Regional Office for South-East Asia; 2010. Available from: <https://apps.who.int/iris/handle/10665/206012>, accessed 13 November 2020.
24. Directorate General of Health Services. Ministry of Health and Family Welfare, Government of India. Establishment of Tobacco Cessation Centers in Dental Institutes - An Integrated Approach in India - Operational Guidelines 2018. National Oral Health Programme/ National Tobacco Control Programme; 2018. Available from: [https://dciindia.gov.in/Rule\\_Regulation/FinaloperationalguidelinesTCCindentalcolleges.pdf](https://dciindia.gov.in/Rule_Regulation/FinaloperationalguidelinesTCCindentalcolleges.pdf), accessed 7 July 2022.
25. Chand PK, Murthy P. Management of tobacco use disorders. In: Basu D, Dalal PK (eds). Synopsis of the clinical practice guidelines on substance use disorders. New Delhi: Indian Psychiatric Society; 2015:81–8. Available from <https://www.indianpsychiatry.org/documents/IPSCPGSUDSynopsisBook2015.pdf>, accessed 13 November 2020.
26. Sharma P, Murthy P, Shivhare P. Nicotine quantity and packaging disclosure in smoked and smokeless tobacco products in India. *Indian J Pharmacol*. 2015;47(4):440–3. doi: 10.4103/0253-7613.161273.
27. The World Bank. Data Bank - World Development Indicators. The World Bank Group; 2022. Available from: <https://databank.worldbank.org/reports.aspx?source=world-development-indicators>, accessed 8 July 2022.
28. Chadda RK, Sengupta SN. Tobacco use by Indian adolescents. *Tob Induc Dis*. 2002;1(1):8. doi: 10.1186/1617-9625-1-8.
29. Gupta R, Pednekar MS, Kumar R, Goel S. Tobacco cessation in India—current status, challenges, barriers and solutions. *Indian J Tuberc*. 2021;68S:S80–S85. doi: 10.1016/j.ijtb.2021.08.027.
30. Gupta R, Agarwal K, Gupta GN. Tobacco cessation delivery by the HCPs—status quo report of a private hospital in India. *EC Psychology and Psychiatry*. 2019;8:1003–9. Available from: [https://www.researchgate.net/publication/346961871\\_EC\\_PSYCHOLOGY\\_AND\\_PSYCHIATRY\\_Research\\_](https://www.researchgate.net/publication/346961871_EC_PSYCHOLOGY_AND_PSYCHIATRY_Research_)

Article\_Tobacco\_Cessation\_Delivery\_by\_the\_HCPs-Status\_Quo\_Report\_of\_a\_Private\_Hospital\_in\_India, accessed 8 July 2022.

31. Gupta R. Healthcare professionals' (HCPs) engagement in tobacco cessation in India. *EC Psychology and Psychiatry*. 2020;9:8–10. Available from: [https://www.researchgate.net/publication/346961936\\_EC\\_PSYCHOLOGY\\_AND\\_PSYCHIATRY\\_EC\\_PSYCHOLOGY\\_AND\\_PSYCHIATRY\\_Case\\_Report\\_Healthcare\\_Professionals'\\_HCPs\\_Engagement\\_in\\_Tobacco\\_Cessation\\_in\\_India](https://www.researchgate.net/publication/346961936_EC_PSYCHOLOGY_AND_PSYCHIATRY_EC_PSYCHOLOGY_AND_PSYCHIATRY_Case_Report_Healthcare_Professionals'_HCPs_Engagement_in_Tobacco_Cessation_in_India), accessed 8 July 2022.
32. Mishra GA, Majmudar PV, Gupta SD, Rane PS, Uplap PA, Shastri SS. Workplace tobacco cessation program in India: a success story. *Indian J Occup Environ Med*. 2009;13(3):146–53. doi: 10.4103/0019-5278.58919.
33. Sorensen G, Pednekar MS, Sinha DN, Stoddard AM, Nagler E, Aghi MB, et al. Effects of a tobacco control intervention for teachers in India: results of the Bihar school teachers study. *Am J Public Health*. 2013;103(11):2035–40. doi: 10.2105/AJPH.2013.301303.
34. Murthy P, Subodh BN. Current developments in behavioral interventions for tobacco cessation. *Curr Opin Psychiatry*. 2010;23(2):151–6. doi: 10.1097/YCO.0b013e328336653f.
35. Goswami A, Reddaiah VP, Kapoor SK, Singh B, Dwivedi SN, Kumar G. Tobacco and alcohol use in rural elderly Indian population. *Indian J Psychiatry*. 2005;47(4):192–7. doi: 10.4103/0019-5545.43050.
36. Chatterjee N, Gupte H, Mandal G, Bhutia T. Does adding a psychosocial cessation intervention to an existing life-skills and tobacco-prevention program influence the use of tobacco and supari among secondary school students? Findings from a quasi-experimental trial in Mumbai, India. *Tob Prev Cessat*. 2019;5:45. doi: 10.18332/tpc/113355.
37. Murthy P, Chand P. Treatment of dual diagnosis disorders. *Curr Opin Psychiatry*. 2012;25(3):194–200. doi: 10.1097/YCO.0b013e328351a3e0.
38. Panda R, Persai D. Cessation attempts in dual users (smoking plus smokeless): findings from two states in India. *Tob Induc Dis*. 2018;16(Suppl 1):A863. doi:10.18332/tid/84349.
39. Gupta RK, Narake SS, Udawat HP. Dual users of tobacco: outcomes of their management in a TCC at a multispecialty hospital in India. *EC Psychology and Psychiatry*. 2021;10(1):21–5.
40. Mohanty VR, Rajesh GR, Aruna DS. Role of dental institutions in tobacco cessation in India: current status and future prospects. *Asian Pac J Cancer Prev*. 2013;14(4):2673–80. doi: 10.7314/apjcp.2013.14.4.2673.
41. Panda R, Jena PK. Examining physicians' preparedness for tobacco cessation services in India: Findings from primary care public health facilities in two Indian states. *Australas Med J*. 2013;6(3):115–21. doi: 10.4066/AMJ.2013.1617.
42. Narasimha VL, Mathew Y, Anil S, Murthy P. A study to evaluate availability of tobacco cessation services in Bengaluru, India. *Asian J Psychiatr*. 2021;58:102600. doi: 10.1016/j.ajp.2021.102600.

## 7.3: Progress in tobacco control for smokeless tobacco

The decrease in prevalence of SLT use by 17.4% overall among individuals aged  $\geq 15$  years between the two GATS (from 25.9% in 2009–2010 to 21.4% in 2016–2017) reflects the substantial tobacco control measures India has taken at the national and sub-national levels. It is noteworthy that the maximum decrease in prevalence of SLT use (33% decrease; from 16.1% to 10.8%) is in the youngest age group of 15–24 years.<sup>1</sup> This sub chapter highlights various policies adopted and initiatives taken to control SLT use since 2004, the current scenario, the challenges faced and the way forward.

### Current scenario

In India, there is a high prevalence of SLT use which is more than double compared to all smokers and almost double compared to cigarette smokers (GATS-2, 2016–17).<sup>1</sup> Table 7.2 shows the various policy measures taken concerning SLT products since the notification of the Cigarettes and Other Tobacco Products Act (COTPA) in 2003 and the formulation of Principal Rules in 2004.

Two more developments represent the policy of awareness generation stated in the WHO

**Table 7.2: Policies adopted from 2003–2004 onwards to regulate SLT use in India**

Year notified	Law	Description
2003	Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act (COTPA) 2003 and Principal Rules, 2004, General Statutory Rules (GSR) <sup>2,3</sup>	<p>This Central-level comprehensive law was intended to regulate the sale and consumption of all tobacco products</p> <ul style="list-style-type: none"> <li>• Section 4 prohibits smoking in public places and indoor workplaces;</li> <li>• Section 5 prohibits advertising of cigarettes and other tobacco products except at a warehouse where stored or shop where sold; the advertising board must also contain a health warning;</li> <li>• Section 5 prohibits all direct and indirect advertising of smokeless and smoking forms of tobacco, except at the point of sale (PoS), with restrictions and a health warning;</li> <li>• Section 6a prohibits sale of tobacco to a person below the age of 18 years and in a particular area, requiring a sign at PoS to this effect; and attracting a fine of INR 200.</li> <li>• Section 6b prohibits sale of tobacco within a radius of 100 yards of any educational institution.</li> </ul> <p>Rule 5(2) of GSR 137 (E) specifies that the seller must ensure that the buyer is not a minor. Rules for further Sections were notified later.</p>



Year notified	Law	Description
2004	Prevention of Food Adulteration Act, 1954 and Rules, 1955, and 1st Amendment Rules, 2004 <sup>4</sup>	This Act and its Rules (repealed in January 2011) required packages containing food products to list all their ingredients, identify the manufacturer, packager or importer, and the weight of the contents. From 2004 any applicable health warning (that chewing tobacco or <i>paan masala</i> is injurious to health) was to be printed on the package.
2005	Goa Public Health Amendment Act, 2005 <sup>5</sup>	The Act prohibits all tobacco products in smoking or smokeless forms, or articles of food containing tobacco, from being manufactured for sale, sold, stored, stocked or distributed or exhibited for sale or consumed by any person within a distance of 50 metres from various institutions/places, including educational institutions, religious places, healthcare institutions, government buildings, sports complexes and playgrounds.
2006	Rule 44J (2008) under the Prevention of Food Adulteration (PFA) Act, 1954, 8th Amendment Rules, 2005 <sup>6</sup>	The rule required a food product not to contain any substance that may be injurious to health: <i>"Tobacco and nicotine not to be used in any food product"</i> .
2006	Food Safety and Standards Act, 2006, Article 30 (2)(a) <sup>7</sup>	<ul style="list-style-type: none"> <li>Under this law, "food" means any substance, whether processed, partially processed or unprocessed, which is intended for human consumption. The manufacture, processing, packaging, storage, transportation, distribution and sale of food products is regulated by the Food Safety and Standards Authority of India and the State Food Safety Departments.</li> <li>The Act states that the Commissioner of Food Safety of the state may prohibit, in the interest of public health, the manufacture, storage, distribution or sale of any article of food, either in the whole of the state or any area or part thereof for such period, not exceeding one year, as may be specified in an order notified in this regard in the Official Gazette.</li> <li>A few states are using this law to prohibit <i>paan masala</i> and/or flavoured/scented tobacco.</li> </ul>
2007	COTPA 2003: Rules <sup>8</sup> Pictorial and text warnings on packages: Sections 7–10 and 20 of COTPA came into force on 1 December 2007; implemented from 31 May 2009 <sup>9</sup>	<ul style="list-style-type: none"> <li>Sections 7–10 require that packages show pictorial and text warnings about the harmful effects of SLT and smoking forms.</li> <li>Section 20 specifies the punishment for makers of tobacco products that do not bear the specified warning.</li> </ul>



Year notified	Law	Description
		<ul style="list-style-type: none"> <li>After prolonged tobacco industry interference (TII), pack warnings began to be implemented on the direction of the Supreme Court.<sup>9</sup> The first pictorial warning for SLT was a scorpion image with English text warnings, “Tobacco Kills”, together occupying 40% of the front pack surface.<sup>10</sup> These were implemented until the end of November 2011, followed by four graphic images of head and neck cancer and a new round of images in 2013. From 1 April 2016, however, new images and warnings were to occupy 85% of pack area on both front and back.<sup>11</sup></li> </ul>
2009	Cable Television Networks (Amendment) Rules, G.S.R. 138(E), 27 February 2009 <sup>12</sup>	Prohibits direct advertising of tobacco products on cable television networks. Indirect advertising is permitted under certain conditions.
2011	Plastic Waste Management and Handling Rules, 2011, under the Environment Protection Act, 1986, <sup>13</sup> notified on 07 February 2011	These rules banned the use of plastic materials in sachets for storing, packing or selling <i>gutkha</i> , tobacco and <i>paan masala</i> . This rule came after a petition was filed in the Rajasthan High Court by the Indian Asthma Care Society in 2007 against the pollution on the roads caused by these plastic sachets and the verdict was upheld by the Supreme Court. <sup>14</sup>
2011	Indian Railways Executive Order, 2011 <sup>15</sup>	Banned the sale of <i>gutkha</i> and other tobacco products in trains and on railway platforms.
2011	Food Safety and Standards (Prohibition and Restrictions on Sales) Regulations (FSSR), notified on 1 August 2011. <sup>16</sup> Note: The Prevention of Food Adulteration Act with all its provisions was repealed in January, 2011	<p>Section 2.3.4 states that a product (is) not to contain any substance which may be injurious to health: Section 2.3.4 states: <i>Tobacco</i> and <i>nicotine</i> shall not be used as ingredients in any food products.</p> <p>Under the Regulations of this Central law, from 1 April 2012 with Madhya Pradesh, states began to implement a ban on <i>gutkha</i>. By December 2013, 33 states and Union Territories (UTs) (out of 27 states and 8 UTs at the time) had banned <i>gutkha</i> and <i>paan masala</i> containing tobacco under this provision.<sup>17</sup></p>
2011	Legal Metrology (Packaged Commodities) Rules, 2011 <sup>18</sup>	These Rules require product packages to list the ingredients, identify the manufacturer, packager or importer (all these entities to be registered) and to specify the weight of the product (over 10 g). The Rules came into force on 1 April 2011.

Year notified	Law	Description
2011	Food Safety and Standards (Packaging and Labelling) Regulations, 2011 <sup>19</sup>	These Regulations require packages containing food products to state the name of the food, list the ingredients, food additives, colours and flavours, name and complete address of the manufacturer, packager or importer, declare the weight of the contents, date of packing, month and year up to which the product is best for consumption; <i>paan masala</i> is to carry the following warning: “Chewing of <i>paan masala</i> is injurious to health”; <i>supari</i> is to carry the following warning: “Chewing of <i>supari</i> is injurious to health”. (Note: Chewing tobacco is not included here.)
2011	Food Safety and Standards (Food Products Standards and Food Additives) Regulations <sup>20</sup>	Section 2.11.5 specifies the permitted ingredients in <i>paan masala</i> and says that it shall be free of any ingredient injurious to health. Section 3.1.3 specifies the maximum limit of sodium saccharin content permitted in <i>paan masala</i> . Section 3.1.11 specifies <i>paan masala</i> as one of the products in which monosodium glutamate is not allowed.
2011	COTPA notification no. GSR 619 (E) <sup>21</sup>	Under this notification, it became illegal for minors to sell tobacco: “No sale to and by minors.”
2016	Juvenile Justice (Care and Protection of Children) Act, 2015 (Act No. 2 of 2016) <sup>22</sup>	This Act prohibits sale or gift of tobacco products to minors (persons under 18 years of age). Punishable with rigorous imprisonment for a term which may extend to 7 years and shall also be liable to a fine which may extend up to INR 1 lakh.
2017	Goods and Services Tax (GST) <sup>23</sup>	As it relates to retail sale of tobacco, Goods and Services Tax (GST), a Central government tax, applies the highest tax slab. This new tax regime also includes the National Calamity Contingent Duty (NCCD) and a compensation cess to states as the previous tax was levied by states. <sup>24</sup>
2018	Tobacco vendor licensing requirement <sup>25</sup>	States can require tobacco vendors to register with their municipal authority for a licence to sell tobacco products. They will be eligible if they comply with all the requirements, including no sale of other goods.
2019	COTPA 2003, Section 11: Tobacco Testing Laboratories	On 5 September 2019, three National Tobacco Testing Laboratories (NTTLs) – one each in Noida, Guwahati and Mumbai – were recognized under the NTCP. The one in Noida, located at the Indian Council of Medical Research–National Institute of Cancer Prevention and Research (ICMR–NICPR) is the apex centre. <sup>24</sup> It has begun to test <i>paan masala</i> for nicotine and magnesium carbonate. <sup>27</sup>

Year notified	Law	Description
2020	Under the Disaster Management Act, 2005, and a few other laws, e.g. Sections 268 and 269 of the IPC, state laws banning spitting, some local laws and the Swachh Bharat Abhiyan (Clean India Mission) <sup>28</sup>	Under this law, states can ban spitting and the sale and use of SLT in public places during the COVID-19 pandemic and punish perpetrators.
2021	Ministry of Environment, Forest and Climate Change has issued notification No. G.S.R. 571 (E) dated 12 August 2021 with effect from 1 July 2022 (MoEFCC, 2022) <sup>29</sup>	As per the rules "The manufacture, import, stocking, distribution, sale and use of following single use plastic (SUP), including polystyrene and expanded polystyrene, commodities" were prohibited with effect from 1 July, 2022: <ul style="list-style-type: none"> <li>• Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [thermocool] for decoration.</li> <li>• Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.</li> </ul>

Sources: MoLJ, 2003<sup>2</sup>; MoHFW, 2004 GSR 137<sup>3</sup>; MoHFW, 2022<sup>4</sup>; Gupta et al., 2016<sup>5</sup>; Kumar N & Aggarwal & Partners, 2016<sup>6</sup>; MoLJ, 2006<sup>7</sup>; MoHFW, 2007<sup>8</sup>; Yadav et al., 2018<sup>9</sup>; Oswal et al., 2010<sup>10</sup>; Gravely et al., 2016<sup>11</sup>; Latest Laws: MIB, 2010<sup>12</sup>; PIB, 2011<sup>13</sup>; FSSR, 2011-a<sup>16</sup>; PIB, 2013<sup>17</sup>; MoCAFPD, 2022<sup>18</sup>; FSSR, 2011-b<sup>19</sup>; FSSR, 2011-c<sup>20</sup>; MoHFW, 2011<sup>21</sup>; MoLJ, 2016<sup>22</sup>; CBITC, 2017<sup>23</sup>; John et al., 2019<sup>24</sup>; Yadav et al., 2020<sup>25</sup>; NTCP, 2019<sup>26</sup>; TOI, 2019<sup>27</sup>; MoEFCC, 2021<sup>28</sup>.

FCTC,<sup>29</sup> including mass media communication and a global knowledge hub on SLT.

- Mass media communication: The NTCP, launched in 2007, aims to create public awareness about the harms of tobacco use. Three public service announcements on the dangers of SLT use, prepared with technical assistance from Vital Strategies, were shown during 2009–2015 in theatres and on the internet.<sup>31–33</sup> In 2009, after the initial campaign about SLT products on both television and radio,<sup>34</sup> around 65% of respondents (all SLT users, including dual users) were aware of the campaign. Among them, 62% recalled the campaign on television, others on radio and TV or radio only. Among those aware of the campaign who were SLT only users, 75% were concerned about their health and 58% had considered quitting in the past 2 months.
- The WHO FCTC Knowledge Hub on SLT: This was established on 6 April 2016 at the

ICMR-NICPR, Noida, to generate awareness on the harms of SLT use and support global SLT control efforts through technical research and scientific evidence generation especially among the FCTC Parties with high SLT burden.<sup>35</sup>

## Challenges to policy implementation

Despite several policies and interventions in place over the years to curb SLT use, there are various challenges to implement tobacco control policies on SLT products in India.

- Prevalence of a wide diversity of SLT products and brands requiring monitoring by law enforcement agencies.
- Availability of several unpackaged, unbranded products such as plain chewing tobacco, *mawa*, and betel quid with tobacco evading existing tobacco control laws and regulations.

Some specific challenges of poor implementation/ poor enforcement of tobacco control laws, as well as use of legal loopholes, are as follows:

- Taxation: Tax evasion has been found rampant on SLT products.<sup>25,36</sup> Evidence suggests that the total current tax burden for SLT, is nearly 64% as shown in chapter 5 (up from around 57% in 2018),<sup>24</sup> which is short of the 75% tax burden recommended by WHO in 2015.<sup>37</sup>
- COTPA Section 5, Ban on advertising: Inadequate implementation of the ban (direct and indirect) has resulted in extensive

surrogate advertising of SLT products across media platforms, by celebrities and famous sportspersons during events such as cricket matches,<sup>25</sup> e.g. in the form of ads for *paan masala* (for the version containing tobacco), tea (for *khaini*),<sup>5</sup> and recently silver-coated cardamom (Box 7.9). The display of *paan masala* packets at PoS with the same brand name as *gutkha* is common while advertising boards for SLT are not displayed.<sup>39</sup> Public exposure to advertising and promotion of SLT products has considerably increased and is higher than that for cigarettes and other smoking products.<sup>40,41</sup>

### BOX 7.9: Case study – A famous actor in an advertising campaign for a surrogate product<sup>38</sup>

The veteran actor Mr Amitabh Bachchan was trolled on social media for endorsing Kamla Pasand (“silver-coated *elaichi*”), a surrogate for *gutkha*. On request of national tobacco control organizations and an explanation of the legal situation, he withdrew from the advertising campaign and returned the money he was paid. Earlier he had said, he thought he was supporting the employment of workers in the *paan masala* industry. He had not realized this was a surrogate product being advertised indirectly for *gutkha*. However, these advertisements continued to be aired even after this withdrawal.

Furthermore, there is rampant media portrayal of SLT use in films on television and on OTT (over-the-top) platforms on the internet.<sup>42</sup> While COTPA 2003 prohibits indirect advertising for tobacco products, the Cable Television Networks (Amendment) Rules, in G.S.R. 138(E), 27 February 2009, permit indirect advertising under certain conditions.<sup>12</sup>

- COTPA Section 6, and the Juvenile Justice (Care and Protection of Children) Act, 2015, Section 77, which together prohibit sale to minors and within 100 yards of educational institutions, are rarely enforced,<sup>43,44</sup> and there are many violators.<sup>45</sup>
- COTPA Sections 7–10: Health Warnings: Research on pictorial health warnings (PHWs) in India several years ago found that only 2% of unique SLT products had compliant health warning labels (HWLs).<sup>46</sup> Recent

research has found somewhat improved compliance<sup>47,48</sup> however, around 15% of over 2000 packaged products analysed were still non-compliant.<sup>49</sup> HWLs (or PHWs) on SLT packages tend to be weak and distorted<sup>50</sup> and have also often been smaller than the prescribed 85% of the principal display area on both sides of the package. Since some packages are tiny, the pack warnings are too small to comprehend.<sup>51</sup> A highly noticeable phenomenon is that warning labels for SLT products are missing on packages of *gutkha* (a banned product).<sup>52,53</sup>

- Challenges in banning promotion and sale of *paan masala* include that the FSSAI lays down standards for *paan masala* without tobacco and thus confers complete legitimacy on it, despite it having to be labelled as “Chewing of *paan masala* is injurious to health”.

- Although *gutkha*/SLT is banned, several states, e.g. Gujarat and Madhya Pradesh, have allowed its manufacture for export (e.g. in Special Economic Zones). However, such products may find their way into the domestic market in packages labelled “for export” or “of export quality” and thus without pictorial health warnings required by India.<sup>54</sup> Some *gutkha* not manufactured in a special economic zones (SEZ) is also labelled for export. Although a ban on *gutkha* has been

in place since 2012, still *gutkha* is available, either sold in twin packets of *paan masala* and flavoured chewing tobacco or as an illicit item manufactured “for export” (Box 7.10). On most *gutkha* packages, there is inadequate information on the contents, quantity by weight, name, place and address of the manufacturer and maximum retail price, which are violations against the Legal Metrology Act (2009), Sections 3 and 18.<sup>18</sup>

### BOX 7.10: Case study – Enforcement of the *gutkha* ban in West Bengal<sup>55</sup>

The legislation related to ban on *gutkha* is in place in almost every state; however, the enforcement is suboptimal. In a study in West Bengal, a majority (82.2%) of vendors were not aware of the ban and nearly 75% accepted that they sold *gutkha* to minors. Less than 1% of vendors were raided for selling *gutkha* and only 15.7% of vendors shifted to other businesses due to the *gutkha* ban. Still, about half among the *gutkha* consumers shifted to other SLT products. Although these results raise concerns over suboptimal enforcement; however, even a small change is helpful.

- Tobacco testing: The ban on the manufacture, sale and storage of *gutkha* or *paan masala* with tobacco<sup>10</sup> has been violated by those who incorporate nicotine into *paan masala*, which is essentially the same as *gutkha*, as found by the NTTL across various brands in Bihar.<sup>56</sup> Yet, the licences of the manufacturers of *paan masala* with nicotine have not been revoked.<sup>57</sup> The consistent finding of magnesium carbonate in *paan masala* through tests ordered by State Health Departments of Maharashtra, Bihar and Jharkhand also show that the manufacturers are not following food safety regulations,<sup>58</sup> as the FSSAI regulations on food additives do not list magnesium carbonate as an ingredient permitted in *paan masala* under Section 2.11.5.<sup>20</sup>
- The Plastic Waste Management Rules, 2016, are still violated by manufacturers of SLT products.<sup>25</sup> The Ministry of Environment, Forest and Climate Change recently issued the notification for ban on single use plastic taking effect from 1 July 2022 in the country. Given that this notification is still at its nascent stage of implementation, strong enforcement and strict monitoring must be undertaken.<sup>29</sup>
- COTPA Section 12 specifies which officers will enforce this law. Training of police personnel on COTPA and its implementation has been inadequate, and enforcement has not been prioritized at the sub-national level.<sup>59,60</sup>
- In violation of the Drugs and Cosmetics Act, 1940, tobacco continues to be included in products used for dental care including *gul*, *gudakhu* and creamy snuff.<sup>25</sup>
- Tobacco vendor licensing: Since 2016, a licence is required for the sale of tobacco in several jurisdictions including Himachal Pradesh, Uttar Pradesh, Uttarakhand, Bihar and is at the early stage of implementation in Punjab. The widespread sale of unbranded and loose products leaves much of SLT unregulated by any law.<sup>61</sup>
- Ban on spitting: SLT use is socially accepted, which leads to spitting in public places. The Indian Railways and Metro rail corporations across India have prohibited spitting for

many years,<sup>62</sup> including Mumbai Municipal Corporation, but these bans on spitting have always been difficult to enforce. On 4 April 2020, the ICMR appealed to the general public during the COVID-19 pandemic, “Not to consume and spit smokeless tobacco (SLT) in public places”, clarifying that the use of these products induces a strong urge to spit.<sup>63</sup> In 2020, during the lockdown period for COVID-19, the Ministry of Home Affairs issued a national directive, “spitting in public places shall be punishable with a fine” under the Disaster Management Act, 2005. Twenty-two states and 6 Union Territories issued specific orders to this effect.<sup>64</sup> However, public awareness is low, and implementation is inadequate.<sup>65</sup>

- In sum, the varied marketing strategies of the tobacco industry, weak enforcement of tobacco control policies, poor monitoring of enforcement, consistent affordability, and partial knowledge in the public about health risks of tobacco and areca nut<sup>66,67</sup> are factors promoting SLT use.<sup>68,69</sup> Sustained mass media campaigns, easily accessible cost covered cessation services and several new tobacco control strategies must be implemented to reduce SLT use.<sup>70</sup>

## The way forward and recommendations

The existing laws relevant to SLT need to be enforced on priority. To improve compliance to the existing laws and regulations for control of SLT use, the following opportunities must be utilized.

- Public awareness on the harms of SLT use needs to be enhanced through ongoing programmes; social behavioural change communication strategies need to be used.
- Community based outreach efforts are needed to reshape social norms surrounding SLT use.

- SLT control messaging can be strengthened through electronic media, social media, caller tunes and interactive voice response systems (IVRS) and include cessation advice.
- Awareness level and opinions of the public and shop owners on laws/regulations related to SLTs must be assessed regularly.
- Public should be encouraged and rewarded for monitoring and reporting violations of tobacco control laws and informed on where to report these.
- Attempts should be made to understand the hurdles faced by enforcement agencies while monitoring and implementing tobacco control-related laws and regulations.
- Police personnel should be provided training on enforcement of existing tobacco control laws.
- Funding for enforcement of tobacco control laws should be increased substantially.
- The FSSAI, to avoid lapses in the implementation of Regulation 2.3.4 of the Food Safety and Standards (Prohibition and Restriction on Sales) Regulation 2011, should issue an appropriate advisory/direction to Food Commissioners of all states/UTs, for discontinuing the practice of issuing yearly ban orders on *gutkha* and *paan masala* (with tobacco and nicotine), and instead issue a one-time order for enforcement of the ban on *gutkha* and *paan masala* (with tobacco and nicotine) in compliance with the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulation 2.3.4.

Suggested amendments in laws to help control SLT use are listed below:

- COTPA Section 4: This should be amended to prohibit SLT use in all public spaces and workplaces, to create spit-free environments. Subsequently, coordinated and concerted efforts should be made by the government at



the national, state and district levels towards creating and maintaining tobacco-free public spaces and workplaces.

- COTPA Section 5: The advertisement of areca nut products such as *paan masala* and their display at PoS should also be prohibited as areca nut itself is a carcinogen and a gateway product to future tobacco use among children.
- The exceptions given to PoS for advertising tobacco products need to be withdrawn. The provisions under COTPA need to be aligned on advertising and this could help end display of *paan masala* (an areca nut product) at PoS, which is surrogate advertising for SLT.
- COTPA Section 6a: Sale of *paan masala* and areca nut to and by minors should be prohibited.
- COTPA Section 6b: The policy in Maharashtra which prohibits the sale of areca nut or *paan masala* around educational institutes should be adopted as a national policy and enforced, which will also help address the problem of twin packaged SLT products sold with *paan masala*.
- The Food Safety and Standards (Prohibition and Restriction on Sales) Regulation, 2011 Rule on prohibiting tobacco or nicotine from being added to any food item needs to be expanded to prohibition of the inclusion of areca nut/betel nut/*supari* (or whatever name is used for the substance) as it is carcinogenic.
- Advocacy with the FSSAI is needed to ensure that the licences of manufacturers of *paan masala* with nicotine or tobacco get cancelled.
- Just as adulteration of food is listed in the Concurrent List of the Constitution of India, drugs and poisons are also listed. Tobacco and areca nut are both considered drugs by the Ministry of Agriculture; hence, both substances should be prohibited in food. However, since areca nut/betel nut/*supari*

products are unlikely to go away soon, a new law to control them may be needed.

- The manufacture of *gutkha* and *paan masala* with tobacco for export (including in Special Economic Zones) should be banned by all states since the manufacture of harmful food products for export (or ostensibly so) is illegal under FSSAI, 2006.
- The FSSAI should explicitly notify regulations banning use of food additives for flavouring, scenting or colouring of tobacco products.
- COTPA Sections 7, 8, 9, and 10: To make HWLs more noticeable, the packaging rules under the Legal Metrology Act should be amended to specify the minimum pack size for SLT products, as presently the pack size is so small that the warning is hardly visible. Plain/standardized packaging will help make the warning labels equally noticeable on all packages. HWLs need to be printed in regional languages and also address health effects on children and pregnant women, which are high-risk groups.
- The Quitline information on SLT products is not legible and clear due to the small size and shape of packs. It is recommended to display Quitline information at PoS. Similar strategy should be used for HWLs/PHWs.
- Internet-based (OTT platforms) films, serials, series should be brought under the ambit of COTPA or similar regulations should be formulated to regulate these platforms.
- Following the example of several states, a vendor licensing system for the sale of tobacco products, as recommended by the Centre, should be adopted as a national policy, as this will regulate the accessibility of tobacco products. Enforcement methods must be planned in advance.
- Laws should be strengthened to avoid their circumvention, e.g. The Drug and Cosmetics Act and the Food Safety laws.



## Key messages

- Prevalence of SLT use among adults in India declined from 25.9% in 2009–2010 to 21.4% in 2016–2017.
- The multiplicity of SLT products and the existence of non-packaged products makes regulation difficult to implement.
- Enforcement of existing laws is the major issue at present, which includes enforcing the ban on *gutkha*, *paan masala* with nicotine or tobacco, and other products where relevant, ban on sale of SLT to and by minors compliance with pack warnings, the Plastic Waste Management Rules (2011) prohibiting plastic packaging of SLT, and ban on spitting.
- Surrogate advertising and promotion of various forms of SLT products continues to be rampant, in spite of a national ban on tobacco advertising.
- Sensitization of the public, retailers, celebrities and law enforcement agencies on the tobacco control laws and their implementation is needed.
- Tobacco vendor licensing, now being implemented in some states, can help to reduce the availability of SLT products, at least to minors.

## REFERENCES

1. Tata Institute of Social Sciences (TISS). Global Adult Tobacco Survey GATS 2 India 2016–17. New Delhi: Ministry of Health and Family Welfare, Government of India; 2018; Pp 74–77, 81. Available from: <https://tiss.edu/view/6/mumbai-campus/school-of-healthsystems-studies/global-adult-tobacco-survey-2-india-2016-17/outcomespublications-3/>, accessed 28 July 2022.
2. National Tobacco Control Programme. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 [COTPA 2003]. Ministry of Law and Justice, The Gazette of India Extraordinary, Part II, Section I, 19 May 2003. Available from: [https://ntcp.nhp.gov.in/cigarettes\\_and\\_other\\_tobacco\\_products](https://ntcp.nhp.gov.in/cigarettes_and_other_tobacco_products), accessed 28 July 2022.
3. National Tobacco Control Programme. Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Rules, 2004. Ministry of Health and Family Welfare, The Gazette of India, Extraordinary Part II, Section 3, Subsection (i), Notification GSR 137, 25th February 2004. Available from: [https://ntcp.nhp.gov.in/cigarettes\\_and\\_other\\_tobacco\\_products](https://ntcp.nhp.gov.in/cigarettes_and_other_tobacco_products), accessed 28 July 2022.
4. Food Safety and Standards Authority of India. Repealed Acts/Orders: Prevention of Food Adulteration Act, 1954. Ministry of Health and Family Welfare, Government of India; 2022. Available from: <https://fssai.gov.in/cms/repealed-acts-orders.php>, accessed 28 July 2022
5. Gupta PC, Arora M, Sinha D, Asma S, Parascondola M, editors. Smokeless Tobacco and Public Health in India. New Delhi: Ministry of Health and Family Welfare, Government of India; 2016. Available from: [https://nhm.gov.in/NTCP/Surveys-Reports-Publications/Smokeless\\_Tobacco\\_and\\_Public\\_Health\\_in\\_India.pdf](https://nhm.gov.in/NTCP/Surveys-Reports-Publications/Smokeless_Tobacco_and_Public_Health_in_India.pdf), accessed 28 July 2022.
6. Kumar N & Aggarwal & Partners, Advocates & Solicitors. Acts, 2016: The Prevention of Food Adulteration Rules 1955; Rule 44J, inserted by the PFA (8th Amendment) Rules, 2005, vide notification No GSR670 dated 17.11.2008. No Date. Available at: <http://www.nkumrandaggarwal.com/acts/view-act.php?id=427&cat=29&title=The%20Prevention%20of%20Food%20Adulteration%20Rules,%201955#a67>, accessed 28 July 2022.
7. Food Safety and Standards Authority of India. Food Safety and Standards Act, 2006: Ministry of Law and Justice (Legislative Department), New Delhi, the 24th August, 2006. Ministry of Health and Family Welfare, Government of India; 2006. Available from: <https://fssai.gov.in/cms/food-safety-and-standardsact-2006.php>, accessed 28 July 2022.
8. Ministry of Health and Family Welfare. Notification S.O. 1955 E for coming into force of the provisions of Section 7(1),(2),(3),(4), 8, 9, 10 and 20 of COTPA. Subsection ii. New Delhi, 16th November, 2007.

9. Supreme Court of India. Health for Millions Trust v. Union of India and Others, Writ Petition (Civil) 549 of 2008. Available from: <https://www.tobaccocontrollaws.org/litigation/decisions/in-20090506-health-for-millions-v.-union-o>
10. Oswal KC, Pednekar MS, Gupta PC. Tobacco industry interference for pictorial warnings. *Indian J Cancer*. 2010;47 Suppl 1:101–4. doi: 10.4103/0019-509X.65318.
11. Government of India. Ministry of Health & Family Welfare. Notification. New Delhi, October 15, 2014. Available at: [http://karhfw.gov.in/nrhm/NTCP/Letter%20for%20Enforcement%20Issued%20to%20Chief%20Secretaries%20of%20All%20State%20Governments\(Annexure-A\).pdf](http://karhfw.gov.in/nrhm/NTCP/Letter%20for%20Enforcement%20Issued%20to%20Chief%20Secretaries%20of%20All%20State%20Governments(Annexure-A).pdf)
12. Ministry of Information and Broadcasting (MIB). Cable Television Networks (Amendment) Rules, G.S.R. 138(E), 27 February 2009. *LatestLaws.com*, 2022. Available from: <https://www.latestlaws.com/bare-acts/centralacts-rules/media-laws/cable-television-networksregulation-act1995/cable-television-networksamendment-rules-2009>, accessed 28 July 2022.
13. Press Information Bureau (PIB), Ministry of Environment, Forest and Climate Change. The Plastic Waste (Management and Handling) Rules, 2011 Notified, 07 February 2011. New Delhi: Government of India; 2011. Available from: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=69649>, accessed 28 July 2022.
14. M/s Tamil Nadu Scented and Chewing Tobacco Manufacturer's Association v. Union of India in Writ petition 9606/2007 and 5311/2008, High Court of Tamil Nadu
15. Government of India Ministry of Railways circular no 20011/TG.III/600/48, 2011 September 15
16. Food Safety and Standards Authority of India. The Food Safety and Standards (Prohibition and Restrictions on sales) Regulations, 2011. New Delhi: Ministry of Health and Family Welfare, Government of India; 2011-a. Available from: <https://fssai.gov.in/cms/food-safety-and-standards-regulations.php>, accessed 28 July 2022.
17. Press Information Bureau (PIB), Ministry of Environment, Forest and Climate Change. Tobacco Ban in the Country, 9 December 2013. New Delhi: Government of India; 2013. Available from: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=101237>, accessed 28 July 2022.
18. Ministry of Consumer Affairs, Food & Public Distribution (MCAFPD), Government of India. The Legal Metrology Act 2009 (Packaged Commodities) Rules, 7 March, 2011. Department of Consumer Affairs. Available from: <https://consumeraffairs.nic.in/acts-and-rules/legal-metrology/the-legal-metrologyact-2009>, accessed 28 July 2022.
19. Food Safety and Standards Authority of India. The Food Safety and Standards (Packaging and Labelling) Regulations, 1 August, 2011. New Delhi: Ministry of Health and Family Welfare, Government of India; 2011-b. Available from: <https://fssai.gov.in/cms/foodsafety-and-standards-regulations.php>, accessed 28 July 2022.
20. Food Safety and Standards Authority of India. The Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 1 August, 2011. Ministry of Health and Family Welfare, Government of India; 2011-c. Available from: <https://fssai.gov.in/cms/food-safety-and-standards-regulations.php>, accessed 28 July 2022.
21. National Tobacco Control Programme. Cigarettes and Other Tobacco Products (Prohibition of Advertisement, Regulation of Trade and Commerce, Production, Supply and Distribution) Amendment Rules, 2011. Notification on Section-6(a) of the Act, No. GSR 619(E), 11 August, 2011. Ministry of Health and Family Welfare, Government of India. Available from: [https://ntcp.nhp.gov.in/cigarettes\\_and\\_other\\_tobacco\\_products](https://ntcp.nhp.gov.in/cigarettes_and_other_tobacco_products), accessed 28 July 2022.
22. Ministry of Law and Justice. The Juvenile Justice (Care and Protection of Children) Act, 2015 (Act no. 2 of 2016), *The Gazette of India, Extraordinary, Part II, Section 1*, 1 January, 2016. New Delhi: Government of India. Available from: <http://cara.nic.in/PDF/JJ%20act%202015.pdf>, accessed 28 July 2022.
23. Central Board of Indirect Taxes and Customs – Goods and Services Tax. GST Rates; Goods Rates Booklet, 03-July-2017, p 138. New Delhi: Department of Revenue, Ministry of Finance, Government of India; 2021. Available from: <https://cbic-gst.gov.in/gstgoods-services-rates.html>, accessed 28 July 2022.
24. John RM, Dauchy E, Goodchild M. Estimated impact of the GST on tobacco products in India. *Tob Control*. 2019;28(5):506–12. doi: 10.1136/tobaccocontrol-2018-054479.
25. Chauhan G. Licensing tobacco vendors in the state of Himachal Pradesh in India - challenges, opportunities and the way forward to implement the new legislation. *Tob Induc Dis* 2018;16.
26. National Tobacco Control Programme. Tobacco Testing, National Tobacco Testing Laboratory. Ministry of Health and Family Welfare, Government of India; 2019. Available from: [https://ntcp.nhp.gov.in/tobacco\\_testing](https://ntcp.nhp.gov.in/tobacco_testing), accessed 28 July 2022.
27. Centre urged to ban 15 pan masala brands. *Times of India*; 14 October 2019. Available from: <https://timesofindia.indiatimes.com/city/patna/centre-urged-to-ban-15-pan-masala-brands/articleshow/71569709.cms>, accessed 28 July 2022.
28. Government of India. Ministry of Home Affairs Order . 15 April 2020 Available from: <https://www>.

- mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines\_compressed%20%283%29.pdf
29. Ministry of Environment, Forest and Climate Change. Notification No G.S.R. 571 (E), New Delhi; 12 August 2021. The Gazette of India: Extraordinary. Available from: <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/aug/doc202181311.pdf>, accessed 28 July 2022
  30. World Health Organization. WHO Framework Convention on Tobacco Control. Geneva: WHO; 2003. Available from: <https://fctc.who.int/who-fctc/overview>, accessed 28 July 2022.
  31. India tobacco control – Surgeon. Vital Strategies; 2010. Available from: <https://www.vitalstrategies.org/resources/india-surgeon-english/>, accessed 28 July 2022.
  32. Ad campaign graphically depicts harms of smokeless tobacco: a leading killer in India. Vital Strategies; 2011. Available from: <https://www.vitalstrategies.org/adcampaign-graphically-depicts-harms-of-smokelesstobacco-a-leading-killer/>, accessed 28 July 2022.
  33. India – Tobacco Control – Sunita. Vital Strategies; 2014. Available from: <https://www.vitalstrategies.org/resources/india-sunita-english/>, accessed 28 July 2022.
  34. Murukutla N, Turk T, Prasad CV, Saradhi R, Kaur J, Gupta S, Mullin S, et al. Results of a national mass media campaign in India to warn against the dangers of smokeless tobacco consumption. *Tob Control*. 2012;21(1):12–17. doi: 10.1136/tc.2010.039438.
  35. WHO FCTC Knowledge Hub on Smokeless Tobacco. WHO FCTC Secretariat; 2020. Available from: <http://untobaccocontrol.org/kh/smokeless-tobacco/visionand-mission/>, accessed 28 July 2022.
  36. GST intelligence detects Rs 225 crore tax evasion –busts illicit pan masala manufacturing units in Indore. *BusinessToday.in*; 13 June 2020. Available from: <https://www.businesstoday.in/current/economypolitics/gst-intelligence-detects-rs-225-cr-taxevsion-busts-illicit-pan-masala-manufacturing-unitsin-indore/story/406848.html>, accessed 29 July 2022.
  37. World Health Organization. WHO report on the global tobacco epidemic, 2015: raising taxes on tobacco. World Health Organization; 2015. Available from: <https://apps.who.int/iris/handle/10665/178574>, accessed 29 July 2022.
  38. Jha L, Khosla V. Amitabh Bachchan walks away from pan masala ad. *Livemint*; 11 October 2021. Available from: <https://www.livemint.com/news/india/mitabh-bachchan-walks-away-from-pan-masalaad11633955848762.html>, accessed 29 July 2022.
  39. Chaudhry S, Chaudhry S, Chaudhry K. Point of sale tobacco advertisements in India. *Indian J Cancer*. 2007;44:131–6. DOI: 10.4103/0019-509x.39374.
  40. Mistry R, Pednekar MS, McCarthy WJ, Resnicow K, Pimple SA, Hsieh HF, et al. Compliance with point-of-sale tobacco control policies and student tobacco use in Mumbai, India. *Tob Control*. 2019;28(2):220–6. doi: 10.1136/tobaccocontrol-2018-054290.
  41. Mehrotra R, Sinha DN, Szilagyi T, editors. Global smokeless tobacco control policies and their implementation. WHO FCTC Global Knowledge Hub on Smokeless Tobacco, ICMR-National Institute of Cancer Prevention and Research (NICPR), Noida, India, 2017. Available from: <https://untobaccocontrol.org/kh/smokeless-tobacco/wp-content/uploads/sites/6/2018/04/Global-smokeless-NICPR-19418-1.pdf>, accessed 29 July 2022.
  42. Chandra S, Rinkoo AV, Kaur J, Prasad V. Tobacco advertising, promotion and sponsorship in India and Indonesia: present regime and the way forward. *Asian Pac J Cancer Prev*. 2021;22(S2):89–96. doi: 10.31557/APJCP.2021.22.S2.89.
  43. Balappanavar AY, Mohanty V, Hussain A. Compliance with tobacco promotion and sale laws in school neighbourhoods in India. *Asian Pac J Cancer Prev*. 2017;18(2):563–70. doi: 10.22034/APJCP.2017.18.2.563.
  44. Mallick A. 40 cases of tobacco product sale to minors registered in '19. *Times of India*. 28 December 2019. Available from: <https://timesofindia.indiatimes.com/city/hyderabad/40-cases-of-tobacco-product-sale-to-minors-registered-in-19/articleshow/73001441.cms>, accessed 29 July 2022.
  45. Press Information Bureau (PIB), Ministry of Health and Family Welfare. Selling of Tobacco Products near School Premises. New Delhi: Government of India; 2019. Available from: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=192109>, accessed 29 July 2022.
  46. Tobacco Pack Surveillance System (TpackSS). Smokeless tobacco health warning label compliance: India-2016. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health. Available from: [https://www.globaltobaccocontrol.org/tpackss/sites/default/files/tpackss\\_smokeless\\_HWL\\_10\\_22\\_2018.pdf](https://www.globaltobaccocontrol.org/tpackss/sites/default/files/tpackss_smokeless_HWL_10_22_2018.pdf), accessed 29 July 2022.
  47. Shaik FB, Maddu N. Smokeless tobacco products profile and pictorial warning labels in India: A review. *Population Medicine*. 2019;1(December):7. doi:10.18332/popmed/114940.
  48. Chahar P, Karnani M, Mohanty VR. Communicating Risk: Assessing Compliance of Tobacco Products to Cigarettes and other Tobacco Products Act (Packaging and Labelling) Amendment Rules 2015 in Delhi, India. *Contemp Clin Dent*. 2019;10(3):417–22. doi: 10.4103/ccd.ccd\_668\_18.

49. Joseph N, Goel S, Singh RJ, Patro B, Pala S, Kumar R, et al. Communicating risk: status of health warning labels on various tobacco products in Indian market. *Indian J Tuberc.* 2021;68S:S48–S54. doi: 10.1016/j.ijtb.2021.07.009.
50. Iacobelli M, Saraf S, Welding K, Clegg Smith K, Cohen JE. Manipulated: graphic health warnings on smokeless tobacco in rural India. *Tob Control.* 2020;29(2):241–2. doi: 10.1136/tobaccocontrol-2018-054715.
51. Panigrahi A, Sharma D. Compliance with packaging and labelling rules for tobacco products marketed in slum areas of Bhubaneswar, India. *Tob Control.* 2019;28(e1):e13–e15. doi: 10.1136/tobaccocontrol-2018-054665.
52. Adhikari K, Pednekar MS, Stepanov I, Singh A, Nikam S, Singhavi H, et al. Observed circumvention of the gutka smokeless tobacco ban in Mumbai, India. *Tob Regul Sci.* 2020;6(5):331–5. doi: 10.18001/trs.6.5.3.
53. Welding K, Saraf S, Iacobelli M, Smith KC, Puntambekar N, Gupta PC, et al. Beyond gutka: evidence of illegal smokeless tobacco in rural and semi-urban areas in India. *Nicotine Tob Res.* 2022;24(6):929–32. doi: 10.1093/ntr/ntab251.
54. Indore Special Economic Zone, Office Memorandum, 9/17/2017, Item B.6. M/s. Emerald Tobacco Pvt. Ltd. - Review of activities of the unit. Available from: <https://indoresez.gov.in/7thUACminutesSEZ%20Indore.pdf>, accessed 8 August, 2022
55. Mukherjee N, Pal B, Ghosh S, Goel S, Lal P. How effective is gutka (a smokeless tobacco) ban in West Bengal, India? A case study. *Tob Induc Dis.* 2018;16(1):778. doi:10.18332/tid/84190.
56. Rumi F. Nicotine found in seven pan masala brands. *Times of India, Patna*; 23 September 2019. Available from: <https://timesofindia.indiatimes.com/city/patna/nicotine-found-in-7-pan-masala-brands/articleshow/71248360.cms>, accessed 29 July 2022.
57. Kaur B. Food safety body's silence leaves states impotent against pan masala contamination. *The Wire*, 18 March, 2022. Available from: <https://thewire.in/health/bihar-jharkhand-pan-masalamagnesium-carbonate-contamination-fssai-silent/>, accessed 28 October 2022.
58. Dey S. Jharkhand bans 11 pan-masala brands on health concerns. *Hindustan Times, Ranchi*; 9 May 2020. Available from: <https://www.hindustantimes.com/indianews/jharkhand-bans-11-pan-masala-brands-onhealth-concerns/story-QXv1MiD7rVHSoABJOy60J.html>, accessed 29 July 2022.
59. Kaur J, Jain DC. Tobacco control policies in India: implementation and challenges. *Indian J Public Health.* 2011;55(3):220–7. doi: 10.4103/0019-557X.89941.
60. Ahuja N, Kathiresan J, Anand T, Isaakidis P, Bajaj D. I have heard about it for the first time from you! Implementation of tobacco control law by police personnel in India. *Public Health Action.* 2018;8(4):194–201. doi: 10.5588/pha.18.0064.
61. Chandra A., Yadav A, Chandan K, Mehrotra, R. Regulatory compliance: a challenge for unbranded smokeless tobacco products. *Journal of Global Oncology.* 2018;4(Suppl 2). Doi: 10.1200/jgo.18.79402.
62. Ministry of Railways. Ministry of Railways. Railway Road Board Notification. Government of India. ;2012. Available from: [https://indianrailways.gov.in/railwayboard/uploads/directorate/traffic\\_comm/Comm-Cir2K12/CC\\_76\\_2012.pdf](https://indianrailways.gov.in/railwayboard/uploads/directorate/traffic_comm/Comm-Cir2K12/CC_76_2012.pdf), accessed 05 January 2023
63. National Institute of Cancer Prevention and Research (NICPR), Indian Council of Medical Research (ICMR). Appeal to the General Public by Government. April 2020. Available from: [http://nicpr.icmr.org.in/images/Appeal\\_to\\_the\\_General\\_Public.pdf](http://nicpr.icmr.org.in/images/Appeal_to_the_General_Public.pdf) & <https://nicpr.icmr.org.in/2-uncategorised/283-134799920>, accessed 29 July 2022.
64. 28 States ban smokeless tobacco products, spitting due to coronavirus. *The Economic Times*; 10 May 2020. Available from: <https://economictimes.indiatimes.com/news/politics-and-nation/28-statesuts-ban-smokeless-tobacco-products-spitting-dueto-coronavirus/printarticle/75657382.cms>, accessed 20 April 2021.
65. Alluri A. Covid-19: India's unwinnable battle against spitting. *BBC News, Delhi*; 27 December 2021. Available from: <https://www.bbc.com/news/worldasia-india-51908404>, accessed 29 July 2022.
66. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Personal habits and indoor combustions. Volume 100 E. A review of human carcinogens. *IARC Monogr Eval Carcinog Risks Hum.* 2012;100(Pt E):1–538. Available from: <https://pubmed.ncbi.nlm.nih.gov/23193840/>, accessed 29 July 2022.
67. Chatterjee N, Todankar P, Mandal G, Gupte H, Thawal V, Bhutia TS, et al. Factors associated with tobacco use in students attending local government schools in Mumbai, India. *Asian Pac J Cancer Prev.* 2016;17(12):5075–80. doi: 10.22034/APJCP.2016.17.12.5075.
68. Thakur JS, Paika R. Determinants of smokeless tobacco use in India. *Indian J Med Res.* 2018;148(1):41–5. doi: 10.4103/ijmr.IJMR\_27\_18.
69. Chandra PS, Mulla U. Areca nut: the hidden Indian 'gateway' to future tobacco use and oral cancers among youth. *Indian J Med Sci.* 2007;61(6):319–21. PMID: 17558091.
70. Gupta PC, Puntambekar N, Assunta M. South Asia's evolving tobacco hydra: moving from quandary to hope. *Tob Control.* 2022;31(2):142–5. doi: 10.1136/tobaccocontrol-2021-057013.



## 7.4: Progress in tobacco control for *bidis*

*Bidi* is the most commonly used tobacco product in India with 7.18 crore Indians smoking *bidis* (GATS-2).<sup>1</sup> India has witnessed significant reduction in the use of tobacco products including *bidis* as reported by the two GATS surveys. The prevalence of current *bidi* smokers among individuals aged 15 years and above reduced from 9.2% in 2009–2010 (GATS-1)<sup>2</sup> to 7.7% in 2016–2017 (GATS-2).<sup>1</sup> It is currently 9.3% among rural residents compared to 4.7% among urban residents. Despite the reduction in prevalence of *bidi* use, the overall market of *bidis* in India is unorganized and unregulated. This sub-chapter highlights the initiatives taken to control *bidi* use since 2004, the challenges faced and the way forward.

### Current scenario

A unique feature of India's tobacco market is the high use of indigenous tobacco products such as *bidis* and chewing tobacco, with almost twice as many *bidi* smokers compared to cigarette smokers as per GATS-2.<sup>1</sup> Tobacco control measures taken to discourage *bidi* use in India are discussed below.

1. Advertising and marketing of *bidis*: The appeal of smoking and specific brands of tobacco products have long been promoted through carefully crafted, aspirational characters, which are highlighted in tobacco marketing.<sup>3</sup> While *bidis* are not widely promoted using print media promotions and sponsorships, compared to cigarettes, they are advertised on a large scale in rural areas and on social media platforms.<sup>4</sup> Often the advertisements explicitly or implicitly claim that *bidis* are less harmful, and contain “natural”, “pure” or “herbal” tobacco. As per GATS data, adults who noticed any *bidi* promotion (PoS, free samples and gifts, discount offers on products when buying tobacco, clothing or other items with brand name or logo of the

product, promotion in mail and surrogate advertisement) declined from 6.8% in GATS-1<sup>2</sup> to 5.4% in GATS-2 – relative change -20.6%.<sup>11</sup> A 2021 study reported that *bidis* were being extensively advertised and marketed with clear images of products on social media, especially Facebook (at least 30 distinct pages for *bidi* companies), where sale was also facilitated.<sup>4</sup> *Bidi* manufacturers also use the Just Dial platform for promoting *bidi* products. *Bidis* can also be bought on Amazon, Alibaba and elsewhere online. These online sources can easily be found.

2. Pictorial health warnings (PHWs): The COTPA 2003<sup>5</sup> is the principal law governing tobacco advertising in India. On 1 December 2007, under COTPA Sections 7–10, the text and PHWs on all tobacco packages, including *bidis*, were to go into force. However, this was delayed<sup>6</sup> and only after a writ petition filed by the non-governmental organization (NGO) “Health for Millions”, these sections were implemented from 31 May 2009.<sup>7</sup> By 2009–2010, 62% of *bidi* smokers who were interviewed in GATS-1 reported to have noticed health warnings on packages and 29% thought of quitting.<sup>2</sup> From 1 April 2016, the rule of larger PHWs occupying 85% of both sides of the display areas of all tobacco packages came into force, followed by the requirement to print the National Quitline number on all tobacco packages including *bidis* from 1 September 2018.<sup>8</sup>

The relative change among current tobacco users noticing health warnings on tobacco products between GATS-1<sup>2</sup> and GATS-2<sup>1</sup> was highest for *bidis* (25.8%), followed by cigarettes (17.2%) and SLT products (13.8%). The relative change among current tobacco users who thought of quitting because of warning labels on tobacco products between GATS-1<sup>2</sup> and GATS-2<sup>1</sup> was also highest for

*bidis* (83.6%), followed by cigarettes (62.9%) and SLT products (36.7%).

However, to maximize the effect of PHWs on tobacco products, several elements are important, such as the size, position, content and design of the message.<sup>9–11</sup> Several studies conducted in India have reported non-compliance with indicators such as the location, label elements: language, colour and printing quality, warning size, etc., on *bidi* packages.<sup>12–14</sup>

3. Control of *bidi* smoking in public places: Both government agencies and NGOs have contributed towards the progress India has made in addressing the problem of tobacco use at several levels. At the national level, implementation of COTPA<sup>5</sup> led to prohibition of smoking in public places. GATS-2 data indicated that nearly 39% of adults are exposed to second-hand smoke (SHS) at home, 30.2% who work indoors are exposed to SHS at their workplace, 13.3% are exposed to SHS in public transport networks, and 7.4% are exposed to SHS in restaurants.<sup>2</sup> *Bidi* smoking contributes to SHS exposure as well as generation of second- and third-hand smoke. Smoke-free laws are commonly implemented in urban settings whereas the prevalence of smoking is higher in rural than in urban areas. Strict enforcement of prohibition of smoking in public places (under COTPA Section 4)<sup>5</sup> can help not only in protecting the non-smokers from SHS but also in reducing consumption among smokers.<sup>15</sup>
4. Sale to and by minors: On 18 September 2009, prohibition on sale of tobacco products, including *bidis*, to minors (COTPA Section 6a)<sup>5</sup> and within 100 yards of educational institutions (COTPA Section 6b) came into force.<sup>5</sup> A study from Delhi documented in 2017 that outlets selling tobacco products including *bidis* were commonly located within 100 yards of educational institutions, and such outlets generally lacked a display board prohibiting the sale of tobacco to minors, and

most educational institutions lacked statutory signboard prohibiting the sale of tobacco within 100 yards.<sup>16</sup> *Bidi* smoking is often initiated below the age of 18 years, especially in rural and urban slum populations of North India.<sup>17</sup> A study conducted revealed that nearly 80% of students in the age group of 13–15 years (92.9% boys, 58.9% girls; 58.8% urban, 82% rural) were refused sale of *bidis* because of their minor age by sellers.<sup>18</sup> Ban on sale by minors was added by an amendment G.S.R.619(E) on 11 August 2011. Section 77 of the Juvenile Justice (Care and Protection of Children) Act, 2015, prohibits giving to any child a tobacco product and provides for high penalties, including a fine of up to a INR 1 lakh and imprisonment for 7 years.<sup>19</sup> Hence, enforcement of no sale of *bidis* to minors assumes special importance.<sup>17</sup>

5. Awareness generation: Considerable efforts have been made at the national, state and regional levels to create awareness on the associated harms of *bidi* smoking. On 11 January 2014, a 30-second public service announcement (PSA) was launched across all major TV channels and was broadcast for a duration of 5 weeks. Two versions of the advertisement were shown, one featuring a *bidi* smoker and the other featuring a cigarette smoker. In addition to TV spots, the materials were available in radio formats, outdoor designs for billboards/hoardings, transport signage and posters. The campaign materials were prepared in 17 Indian languages.<sup>20</sup> Details on media campaigns and stakeholder sensitization are given in Chapter 8.5.
6. Taxation on *bidis*: The price of a tobacco product is an important economic determinant of its consumption. Policies related to increase in real consumer price (i.e. adjusted for inflation) of tobacco products are associated with reduced tobacco use, particularly if affordability (i.e. percentage of income required to buy specific units of tobacco products) of the products is reduced. Studies in India have concluded

that higher *bidi* and cigarette prices can lower the probability of initiation of *bidi* or cigarette smoking and regular use.<sup>21,22</sup> After a concerted campaign, tobacco products were included under GST in the slab of 28%, the highest rate, as declared on 18 May 2018 by the GST Council.<sup>23</sup> Currently, the tax burden on *bidis* is estimated to be 22% compared to 16% pre-GST, with no additional cess imposed on *bidis*.<sup>24</sup> This represented a tax increase, however, the *bidi* industry is largely unorganized with firms employing many small-scale, local producers, which are unregulated, and evade tax owing to exemptions for small-scale producers, and no additional cess imposed on *bidis*, making them cheaper and more affordable at lower increments in tobacco taxes, helping to keep the retail price of *bidis* low compared to cigarettes.<sup>21,22,25</sup>

## Challenges

Despite concerted efforts by key stakeholders including the government, there are several challenges in implementation of guidelines, Acts and regulations with respect to control of *bidi* use in India.

1. *Bidi* industry interference: The *bidi* industry has been known to interfere in tobacco control policy-making and its implementation. They adopt six major strategies for interference in India by (i) manipulating the political and legislative process; (ii) over-emphasizing the employment aspect and economic importance of *bidis* in the media; (iii) gaining public support by looking respectable; (iv) creating front groups for advocacy of the industry; (v) discrediting scientific evidence of harm caused by *bidis*; and (vi) intimidating the government with litigation.<sup>26</sup> Certain vested interests make it easier for the *bidi* industry to interfere with tobacco control efforts in the country.
2. Enforcement of pack warnings: Front groups representing the *bidi* industry have resisted

pack warnings and have aggressively argued on the considerations of loss of livelihood and difficulties in packaging, while undermining the provisions of the COTPA. The *bidi* industry posed legal hurdles and fought the implementation of 85% pack warnings. In the face of so much interference by the tobacco industry, the judiciary has had to intervene time and again for implementing pack warnings on all tobacco products in India (Box 7.11).

Due to interference by a trade union connected to the *bidi* industry, the government withdrew its notification issued on 13 April 2020, which mandated four-colour printing of PHWs on all types of packaging materials including wholesale packages. The fight to enforce PHWs and other text warnings on *bidi* packs is far from over.<sup>27</sup>

3. Tax exemption criteria: From 1 April 2019, suppliers of goods (e.g. *bidis*) are not required to register under GST or pay tax if their turnover in a financial year does not exceed INR 40 lakh. This was increased from the INR 20 lakh threshold originally mentioned in Section 23 of the CGST Act, 2017.<sup>28</sup> This exemption provides an opportunity for *bidi* manufacturers to circumvent their tax liability by establishing networks of smaller shell companies employing between 1–10 and 11–20 workers. These factors, along with cheaper raw materials used, make *bidi* use affordable, especially among the lower socioeconomic strata.
4. Sale of loose *bidis*: No Central provision specifically prohibits the sale of loose *bidis* or cigarettes, which makes it easier for youth to start smoking; however, three states, namely Rajasthan, Himachal Pradesh and Maharashtra, have imposed a complete ban on the sale of single stick loose *bidi* and cigarette, being sold without packet as they do not have the mandatory health warning on them.<sup>29</sup>
5. Livelihood issues of *bidi* rollers and *tendu* leaf pluckers: Although the GoI has announced



### **BOX 7.11: Case study – Civil society’s crusade to counter tobacco industry interference to achieve 85% pack warnings**

The revised COTPA Packaging and Labelling Rules were notified in 2009 stipulating 40% coverage of tobacco packs with PHWs. These were amended in 2014 mandating that specified health warnings, including pictorial warnings, must occupy at least 85% of the front and back panel of the tobacco packaging, which are to be rotated every year.

The tobacco industry strongly opposed these rules and the move to increase the size of the warnings was aggressively hindered and stalled at various junctures by the *bidi* industry and others. Soon after the rules were notified, the industry front groups such as the All India *Bidi* Industry Federation, the Tobacco Institute of India, the Retailers Association, the Federation of All India Farmers Association, the Tobacco Growers Association, the Confederation of Indian Industry (CII), the Associated Chambers of Commerce and Industry of India (ASSOCHAM) sent representations to the government through various channels. They objected to the need for 85% pictorial warnings, questioned their constitutional validity as this would affect income of farmers, livelihoods of *bidi* workers, revenue collections, boost illegal cigarette trade, etc. In 2015, a Parliamentary Committee on Subordinate Legislation (CoSL) of Lok Sabha was set up with some members having clear conflicts of interest. After deliberations, the committee wrote to the MoHFW to keep the rules in abeyance. A joint representation from public health organizations was submitted to CoSL giving all the relevant evidence for stronger pack warnings. Many stakeholders joined the campaign – doctors, medical associations, NGOs, families of cancer victims and even some MPs writing to the Hon'ble Prime Minister and the MoHFW. A public interest litigation (PIL) filed in Rajasthan High Court resulted in the order to the MoHFW to implement the pack warning rules.

During 2014–2016, the Pack Warning Amendment Rules, 2014 were also challenged by the tobacco companies, manufacturers and retailers before several High Courts. The Karnataka High Court heard over 60 cases filed by representatives of the tobacco and *bidi* industry, challenging the 85% pack warnings. The “Health for Millions” Trust filed a PIL in the Supreme Court of India after which the Court directed the transfer of all matters pending before various High Courts to the Karnataka High Court and vacated all stay orders by all other courts. “Tobacco Gate” – a campaign by media houses in support of 85% pack warnings successfully countered the opposition put up by the tobacco industry. Public health organizations, doctors and patients held a press conference in Delhi, which highlighted the need for large-size pack warnings and the intentional delays due industry interference. A social media campaign “*Size Badhao Life Bachao*” garnered support from the youth; citizens tweeted to policy-makers in large numbers; petitions and signature campaigns received huge support from all walks of society. This exceptional show of strength and solidarity by civil society countered the tremendous pressure from the tobacco industry. Finally, India stood its ground for the health of its people and introduced 85% pictorial warnings from 1 April 2016.

several welfare schemes for *bidi* rollers, the *bidi* industry keeps a majority of these workers either as contractual labour or self-employed, denying them the mandatory

ID cards required to access various social protection schemes. *Bidi* manufacturing units remain largely in the unregistered sector and stay outside the government tax system,

avoiding provisions of employment benefits such as provident fund, healthcare, etc., to *bidi* workers. *Bidi* rollers in India work in unhygienic environments exposed to health risks such as body pain, joint pain, visual impairment, anaemia, chronic bronchitis, and being prone to asthma, tuberculosis, as well as lung and other thoracic cancers in the long run. Exposure to tobacco dust induces mutations, i.e. damage to DNA, resulting in irreparable health problems.<sup>30</sup>

*Bidi* rollers are among the lowest paid workers in the country with women and children constituting the majority of the workforce. It has been found that *bidi* workers earn only 17% of wages compared to workers in other manufacturing industries.<sup>31</sup> Research shows that *bidi* rollers are often economically exploited by middlemen, they enjoy no rights or privileges as workers, and live in abject poverty. The practice of child labour is rampant in this industry, which deprives children of normal childhood, education and basic entitlements.<sup>32</sup> Hence, *bidi* rollers would benefit by an alternative livelihoods strategy.

*Tendu* leaf pluckers, mostly from tribal/forest dwelling communities, do not usually receive just compensation for the labour they put into leaf plucking.<sup>33</sup>

## The way forward and recommendations

Experience has shown that interference by the *bidi* industry needs to be tackled in order to implement tobacco control laws in India. Article 5.3 of the FCTC states that Parties need to protect their public health policies on tobacco control from commercial and other vested interests of the tobacco industry.

- Implement legislation more strictly and uniformly: Action is required to protect all relevant tobacco control policies from interference by the *bidi* industry (WHO FCTC Article 5.3). Strict regulatory guidelines

and use of authority even in rural areas is required for uniform enforcement of pack warnings. Community participation should be encouraged for the implementation and monitoring of designated smoke-free public places as per the COTPA.

- Develop strategies to meet tax revenue targets: By plugging the loopholes in tax avoidance, the Ministry of Finance needs to develop a mechanism for revenue collection from both *bidi* manufacturing and the *tendu* auctions done by the states. This can be done by eliminating tax exemptions for small *bidi* producers, making taxation uniform and adjusting it regularly for inflation and individual income, introducing additional cess over and above the 28% GST slab on *bidi* products.
- Develop feasible options for alternative livelihoods for *bidi* rollers: Given that *bidi* rolling takes place in India's poorest pockets and among the most vulnerable sections, the focus needs to be on ending the exploitation of *bidi* workers. Promotion of meaningful employment opportunities in rural areas will remove deep societal and economic inequities created by the *bidi* sector.
- Address supply-side interventions: Regulation is needed for labour standards for *bidi* rolling, especially home-based rolling. Stronger welfare measures are needed to improve working conditions in the entire *bidi* sector. There is also a need for transparency and accountability in the *tendu* leaf (*tendu patta*) sector, which comes under state forest departments, replete with corruption and exploitative economics.
- More effective communication strategies are needed to dispel myths that "*bidis* are less harmful than cigarettes", which continue to misguide the public and current users.
- A comprehensive 360-degree study is needed to ascertain the true cost of *bidi* on the Indian economy and society. This should include long-term effects of *bidi* smoking ecological, environmental, occupational

health costs and issues of human rights and equity affecting communities involved in *bidi* cultivation, *tendu* leaf plucking and *bidi* manufacture. At the state and national

levels, a cost accounting study is required to capture tax revenues, subsidies, livelihood benefits to local communities, and profits to *bidi* traders.

## Key messages

- Prevalence of *bidi* smoking in India declined among adults from 9.2% in 2009–2010 to 7.7% in 2016–2017.
- While all provisions of the COTPA are applicable on *bidis*, including the ban on smoking in public places, the ban on all forms of tobacco advertising, the ban on sale of tobacco products to and by minors, and mandatory depiction of PHWs on all tobacco products, the enforcement of these provisions on *bidis* has been a challenge, due to a large but influential unorganized sector.
- The *bidi* industry takes advantage of tax concession by creating smaller shell companies, and employing small-scale, local producers that are unregulated.
- Control on *bidi* use warrants a pan-India strategy for alternative livelihoods for *bidi* rollers and *tendu* leaf pluckers, as well as a uniform taxation policy, congruent with that for other tobacco products.

## REFERENCES

1. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey GATS 2 India 2016–17. Ministry of Health and Family Welfare, Government of India; 2018. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>, accessed 29 July 2022.
2. International Institute for Population Sciences, Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey GATS India 2009–10. IIPS; 2010. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-India-2009-2010-Report.pdf>, accessed 29 July 2022.
3. Smith KC, Welding K, Iacobelli M, Saraf S, Cohen JE. Headshots on *bidi* and smokeless tobacco packs in India and Bangladesh: a curious branding element. *Tob Control*. 2022;31(1):117–18. doi: 10.1136/tobaccocontrol-2020-055867.
4. Kuganesan S, Kumar N, Mallik V, Raskin H, Jain P, Murukutla N. Selling death on social media: how *bidis* are reaching consumers online. New York, NY: Vital Strategies; 2021. Available from: [https://www.vitalstrategies.org/wp-content/uploads/Selling-Death-on-Social-Media\\_How-Bidis-Are-Reaching-Consumers-Online.pdf](https://www.vitalstrategies.org/wp-content/uploads/Selling-Death-on-Social-Media_How-Bidis-Are-Reaching-Consumers-Online.pdf), accessed 29 July 2022.
5. National Tobacco Control Programme. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003. Ministry of Law and Justice, The Gazette of India Extraordinary, Part II, Section I, May 19, 2003. Available from: [https://ntcp.nhp.gov.in/cigarettes\\_and\\_other\\_tobacco\\_products](https://ntcp.nhp.gov.in/cigarettes_and_other_tobacco_products), accessed 29 July 2022.
6. Oswal KC, Pednekar MS, Gupta PC. Tobacco industry interference for pictorial warnings. *Indian J Cancer*. 2010;47 Suppl 1:101–4. doi: 10.4103/0019-509X.65318.

7. Yadav A, Singh A, Khadka BB, Amarasinghe H, Yadav N, Singh R. Smokeless tobacco control: litigation & judicial measures from Southeast Asia. *Indian J Med Res.* 2018;148(1):25–34. doi: 10.4103/ijmr.IJMR\_2063\_17.
8. Kumar R, Saroj SK, Kumar M. Tobacco Quitline toll-free number on tobacco packets in India: An analysis on outcome. *Monaldi Arch Chest Dis.* 2021;91(2). doi: 10.4081/monaldi.2021.1612.
9. Fong GT, Hammond D, Hitchman SC. The impact of pictures on the effectiveness of tobacco warnings. *Bull World Health Organ.* 2009;87(8):640–3. doi: 10.2471/blt.09.069575.
10. Swayampakala K, Thrasher JF, Hammond D, Yong HH, Bansal-Travers M, Krugman D, et al. Pictorial health warning label content and smokers' understanding of smoking-related risks—a cross-country comparison. *Health Educ Res.* 2015;30(1):35–45. doi: 10.1093/her/cyu022.
11. Cohen JE, Brown J, Washington C, Welding K, Ferguson J, Smith KC. Do cigarette health warning labels comply with requirements: a 14-country study. *Prev Med.* 2016;93:128–34. doi: 10.1016/j.ypmed.2016.10.006.
12. Smith K, Welding K, Saraf S, Washington C, Iacobelli M, Cohen J. Tobacco packaging in India: assessing compliance with Health Warning Label (HWL) laws and marketing appeals for *cigarettes*, *bidis* and smokeless products. *Tob Induc Dis.* 2018;16(1):379. doi:10.18332/tid/84002.
13. Panigrahi A, Sharma D. Compliance with packaging and labelling rules for tobacco products marketed in slum areas of Bhubaneswar, India. *Tob Control.* 2019;28(e1):e13–e15. doi: 10.1136/tobaccocontrol-2018-054665.
14. Saraf S, Welding K, Iacobelli M, Cohen JE, Gupta PC, Smith KC. Health warning label compliance for smokeless tobacco products and *bidis* in five Indian states. *Asian Pac J Cancer Prev.* 2021;22(S2):59–64. doi: 10.31557/APJCP.2021.22.S2.59.
15. World Health Organization. Tobacco Factsheet. 24 May 2022. Available From: <https://www.who.int/news-room/fact-sheets/detail/tobacco>, accessed 29 July 2022.
16. Yadav R, Swasticharan L, Garg R. Compliance of specific provisions of tobacco control law around educational institutions in Delhi, India. *Int J Prev Med.* 2017;8:62. doi: 10.4103/ijpvm.IJPVM\_239\_16.
17. Gupta V, Yadav K, Anand K. Patterns of tobacco use across rural, urban, and urban-slum populations in a north Indian community. *Indian J Community Med.* 2010;35(2):245–51. doi: 10.4103/0970-0218.66877.
18. More boys than girls denied cigarette, *bidi* due to age. *The Tribune*; 2021. Available from: <https://www.tribuneindia.com/news/ludhiana/more-boys-than-girls-denied-cigarette-bidi-due-to-age-349039>, accessed 29 July 2022.
19. National Tobacco Control Programme. Juvenile Justice (Care and Protection of Children) Act, 2015. Tobacco Control Law and Related Laws in India. Ministry of Health and Family Welfare, Government of India; 2016. Available from: [https://ntcp.nhp.gov.in/acts\\_rules\\_regulations](https://ntcp.nhp.gov.in/acts_rules_regulations), accessed 30 July 2022.
20. Campaigns. India – Tobacco Control – Artery *Bidi* (English). Vital Strategies; 2021. Available from: <https://www.vitalstrategies.org/resources/india-artery-bidi-english/>, accessed 30 July 2022.
21. Rana K, Goel S, Prinja S. An analysis of affordability of cigarettes and *bidis* in India. *Indian J Tuberc.* 2021;68S:S55–S59. doi: 10.1016/j.ijtb.2021.08.020.
22. Welding K, Iacobelli M, Saraf S, Smith KC, Puntambekar N, Gupta PC, et al. The market for *bidis*, smokeless tobacco, and cigarettes in India: evidence from semi-urban and rural areas in five states. *Int J Public Health.* 2021;66:1604005. doi: 10.3389/ijph.2021.1604005.
23. GST Council. Notification No. & Date of Issue: 23/2018-Central Tax, dt. 18-05-2018. Goods and Service Tax. Schedule II: list of goods at 28% rate. Available from: <http://gstcouncil.gov.in/sites/default/files/NOTIFICATION%20PDF/goods-rates-booklet-03July2017.pdf>, accessed 30 July 2022.
24. John RM, Dauchy E, Goodchild M. Estimated impact of the GST on tobacco products in India. *Tob Control.* 2019;28(5):506–12. doi: 10.1136/tobaccocontrol-2018-054479.
25. Kostova D, Chaloupka FJ, Yurekli A, Ross H, Cherukupalli R, Andes L, et al; GATS Collaborative Group. A cross-country study of cigarette prices and affordability: evidence from the Global Adult Tobacco Survey. *Tob Control.* 2014;23(1):e3. doi: 10.1136/tobaccocontrol-2011-050413.
26. Lal P, Pandey A K. Chapter 14: Tobacco industry interference and public health. In: Goel S, Kar SS, Singh RJ, editors. Tobacco control: a module for public health professionals. Collaborative work between PGIMER, Chandigarh, JIPMER, Puducherry, The Union, South-East Asia, New Delhi; 2016.
27. BMS lauds govt for withdrawing order on pictorial warning on beedi bundles, wholesale packs. *Times of India*; 27 July 2020. Available from: <https://timesofindia.indiatimes.com/bms-lauds-govt-for-withdrawing-order-on-pictorial-warning-on-beedi-bundles-wholesale-packs/articleshow/77203110.cms>, accessed 30 July 2022.
28. Indian Trade Portal. New changes in GST applicable from 1.4.2019. Department of Commerce, Ministry of Commerce and Industry, Government of India. Available from: <https://www.indiantradeportal.in/vs.js?p?lang=0&id=0,959,10581,12357,14026>, accessed 30 July 2022.

29. Kapoor S, Mehra R, Yadav A, Lal P, Singh RJ. Banning loose cigarettes and other tobacco products in India: a policy analysis. *Asian Pac J Cancer Prev*. 2021;22(S2):51–7. doi: 10.31557/APJCP.2021.22.S2.51.
30. Caught in a DEATH TRAP: The Story of *Bidi* Rollers of West Bengal and Gujarat. Voluntary Health Association of India, 2008. Available from: <https://vhai.org/publications/tobacco-control/caught-in-a-death-trap-the-story-of-bidi-workers-in-india/>, accessed 30 July 2022.
31. Arora M, Datta P, Barman A, Sinha P, Munish VG, Bahl D, et al. The Indian *Bidi* Industry: Trends in Employment and Wage Differentials. *Front Public Health*. 2020;8:572638. doi: 10.3389/fpubh.2020.572638.
32. At the crossroads of life and livelihood: the economics, poverty and working conditions of people employed in the tobacco industry in India: a study based on primary research among tobacco workers in Bihar, Jharkhand, Madhya Pradesh & Uttar Pradesh. New Delhi: Voluntary Health Association of India, 2010.
33. Lal PG, Wilson NC. The perverse economics of the *bidi* and *tendu* trade. *Econ Polit Wkly*. 2012;47(2),77–80. Available from: <http://www.jstor.org/stable/23065613>, accessed 30 July 2022.

## 7.5: Alternative livelihoods for *bidi* rollers and tobacco farmers

Article 17 of the WHO FCTC specifies that tobacco-dependent workers and farmers should be provided with support to take up alternative activities that are economically viable. However, while the demand-side policies of tobacco control have gained momentum and have been proven to be effective in India, the supply-side policies are still in their infancy stage. Although the measures taken to find alternative avenues are on a very small scale compared to the magnitude of the problem, the type of research conducted on alternative crops, the success stories of tobacco farmers and the initiatives taken to develop skills among *bidi* rollers are discussed in this sub-chapter to draw lessons for the future course of action.

### Feasibility of alternative crops: results of three decades of research investigations

Comparative cost studies on alternative crops to tobacco have been available in India since the 1990s. These studies<sup>1-4</sup> conducted by different universities, agricultural research institutes and individual researchers identified a few local crops that yielded returns that were better than or nearly as high as those of tobacco. However, experiments carried out by the Central Tobacco Research Institute (CTRI)<sup>5,6</sup> revealed that none of the monocrops were as remunerative as tobacco. These studies found that mixed cropping yielded higher returns than monocropping of tobacco. The results of other studies on alternative crops to tobacco are summarized in Table 7.3.

**Table 7.3: Studies on alternatives crops to tobacco**

S. No.	Research	State and District	Type of tobacco crop in the selected region	Study results
1.	Dinesh Kumar et al. (2010) <sup>7</sup>	Karnataka Shimoga district	FCV tobacco	<ul style="list-style-type: none"> <li>Tobacco as a monocrop earned higher returns</li> <li>The next best alternatives: Monocrop of chilli with higher benefit-cost ratio than tobacco and mixed cropping of other crops was more profitable than tobacco</li> <li>Profitable combinations               <ul style="list-style-type: none"> <li>(i) Cotton+chilli+groundnut</li> <li>(ii) Groundnut+chilli+french bean</li> </ul> </li> </ul>
2.	Krishna et al. (2010) <sup>8</sup>	Andhra Pradesh East Godavari district	FCV tobacco in fallow season*	<ul style="list-style-type: none"> <li>Fallow tobacco had higher returns</li> <li>Next best alternatives: Maize, red gram, chickpea, horse gram</li> </ul>



S. No.	Research	State and District	Type of tobacco crop in the selected region	Study results
3.	VHAI's study (2010) <sup>9</sup>	Bihar Vaishali district	Chewing tobacco	<ul style="list-style-type: none"> <li>Paddy and vegetables were more profitable than tobacco</li> </ul>
4.	Rao and Nancharaiah (2012) <sup>10</sup>	Andhra Pradesh Prakasam district	FCV tobacco	<ul style="list-style-type: none"> <li>Net returns higher for paddy and Bengal gram than for tobacco</li> </ul>
5.	Ranganadhan (2014) <sup>11</sup>	Karnataka Mysore district	FCV tobacco	<ul style="list-style-type: none"> <li>Net returns higher for banana, followed by sugarcane, tobacco and ginger</li> </ul>
6.	Nayak (2015) <sup>12</sup>	Karnataka Mysore and Hassan districts	FCV tobacco	<ul style="list-style-type: none"> <li>Net returns higher for ginger than tobacco</li> <li>Net returns per rupee of investment higher for cowpea, jowar, paddy, chilli and plantations</li> </ul>
7.	Teja et al. (2016) <sup>13</sup>	Andhra Pradesh Nellore and Prakasam districts	FCV tobacco	<ul style="list-style-type: none"> <li>Tobacco earned higher returns</li> <li>The next best alternatives were paddy in irrigated conditions and red gram and Bengal gram in un-irrigated conditions</li> </ul>
9.	Ramesh et al. (2020) <sup>14</sup>	Andhra Pradesh Prakasam district	FCV tobacco	<ul style="list-style-type: none"> <li>Net returns higher for chickpea, black gram, red gram and maize than from tobacco</li> <li>Next best alternatives: jowar and safflower</li> </ul>
*Tobacco grown after keeping the land fallow for one or more years, FCV tobacco: flue-cured virginia tobacco				

## Why is tobacco preferred over other crops?

The overuse of land and water resources, dependence on rainfall, small landholdings, low level of mechanization, poor storage facilities, lack of service roads to transport alternative agricultural produce (which are bulky) and lack of agro-based industries nearby have been identified as obstacles to the substitution of tobacco with other crops.<sup>12</sup> The factors that have been identified to sustain tobacco cultivation include the institutional support it receives, higher returns and international demand for tobacco.

## Shifting from tobacco: Empirical evidence

In recent years, there has been significant crop diversification in tobacco-growing regions, with more high-value crops being grown. There is greater diversification among smaller landholders.<sup>15–17</sup> Infrastructural and technological factors and irrigation are reported to be the main factors influencing diversification.<sup>18</sup> Horticulture is expected to be one of the emerging sectors that may replace tobacco cultivation.<sup>19</sup>

In 2014, an NGO in the village of Hitnehebbagilu in the Periyapatana taluk, Mysuru district,



Karnataka helped 20 tobacco growers to successfully shift from tobacco to vegetable cultivation, and to follow organic farming practices (Box 7.12).<sup>20</sup> In a similar effort, the Tobacco Board, in collaboration with the Department of Horticulture and Agriculture, Government of Karnataka, linked flue-cured virginia (FCV) tobacco farmers in the Hunsur block of Mysuru district to the Horticultural Producers' Cooperative Marketing and Processing Society Ltd. to enable timely sale of

their produce. The farmers were provided with access to bank loans, facilities for drip irrigation and subsidized fertilizer, and soil testing was done free of cost. The result was that more than a thousand farmers shifted voluntarily from the cultivation of FCV tobacco to other crops (Box 7.13). The pilot project was scaled up from 250 hectares to 4500 hectares.<sup>21</sup> However, the sustainability of these initiatives needs to be examined for replication elsewhere.

## Diversification from tobacco cultivation: Sharing the experiences of farmers

### BOX 7.12: Case study – Experience of a *bidi* tobacco grower in Karnataka



Mr Rajagonda Patil with his sugarcane crop

Mr Rajagonda Patil, a progressive farmer from the village of Sidnal in Karnataka's Belgaum district, jointly owns 22 acres of land with his brother. They have stopped growing tobacco since 2015 and now cultivate sugarcane. Their main reasons for growing sugarcane are the availability of water and a good market due to the existence of sugar factories in the area. In the off season, when the land is left fallow so that it recovers its fertility, they grow jowar and Bengal gram or watermelon, depending on the demand (Watermelon can be grown within 60 days). They also grow chilli, coriander and vegetables for household consumption. Mr. Patil's net earnings

from tobacco were INR 60,000 per acre, whereas sugarcane brings in around INR 150,000 to 225,000 per acre. Sugarcane in this area has a relatively higher sugar content and thus, has greater value. It is also a source of fodder for cattle. Mr Patil is happy because of the demand from local factories and the good rate for his produce.

### BOX 7.13: Case study – From chewing tobacco to broccoli in Uttar Pradesh



Mr Vinod Singh's broccoli crop



Mr Vinod Singh's mushroom crop

Mr Vinod Rajabhadur Singh Chauhan, who belongs to the village of Manpura in Etah district, Uttar Pradesh, owns 6 acres of irrigated land jointly with his brother. Realizing that cultivating vegetables, particularly broccoli, was profitable, he gave up tobacco farming in 2018 and now grows red cabbage, tomato, cauliflower, onion and mushroom. His other reasons for stopping tobacco cultivation were uncertainty of prices and long waiting periods associated with tobacco sale and, the advertisements published by the government on the health concerns related to the consumption of tobacco. Mr Singh uses mainly organic sprays on the vegetables he grows. There is a high demand for broccoli as there are few farmers growing it. Earlier, the transport of the vegetables used to be a problem, but a few farmers have got together and arranged for a mini-carrier for convenient transport. Mr Singh gets his payment for each load of supply immediately. Government officials, researchers and other farmers visit Mr Singh's farm frequently to witness the transformation. His success story has been published in the newspapers. Due to the demonstration effect, more and more farmers in the neighbouring areas have become interested in growing broccoli and other vegetables.

## Central Government initiatives to create alternative livelihoods for tobacco-dependent workers

### Tobacco farmers

The Department of Agriculture, Cooperation and Farmers Welfare, GoI is implementing the Crop Diversification Programme (CDP),<sup>22</sup> a sub-scheme of the Rashtriya Krishi Vikas Yojana, to encourage tobacco farmers to shift to alternative crops.

The implementation of the programme began in 2015–2016 in the states of Andhra Pradesh, Bihar, Gujarat, Karnataka, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.

The Tobacco Board, Ministry of Commerce and Industry is working with the CTRI and state agriculture departments to provide tobacco farmers with economically sustainable alternatives. Besides, it conducts programmes to educate tobacco farmers and raise awareness regarding the cultivation of alternative crops.

In 2008–2009, the MoHFW had lent the CTRI its support for launching a pilot project on the development of an “alternative cropping system to *bidi* and chewing tobacco” in five agro-ecological regions of India. The pilot project was implemented in Nandyal (Andhra Pradesh), Anand and Dharmaj (Gujarat), Nippani (Karnataka), Veda sandur (Tamil Nadu) and Dinhata (West Bengal).

### **Bidi rollers**

In 2008, the Ministry of Labour and Employment (MoLE), GoI had launched a pilot initiative to develop the skills of *bidi* rollers in Bangalore, Nagpur, Solapur, Ajmer, Tonk, Beawar, Karauli, Nasirabad, Bundi, Kota, Jabalpur, Indore, Hyderabad, Karimnagar, Kolkata and Murshidabad. However, the MoLE could not sustain this initiative due to the lack of funds. In 2017, the MoLE<sup>23</sup> in partnership with the National Skill Development Corporation under the Ministry of Skill Development and Entrepreneurship and with the support of WHO India, launched a skill development training programme for *bidi* workers and their dependants. The pilot phase of the programme was launched in one district each in five states. The states were Kerala (Kasargod), Odisha (Sambhalpur), Chhattisgarh (Rajnandgaon), West Bengal (North 24 Parganas) and Telangana (Nizamabad). Thereafter, the programme was expanded to cover all the districts of the country where *bidis* are rolled. The programme aims to train the identified *bidi* rollers/dependants under the Pradhan Mantri Kaushal Vikas Yojana and similar initiatives, such as the Deen Dayal Upadhyaya Grameen Kaushalya Yojana/Rural Self-Employment Training Institute, or under corporate social responsibility initiatives. According to the guidelines of the scheme, those who provide the training are also in charge of placement.

Under this programme, over 7158 *bidi* rollers/dependants have received training in different skills and 2627 have been placed, both in self-employment and wage employment.<sup>24</sup> It has been observed that after placement, many

beneficiaries earn three to four times the amount they earned as *bidi* rollers.

## **Empowering *bidi* workers to take up alternative livelihoods: Building support from the grassroots**

In 2017, it was decided to use a bottom-ups advocacy approach, under which trade unions, labour groups, government representatives, academicians and NGOs were involved in working with *bidi* workers. An intensive process of mapping the existing realities of *bidi* workers, in terms of their work, health and livelihood, took place at the state and national levels. West Bengal, Tamil Nadu, Madhya Pradesh and Uttar Pradesh, where *bidi* workers are concentrated, were selected. Consultations were held with all tobacco stakeholders at the state and national levels to brainstorm strategies to effectively address challenges related to *bidi* workers at the individual and collective levels. Skill sets that the workers would need to articulate their demands vis a vis the government and industry were also discussed.

Gradually, support networks were built and one to three groups of *bidi* workers were formed in each state. Relationships were strengthened with these *bidi* worker groups over the period and later on they even supported tobacco control in a meaningful manner. This organic process



**Figure 7.3: Leadership workshop for *bidi* workers in Jaunpur, Uttar Pradesh (2018-2019)**





**Figure 7.4: Leadership workshop for *bidi* workers in Sagar district, Madhya Pradesh (2018)**

was cemented by a leadership development programme. The “leadership workshops” (figure 7.3 and 7.4) under this programme addressed issues such as the lack of confidence and information; and the inability to access services, the causes behind the exploitative nature of *bidi* work and eventually formulated demands for state and national level advocacy. These workshops enabled 80 self-motivated leaders of *bidi* workers to develop the skills to effectively articulate their concerns to the government and industry. An important aspect that contributed to the success of these workshops was the inclusion of influential role models for women *bidi* workers, and the fact that these role models were chosen from their local context.

The process described above had a cascading impact, with each leader adding at least 10–20 workers to the group on returning to the village. Capacity-building workshops continued in the second phase and presently, the third phase of the cross-sharing follow-up workshops is underway. The *bidi* workers have been able to articulately put forward their demands to government officials and elected representatives, including those related to the lack of ID card that are issued to *bidi* workers, access to government schemes, industry accountability, health harms, declaring *bidi* as a hazardous process and the need for healthy and safe alternative livelihood options at their doorstep. Further, the *bidi* workers demanded



**Figure 7.5: Groups working with *bidi* workers present the GST memorandum on increasing *bidi* taxation to the Tamil Nadu Minister of Commercial Tax, 2017**

that the MoLE provide them with sustainable alternative livelihood programmes.

## Initiatives to provide Tamil Nadu *bidi* rollers with alternative livelihoods

More than 5 lakh women are engaged in rolling *bidis* in Tirunelveli, which is the hub of the *bidi* industry in Tamil Nadu. The *bidi* workers do not know which company they are working for. They identify the *bidis* they have rolled on the basis of the colour of the thread they have used, and not by the name of the company. This indicates that they are unregistered workers who are exploited and do not receive any social benefits. Perhaps this is a strategy to prevent them from making any demands from the employer. Thus, there is a strong case for making them aware of their situation and motivating them to work elsewhere. Besides providing the *bidi* workers with options for alternative livelihoods, it is crucial to take stringent measures to stop illegal companies from luring and exploiting them, particularly women (Figure 7.5).

Following the adoption of the FCTC and enactment of COTPA 2003, various initiatives were taken by the government, NGOs, the corporate sector, microfinance companies and banks to provide *bidi* workers with an alternative source of livelihood. The training programmes had links to microfinance institutions. Most of them offered tailoring or beautician courses, driving lessons, courses for making hand-crafted products. More than 1000 women who rolled



**Figure 7.6: *Bidi* workers speak to the media about the health problems they have developed as a result of their work and their desire to leave the work**



**Figure 7.7: Awareness programme for *bidi* rollers on occupational hazards by Cancer Institute (WIA), Chennai, Tamil Nadu**

*bidis* in the Tirunelveli and Vellore districts were educated on the occupational hazards that they were facing (Figure 7.6 and 7.7). So far, nearly 150 *bidi* rollers have been trained in tailoring, making handicrafts and manufacturing wigs by the Cancer Institute (WIA) (Figure 7.8 and 7.9). Nearly 60% of those trained have been successfully placed in sustainable alternative employment. Some have gone back to rolling *bidis* because they feel it is more convenient to work from home. The women who have shifted to an alternative livelihood are earning well and there has been an improvement in their quality of life.

A survey conducted by the Nellai Cancer Care Centre at Pappakudi, Tamil Nadu revealed that most *bidi* rollers were middle-aged and only 1% spent more than 8 hours at work. More than 90% earned about INR 100 a day. Considering the time they spent on their work and their average earnings, it appears that *bidi* rolling is not the sole livelihood activity. Besides, their wages are lower than those paid under the Mahatma Gandhi



**Figure 7.8: The Cancer Institute (WIA), Chennai trains women *bidi* workers to make coir-based handicrafts in Tirunelveli**



**Figure 7.9: Training in tailoring provided by the Cancer Institute (WIA), Chennai in Tirunelveli**

National Rural Employment Guarantee Scheme (MGNREGS). These workers' willingness to shift to another line is relatively low (only 26%) due to their age, the lack of skills, shortage of money, absence of opportunities, need to take care of children and the convenience of working from home, among other things. In another survey initiated by the Cancer Institute (WIA), over 70% of the participants expressed their willingness to shift from *bidi* work and enrol in a new skill-based training programme, but expected compensation, such as a stipend, during the transition period. These surveys indicate that large-scale institutional and industry-linked programmes are necessary to encourage *bidi* rollers to take up alternative livelihoods. It should be noted that education is among the factors that could reduce the number of *bidi* workers in the future, considering that *bidi* workers' children who have graduated and moved to work in towns and cities nearby wanted their parents to stop rolling *bidis*.

## BOX 7.14: Perceptions of tobacco farmers and *bidi* workers on alternative livelihoods

- Farmers are aware of the FCTC and assume that the government may reduce the area under tobacco in the near future.
- But, they lack information on alternative crops and currently, there are very few crops identified as alternatives to tobacco.

- Farmers are interested in the “barn buyout” scheme wherein farmers demand compensation in the range of INR 5-10 lakhs from the government for dismantling their tobacco curing barn and shift to other crops.

### Farmers

- The willingness to shift from tobacco cultivation is low in the states of Gujarat and Bihar and the FCV tobacco-growing areas of Karnataka and Andhra Pradesh.
- Diversifying from tobacco without government support would affect their livelihood.

- Farmers with irrigation sources have diversified their agriculture.
- Farmers believe that institutional and industry support sustains tobacco cultivation and that the voices of only a few large farmers are represented in tobacco farming decisions.

### *Bidi* rollers

*Bidi* workers are willing and eager to shift from the harmful, exploitative, and low-paid work where they are unable to secure even minimum wages.

Whether it is Madhya Pradesh, Tamil Nadu, West Bengal, Uttar Pradesh, Maharashtra, Karnataka or any other *bidi*-producing state, workers lack information on the alternative livelihood options available. Even if options are locally available, they are often unable to access them due to the lack of an ID-card or due to the limitations of their age or educational qualifications.

*Bidi* workers want this intergenerational work to end and do not want their children to continue with it after them.

## Summary and conclusions

Although individual researchers and the regional institutes of the Indian Council of Agricultural Research (ICAR) have been conducting research on alternative crops to tobacco for more than three decades, there are precious few institutional interventions to promote viable alternatives or mixed cropping. The CDP

initiated by the Central Government in 2015–2016 is a drop in the ocean in terms of budget allocation and coverage when seen in the context of the area under tobacco cultivation. For the programme to yield better results, there is a need to allocate sufficient resources, and to improve planning, and monitoring mechanisms. The case studies and results of the field experiments on alternative crops indicate that

mixed farming, farming of sugarcane and ginger, organic farming of vegetables, cultivation of fruits and floriculture are some economically viable or next best alternatives to tobacco. Their profitability varies from state to state. However, only a big push and large-scale measures from the government or any external agency can drive and sustain diversification. The skill development programmes implemented for *bidi* rollers by the MoLE and NGOs are praiseworthy, but are too

small to cover the large workforce engaged in *bidi* rolling. They have been successful due to the inclusion of influential role models who have been chosen from the region and with whom the *bidi* rollers can connect. It must be impressed upon the *bidi* workers that their earnings are less than the wages paid under the MGNREGS. It should be kept in mind that education is one of the factors that could reduce the number of people who take up *bidi* rolling in the future.

## Key messages

- Despite numerous constraints in substituting the cultivation of tobacco with that of other crops, it has been found that crop diversification/mixed cropping in tobacco-growing regions on a large scale is more profitable than monocropping of tobacco.
- Farmers have shifted to alternative livelihoods due to the adoption of several measures, such as providing support for the timely sale of alternative produce, facilitating access to bank loans, providing free soil testing and access to irrigation facilities, making raw materials available at subsidized rates, and providing technical knowhow and training.
- There is a need to strengthen government initiatives and schemes to provide economically viable alternative livelihoods, implement the “barn buyout scheme”, and provide institutional and industry support. Efforts must be made to increase tobacco farmers’ knowledge and awareness of alternative cropping.
- The integrated farming system must be adopted widely to reduce the land under tobacco cultivation and sustain farming.
- Before initiating any livelihood programme, periodic needs assessment surveys of *bidi* workers and tobacco farmers must be conducted.
- The sustainability of interventions can be ensured through intensive behaviour change communication, and by end-to-end business planning and post-training support that connects *bidi* rollers or tobacco farmers to government schemes and departments.

## REFERENCES

1. Sathyapriya VS, Govinda Raju KV. Economic Viability of Alternative Crops to Tobacco Agricultural Development and Rural Transformation Unit, ISEC, Bangalore; 1990.
2. Karnataka State Department of Agriculture. Report on Region-wise Cost of Cultivation. Bangalore: Government of Karnataka; 1994–95:57–123.
3. Bhat BN, Hundekar AR, Khot RS, Yandagoudar BA. *Bidi* tobacco. University of Agricultural Sciences, Dharwad; 1998.
4. Panchamukhi PR. Agricultural Diversification as a Tool of Tobacco Control. WHO International Conference on Global Tobacco Control Law, 7–9 January 2000, New Delhi. Available from: [https://www.who.int/docs/default-source/searo/india/tobacco/panchimukhi2000x.pdf?sfvrsn=d1a5121c\\_2](https://www.who.int/docs/default-source/searo/india/tobacco/panchimukhi2000x.pdf?sfvrsn=d1a5121c_2), accessed 30 July 2022.
5. Ministry of Health and Family Welfare. Report of the Expert Committee on the Economics of Tobacco Use in India. Ministry of Health and Family Welfare, Government of India, New Delhi; February 2001.



6. Central Tobacco Research Institute. Alternative crops to *Bidi* and Chewing tobacco in different agro-ecological sub regions: 2008–2009. Results presented at the workshop organized to discuss methodological issues related to a “Study on Alternative cropping for Tobacco” organized by Public Health Foundation of India, New Delhi at Hyderabad on 7 January 2012.
7. Kumar MD, Naik C, Sridhara S, Vagheesh TS, Girijesh GK, Rangaiah S. Investigation on economically viable alternative cropping systems for FCV tobacco (*Nicotiana Tabacum*) in Karnataka. *Karnataka J Agric Sci.* 2010;23(5):689–92. Available from: [https://www.researchgate.net/publication/269694354\\_Investigation\\_on\\_economically\\_viable\\_alternative\\_cropping\\_systems\\_for\\_FCV\\_tobacco\\_Nicotiana\\_tabacum\\_in\\_Karnataka](https://www.researchgate.net/publication/269694354_Investigation_on_economically_viable_alternative_cropping_systems_for_FCV_tobacco_Nicotiana_tabacum_in_Karnataka), accessed 30 July 2022.
8. Krishna SK, Reddy SVK, Kumar PH, Krishnamurthy V, Nageswara R. Agronomic and economic evaluation of alternative cropping systems for FCV tobacco (*Nicotianatabacum*) on Vertisols of Andhra Pradesh. *Indian J Agron.* 2010;55(4):270–75.
9. VHAI (2010), “At the Crossroads of Life and Livelihoods”. Available from <https://vhai.org/publications/tobacco-control/at-the-crossroad-of-life-and-livelihood/>
10. Rao KE, Nancharaiah G. Alternative to tobacco crop cultivation in rabi season: a cost benefit analysis. *Agricultural Situation in India.* 2012;69(2):67–78. Available from: <https://eands.dacnet.nic.in/Publication12-12-2012/2541-may12/2541-1.pdf>, accessed 30 July 2022.
11. Ranganadhan S. Tobacco and alternate crops in Karnataka - a management perspective. *International Journal of Social Science.* 2014;3(2):113–22.
12. Nayak N. Alternatives to flue cured Virginia tobacco cultivation: preliminary observations from a tobacco growing region in India. *Curr Agri Res.* 2015;3(1). Available from: <http://www.agriculturejournal.org/?p=1401>, accessed 1 August 2022.
13. Teja K, Rajeshwari S, Devi B, Reddy R. Economics of tobacco and its alternative crops in nellore and prakasam districts of Andhra Pradesh. *IJRANSS.* 2016;4(10):115–22.
14. Ramesh G, Rao V, Rao GMVP. Evaluation of viable alternative crops for FCV tobacco in southern black soils of Prakasam District of Andhara Pradesh. *Int J Curr Microbiol App Sci.* 2020;9(8):3949–54. <https://doi.org/10.20546/ijcmas.2020.908.454>.
15. Birthal PS, Joshi PK, Roy D, Amit T. Diversification in Indian agriculture towards high-value crops - the role of smallholders. IFPRI Discussion Paper. International Food Policy Research Institute, Hyderabad; 2007. Available from: <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/125291/filename/125292.pdf>, accessed 1 August 2022.
16. Bazaz NH, Haq I. Crop diversification in Jammu and Kashmir: pace, pattern and determinants. *IOSR Journal of Humanities and Social Science (IOSR-JHSS).* 2013;11(5):1–7. Available from: <https://www.iosrjournals.org/iosr-jhss/papers/Vol11-issue5/A01150107.pdf>, accessed 1 August 2022.
17. Kumar S, Gupta S. Crop Diversification towards high-value crops in India: a state level empirical analysis. *Agric Econ Res Rev.* 2015;28(2):339–50. DOI: 10.5958/0974-0279.2016.00012.4.
18. Acharya SP, Basavaraja H, Kunnal LB, Mahajanashetti SB, Bhat ARS. Crop diversification in Karnataka: an economic analysis. *Agric Econ Res Rev.* 2011;24(1):351–7. DOI: 10.22004/ag.econ.119408.
19. Directorate of Economics and Statistics. State of Indian Agriculture 2015–16. Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi; 2016. Available from: [https://eands.dacnet.nic.in/PDF/State\\_of\\_Indian\\_Agriculture,2015-16.pdf](https://eands.dacnet.nic.in/PDF/State_of_Indian_Agriculture,2015-16.pdf), accessed 1 August 2022.
20. Farmer couple in Periyapatna cultivates 15 varieties of ladies finger. *Times of India;* 24 May 2018. Available from: <https://timesofindia.indiatimes.com/city/mysuru/farmer-couple-in-periyapatna-cultivates-15-varieties-of-ladies-finger/articleshow/64294399.cms>, accessed 1 August 2022.
21. Prabhakara P, Pandey A K, Lal P, Suvarna V. Elimination of tobacco growing is possible: a case study from Karnataka India. *Tob Induc Dis.* 2018;16(1):397. doi: 10.18332/tid/84437.
22. Department of Agriculture, Cooperation and Farmers Welfare, Lok Sabha. Unstarred Question No. 2038. Ministry of Agriculture and Farmers Welfare, Government of India; 3 March 2020.
23. Ministry of Labour and Employment. Lok Sabha, Unstarred Question No. 4781. Government of India; 22 July 2019. Available from: <http://164.100.24.220/loksabhaquestions/annex/171/AU4781.pdf>, accessed 1 August 2022.
24. Press Information Bureau. 3620 Beedi Workers Trained Under the Skill Development Programme. Ministry of Labour and Employment, Government of India; 22 July 2019. Available from: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1579735>, accessed 1 August 2022.

## 7.6: Legal challenges

### History of tobacco control litigation in India

India's initial efforts to deal with the massive health risks posed by tobacco use started with the Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975, followed by the enactment of the Prohibition of Smoking and Protections on Non-Smokers Health Act by several states and Union Territories. In the wake of international consensus on the need to reduce death and disease caused by the growing tobacco epidemic, the GoI introduced the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA). The Act prohibits smoking in public places, the direct and indirect advertisement of tobacco products, the sale of tobacco products to and by minors and near educational institutions, and also makes the display of 85% PHWs on all tobacco packs mandatory.

The Indian judiciary has played a significant role in supporting the regulation of tobacco use and trade. In 1997, the Supreme Court upheld the GoI notification imposing a total prohibition on the use of tobacco in the preparation of tooth powder and toothpaste, under the Drugs and Cosmetics Act, 1940.<sup>1</sup> In a public interest litigation (PIL) in 2001, the Supreme Court held that smoking in public places is in violation of a non-smoker's fundamental right to life, guaranteed under Article 21 of the Constitution of India. It directed the Union of India, states and Union Territories to take effective steps to ensure that smoking is prohibited in public places.<sup>2</sup> The Apex Court upheld the Central Government's initiatives to ban *gutkha* and *paan masala* (containing tobacco and nicotine) in the country.<sup>3</sup> It is only pursuant to the orders and

directions of the Supreme Court from time to time that the Rules, a form of subordinate legislation notified under COTPA, have been implemented. The Rules pertain to smoke-free public places (2008), PHWs on tobacco packs (2008 and 2018), the regulation of the depiction of tobacco products and their use in films and television (2009), and the regulation of advertisements of tobacco products at the PoS.<sup>4</sup>

### Role of civil society in aiding government to counter challenges by tobacco industry

The civil society has contributed extensively by filing PILs when the implementation of a tobacco control law or policy has been either weak, delayed or deferred indefinitely.<sup>5</sup> It has also played a constructive role by defending the government's tobacco control laws and policies against challenges, both at the national and sub-national levels. The interventions by CSOs and arguments from the public health perspective, backed by scientific evidence, have resulted in passing of appropriate orders for the implementation of tobacco control laws.<sup>6</sup>

A PIL filed in the Himachal Pradesh High Court<sup>7</sup> led PHWs to be notified and subsequent Supreme Court directions<sup>8</sup> resulted in their implementation. An increase from 40% to 85% in PHWs in 2014 was followed by massive litigation across forums and implemented with the intervention of Rajasthan High Court and finally by a Supreme Court order<sup>9</sup> in litigation initiated by civil society, for continuing implementation of the larger health warnings in the country. PIL has also been initiated for implementation of plain packaging in India.<sup>10</sup> PILs have led the industry to withdraw advertisements and alter promotional campaigns that violate provisions of COTPA.<sup>11</sup>

Courts on several occasions, taking cognizance of PILs, ordered government agencies to ensure strict implementation of the COTPA: prohibit sale of tobacco and related products to and by minors and within 100 yards of educational institutions, sensitize the youth as well as the police force, carry out comprehensive inspections to ensure enforcement and take action against institutions for non-compliance.<sup>12</sup>

In Rajasthan a PIL resulted in banning the use of plastic sachets to pack *gutkha* and *paan masala*,<sup>13</sup> while another in Himachal Pradesh got directions for stringent enforcement of *gutkha* ban.<sup>14</sup> Courts have ordered governments to refrain from participating in and extending financial support to tobacco promotion events and also instructed the government to enact a policy to prevent tobacco industry interference (TII) in government decision-making.<sup>15</sup>

## Specific legislation and challenges

As mentioned earlier, the Supreme Court upheld the ban on the use of tobacco in the manufacture of toothpastes/tooth powders in 1997. However, it has been widely reported that the ban is frequently violated, especially in the case of *gul*. The Food Safety and Standards (Prohibition and Restrictions on Sales) Regulations, notified by the FSSAI in 2011, incorporated a key provision that prohibited the use of tobacco and nicotine as ingredients in any food item. This resulted in a ban on *gutkha* and other flavoured tobacco products with food additives. However, manufacturers continue to violate the ban even after the Supreme Court judgment and FSSAI notification.

The revised smoke-free rules, notified in 2008, were challenged by the industry in the Delhi High Court and other High Courts. However, as a result of the government's intervention, all these cases pending before different high courts were clubbed together and brought before the Apex Court through a transfer petition. Through an interim order, the Supreme Court paved the way

for the implementation of the smoke-free rules from 2 October 2008.

Similar challenges were faced in the implementation of Section 5 of COTPA, with the Bombay High Court staying the regulation related to advertising boards at the PoS. The stay continued for almost eight years due to strong opposition from the tobacco industry. The lackadaisical approach of the government advocates contributed to the initial stay order, as well as the delays in hearing. Finally, the Supreme Court vacated the stay in 2013, due to intervention of civil society.

The implementation of Section 6 of COTPA was challenged in various High Court; however, the courts did not entertain the challenges. Section 7 of COTPA, relating to PHWs, has remained a key point of contention for the tobacco industry. Several litigations were filed across the country that were transferred to the Supreme Court, which finally allowed the provision on PHWs to take effect from 31 May 2009. The Supreme Court stayed the Karnataka High Court's order<sup>16</sup> quashing the 2014 regulation that PHWs should cover 85% of the packaging space of tobacco products and packages.

## Other challenges

### World Health Organization Framework Convention on Tobacco Control

In a petition filed before the Delhi High Court, the Federation of All India Farmer Associations (FAIFA) sought to participate in the seventh session of the Conference of Parties in November 2016, after its application was rejected by the WHO FCTC Secretariat on the ground of conflict of interest. The FAIFA subsequently challenged the veracity and validity of the WHO FCTC and the stipulations made therein, arguing that the provisions of the Convention were *ultra vires* the domestic law and the Constitution of India. The objection was mainly to Article 17 of the FCTC (Parties to promote economically viable

alternative for tobacco workers, growers and sellers) and the circular issued by the Tobacco Board for the reduction of the size of the tobacco crop in Karnataka.<sup>17</sup> The case is still pending before the High Court of Delhi.

### **Use of Indian Penal Code to enforce a state ban on smokeless tobacco**

To enforce the state ban on SLT under the Food Safety and Standards Act (FSSA), 2006, the state of Maharashtra registered first information reports against offenders under Sections 188, 272, 273 and 328 of the Indian Penal Code, for offences punishable under Sections 26 and 30 of the FSSA 2006. The respondents filed a petition in the High Court for quashing of the criminal proceedings. The High Court quashed the criminal proceedings and declared that the food safety officers could proceed against the respondents only under the provisions of the FSSA. The case went up to the Supreme Court, which upheld the state's action and observed that there is no bar to the trial or conviction of an offender under two different enactments; there is a bar only to punishing an offender twice for the same offence. Thus, there is no bar to the prosecution of persons under the IPC where the offences committed by them are penal and cognizable offences, even if the order is issued under the FSSA.<sup>18</sup>

### **Ban on e-cigarettes**

On the basis of a direction of the Punjab and Haryana High Courts against nicotine use in 2007,<sup>19</sup> the state of Punjab, followed by other states, declared e-cigarettes an unapproved drug and banned their manufacture, distribution and sale. Further, in a PIL for the regulation of e-cigarettes, the Delhi High Court directed the Central Government to fix a time frame to put in place a regulatory measure for e-cigarettes.<sup>20</sup> The Central Government, in 2018, issued an advisory for a complete ban on e-cigarettes (including online sale). This advisory was challenged by the industry resulting in a stay on the enforcement of the order issued for implementation of advisory.<sup>21</sup>

In 2019, the Government of India promulgated an ordinance to ban e-cigarettes.<sup>22</sup> This was challenged by the industry in the Calcutta High Court. However, the industry did not get any relief and subsequently, Parliament enacted the law banning e-cigarettes in India.<sup>23</sup>

### **Industry tactics**

Multiple litigations against tobacco control laws is a part of the tactics used by the tobacco industry worldwide to stall the implementation of tobacco control measures. Defending multiple suits across the country places a strain on the state's limited human and financial resources. By the time the matter reaches the Apex Court much valuable time is lost, for example, the laws on PHWs covering 40% and 85% of tobacco packages were effectively implemented only after years of litigation. Sometimes the lackadaisical approach or change of government counsels also helps the industry to obtain stays on the implementation of laws.<sup>24</sup>

Forum shopping is another tactic that the industry frequently adopts, for instance despite the Supreme Court hearing all the appeals related to PHWs, the new images of PHWs were challenged by the same petitioner, before a High Court.<sup>25</sup> Similarly, multiple cases related to e-cigarettes were filed simply to delay the implementation of the ban. When the Central Government issued an advisory to the states and Union Territories to ban e-cigarettes in August 2018, the advisory and implementation orders were challenged before the Delhi High Court.<sup>26</sup> After e-cigarettes were banned through an ordinance issued in September 2019, Plume Vapours and another e-cigarettes importer challenged the ban before the Calcutta High Court. During the hearing of the case, aptly called a "proxy case" for an e-cigarette giant company, officials of the giant global tobacco company sat beside the founder of Plume. Both challenges sought an interim stay on the e-cigarettes ban, which was denied by the Court.<sup>27</sup>

## Conclusion

The tobacco industry orchestrates multiple legal challenges in varied forums (Supreme Court, High Courts, and even District Courts) against various tobacco control measures as a part of its standard interference tactics. Conflicting laws and orders are antithetical to public health

goals as any ambiguity, whether legal or judicial, provides an opportunity to the tobacco industry to challenge the laws/orders to serve their commercial interest. The implementation of COTPA 2003 and other tobacco control laws has been largely supported by the judiciary and a spirited civil society.

## Key messages

- PILs have helped a lot in promoting tobacco control initiatives in India.
- The tobacco industry has been using litigation to derail, delay and dilute tobacco control laws.
- The legal challenges from the industry have been strongly countered by the government and a spirited civil society.
- There is a felt need to set up a strong legal mechanism dedicated to countering tobacco industry challenges in various courts.
- The enforcement of court decisions on tobacco control laws remains a challenge and needs further strengthening.
- Court decisions favouring tobacco control measures should be widely publicised among all stakeholders to promote compliance.

## REFERENCES

1. Laxmikant Vs Union of India and Others (1997) 4 SCC 739.
2. Murli S. Deora Vs Union of India and Ors, (2001) 8 SCC 765.
3. Union of India Vs Central Arecanut Markg. Co-Op. & Ors (TC No. 1 of 2010); Ankur Gutka Vs Indian Asthma Care Society & Ors. (SLP No.16308 of 2007).
4. Union of India Vs ITC Ltd., Etc. (TP No. 28322 of 2008); Union of India Vs Mahesh Bhatt, SLP(C) No. 8429-8431 of 2009; Health for Million Vs. Union of India & Ors. (Civil Appeal Nos. 5912-5913 of 2013); Health for Millions Vs Union of India and Ors. (Writ Petition (Civil) No. 549 of 2008); Cancer Patients Aids Association Vs Union of India and Ors. (Civil Appeal No. 8438 of 2018).
5. Indian Asthma Care Society & Anr. Vs State of Rajasthan & Ors. (Writ Petition No.1966/2003); Health for Million Vs Union of India & Ors. (Civil Appeal Nos. 5912-5913 of 2013); Health for Millions Vs Union of India and Ors. (Writ Petition (Civil) No. 549 of 2008).
6. Union of India Vs ITC Ltd., Etc. (TP No. 28322 of 2008) Union of India Vs Mahesh Bhatt, (SLP(C) No. 8429-8431 of 2009) Karnataka Beedi Industry Association & Anr. (Writ Petition Nos.53876-53877/2015).
7. Ms Ruma Kaushik Vs Union of India. CWP No 1223/2004; [High Court of Himachal Pradesh].
8. Health for Millions Trust Vs Union of India and Others, Writ Petition (Civil) 549 of 2008 [Supreme Court of India].
9. Rahul Joshi Vs Union of India & Ors W. P. No. 8680/2015 [Rajasthan High Court]. Cancer Patients Aid Association Vs Union of India & Ors. (Civil Appeal No.8438/2018) [Supreme Court of India].
10. Umesh Narain Sharma Vs Union of India (W.P. 134/2016) [Supreme Court of India]; Love Care Foundation Vs Union of India & Ors., Writ Petition No. 1078 (M/B) of 2013 [Allahabad High Court].
11. Faith Foundation Vs State of Gujarat; R/Writ Petition (PIL) NO. 173 of 2017 [High Court of Gujarat]; Health for Millions Vs Union of India & Others Civil appeal no. 5912-5913/2013 [Supreme Court of India]; Hemant Goswami Vs Godfrey Philips of India. CWP No. 3131/2005 [Bombay High Court]; Amarsinh Z Choudhari Vs State of Gujarat. Special Civil Application No. 4848 of 2009 [High Court of Gujarat].



12. J&K Voluntary Health & Dev. Assoc. Vs State & Ors. OWP (PIL) No. 406/2010 [Jammu and Kashmir High Court]; World Lung Foundation South Asia Vs Ministry of Health and Family Welfare W.P.(C) 7540/2010 [Delhi High Court]; Cancer Patients Aid Association Vs State of Karnataka & Anr. W.P. 17958/2009 [Karnataka High Court]; Kerala Voluntary Health Services Vs Union of India, Writ Petition 38513 of 2010 [Kerala High Court]; Dinar Yashwant Sohoni Vs The State of Maharashtra & Ors. P.I.L. No. 98 of 2013 [Bombay High Court].
13. Indian Asthma Care Society & Anr. Vs State of Rajasthan & Ors. CWP No. 1966/2003 [The High Court of Rajasthan].
14. Suo moto/Court On Its Own Motion vs State of Himachal Pradesh & Others. CWP No. 75 of 2018 [The High Court of Himachal Pradesh]; J ANBAZHAGAN Vs. Union of India & Ors. W.P. (c) 19335 of 2017 [Madras High Court].
15. The Institute of Public Health Vs The State Government of Karnataka and Ors. W.P. No. 27692/2010 (The High Court of Karnataka). See also: Sumitra Hooda Pednekar Vs Life Insurance Corporation & Ors. Public Interest Litigation Lodging No. 46 of 2017 (The High Court of Bombay); Cyril Alexander Vs UOI & Ors, Writ Petition No. 9955/2014 [Madras High Court].
16. Cancer Patients Aid Association Vs Union of India & Ors. (Civil Appeal No.8438/2018).
17. Federation of All India Farmer Association & Ors. Vs Union of India & Ors. (W.P.(C) No. 9655/2016).
18. The State of Maharashtra & Anr. Vs Sayyed Hassan Sayyed Subhan & Ors. (Criminal Appeal No.1195 of 2018).
19. Burning Brain Society Vs Union of India & Ors. (C.W.P No.14597 of 2007).
20. Seema Sehgal Vs. UOI & Ors., W.P. No. 10624/2017.
21. Litejoy International Pvt Ltd Vs Union of India & Ors; M/S Focus Brand Trading (India) Pvt Ltd & Anr Vs Directorate General of Health Services Union of India & Ors.
22. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Ordinance, 2019.
23. Plume Vapour Private Ltd. & Anr. Vs UOI (AST 40 of 2019) and M/s Woke Vapours Pvt. Ltd. Vs UOI & Others (AST 41 of 2019).
24. Health for Million Vs. Union of India & Ors. (Civil Appeal Nos. 5912-5913 of 2013).
25. Godfrey Phillips India Limited vs. Union of India, W.P.Nos.25903/2018 and W.P.No.26091/2018, High Court of Karnataka (2018). GPI argued that 85% pack warning Rules were unconstitutional, arbitrary, illegal and would require extra expenditure.
26. Litejoy International Pvt Ltd v. Union of India, W.P.(C) 2351/2019, High Court of Delhi at New Delhi (2019) W.P.(C) 2351/2019 Delhi Court observed that E-cigarettes are not therapeutic devices and do not have any medicinal value, therefore do not fall within the definition of a 'drug', as defined under section 3(b) of the Drugs and Cosmetics Act 1940.
27. Plume Vapour Private Ltd. & Anr. -Vs Union of India (A.S.T 40 of 2019) heard with M/s Woke Vapors Pvt. Ltd. -Vs Union of India & Ors. (A.S.T 41 of 2019); <https://www.thebureauinvestigates.com/stories/2019-11-21/juul-spreads-over-the-world-as-home-market-collapses-in-scandal>; <https://www.livemint.com/news/india/e-cigarettes-ban-govt-faces-legal-challenges-in-kolkata-high-court-1569506165654.html>.



## 7.7: National Tobacco Testing Laboratories

India has high prevalence of both smoking and smokeless tobacco (SLT) use with a high disparity in demographics and socioeconomic status.<sup>1</sup> The national and regional level control programmes have demonstrated partial success in bringing down the tobacco usage;<sup>1</sup> however, there is a need for scaling up and strengthening these programmes by implementing additional innovative and scientific evidence-based strategies to control tobacco usage.<sup>2</sup>

### **World Health Organization Framework Convention on Tobacco Control (Articles 9 and 10) and European Union recommendations on science-based tobacco control**

Strengthening of tobacco control is one of the global development targets of the 2030 Agenda for Sustainable Development.<sup>3</sup> This cause has been supported by the WHO through the FCTC. Articles 9 and 10 of FCTC address the regulation of the contents and emissions of tobacco products and tobacco product disclosure. The global progress in these policy domains has been slow and has often been hindered by tobacco industry interference (TII)<sup>4</sup>. The lack of formal guidelines, the complexity of the existing ones, insufficient capacity for testing the contents of tobacco products and financial constraints<sup>5</sup> are among the reasons for the slow progress in this component of tobacco control in India.

Product testing, regulation and disclosure are important components of tobacco control policy. The European Union has demonstrated the scientific way of implementing regulations: The Scientific Committee for Emerging and Newly Identified Health Risks (SCENIHR) has identified the additives in tobacco products that

should be put on a priority list. Through Article 6(1) of Directive 2014/40/EU, the European Commission has laid down the reporting obligations for the additives enumerated in the list. Further, it requires manufacturers and importers to carry out comprehensive studies on the additives contained in their products, that have been included in the priority list.<sup>6</sup>

### **Requirements under COTPA 2003, other relevant laws and the National Tobacco Control Programme**

The COTPA 2003, a comprehensive national tobacco control law, came into force in 2004<sup>7</sup> and the GoI launched the National Tobacco Control Programme (NTCP) in 2007–2008 to strengthen the provisions and policies mandated under the COTPA and the WHO FCTC (Table 7.4).<sup>8</sup>

Indian law is strong enough to comply with most of the provisions of the FCTC, but there is a need to bolster and scale up the country's research capacity in the area of testing of tobacco products through rules and regulations.

### **Nature of tobacco products, rigour of laboratory evidence and generation of scientific guidelines for regulation**

Tobacco products in all forms are toxic, all of them encourage use and addiction, and all have the potential to cause harm. Other than nicotine, which is a naturally occurring compound in tobacco and the primary addictive component of tobacco products, tobacco products have chemical constituents that are toxic as well as carcinogenic.<sup>10</sup> Numerous ingredients and additives that are added during manufacturing

**Table 7.4: Provisions of COTPA related to product testing and their alignment with FCTC<sup>9</sup>**

Provisions	FCTC Article	COTPA
Tobacco content and product regulation	Article 9: Regulation of contents of tobacco products by testing and measuring the contents and emissions	Section 11 requires the Central Government to grant recognition to laboratories for testing the nicotine and tar content of tobacco products
Requirements for content disclosure	Article 10: Tobacco manufacturers and importers required to disclose information on the contents, toxic constituents and emissions of their products for regulation of tobacco product disclosures	Section 10 requires the Central Government to prescribe a specific warning or indication of nicotine and tar content, including the height of each letter or figure or both used in such warning or indication Section 7(5) of COTPA prohibits both direct and indirect production and supply of any tobacco product unless it has a specific warning or indication of the nicotine and tar content, along with the maximum permissible limits thereof

can further contribute to toxicity or alter the chemistry of the tobacco product.<sup>11–14</sup> Therefore, regulation of tobacco products is necessary to address the health consequences of the use of such products.

Scientific rigour forms the basis of the scientists' confidence in laboratory evidence and of the public's trust in science.<sup>15</sup> The regulatory laws for tobacco industry are currently facing a challenge arising from adverse scrutiny of scientific evidence by interested parties along with minimal or no advice from the scientific community.<sup>16</sup>

To exert their regulatory authority, governmental agencies need unbiased, evidence-based, laboratory-generated scientific data on the impact of tobacco and other nicotine-containing products on human health. These include banning of flavours and additives, limiting nicotine content, and reducing or eliminating toxicants.

It is necessary to adopt a comprehensive, interdisciplinary approach towards the reduction of tobacco use owing to its negative health effects. This approach includes conducting research to provide scientific evidence to guide policy, establish regulations, educate consumers on the hazards of using tobacco products and make decisions on the introduction of new products in the market.

## National Tobacco Testing Laboratories

India, having ratified the WHO FCTC, is fully committed to the implementation of Articles 9 and 10 of the treaty. The implementation of Section 11 of the COTPA requires the MoHFW to set up and notify tobacco testing laboratories. In September 2019, the Central Government recognized three laboratories across India for testing tobacco and tobacco products (notified vide GSR 633 (E) dated 5 September 2019). These National Tobacco Testing Laboratories (NTTLs) are located in the National Institute of Cancer Prevention and Research, Noida, the Central Drug Testing Laboratory, Mumbai and the Regional Drug Testing Laboratory, Guwahati. The Apex NTTL is located at the National Institute of Cancer Prevention and Research.<sup>17</sup> The National Institute of Mental Health and Neuro Sciences (NIMHANS) is also functioning as a tobacco testing lab.

The analysis of tobacco and tobacco products is complicated, and requires a sound knowledge of advanced separation and analytical techniques. Consequently, the laboratories' requirements are costly and they rely heavily on expert human resources. A framework has been prepared for the initiation and seamless operation of the

NTTLs. The framework focuses on the adoption of standard testing procedures and quality assurance steps for accurate and precise data generation. For the initial period, provision has been made for a skeletal contractual staff, which will continue to operate till the government sanctions the regular scientific staff.

### Vision of National Tobacco Testing Laboratories

The NTTLs are envisioned as accredited world-class laboratories engaged in the provision of analytical facilities for tobacco and tobacco products to generate scientific information and advisories for public health.

### Mission of National Tobacco Testing Laboratories

The NTTLs shall:<sup>17</sup>

- Undertake analysis of all tobacco products with specialized equipment and experimental facilities, using scientific methods;
- Participate in the generation of global tobacco testing protocols, round robin tests (interlaboratory test performed independently several times), validation of methods and

development of analytical methods for testing of tobacco products;

- Conduct relevant research on the development of new technologies for tobacco analysis and on the safe disposal of tobacco-related waste;
- Provide scientific analytical information to the NTCP; and
- Share information, knowledge and technical expertise with others: WHO or bilaterally with any interested country, as approved by the competent authority.

### Identification of harmful and potentially harmful substances in tobacco products

Cigarettes are “highly-engineered consumer products” whose production involves steps such as the handling of tobacco to the use of additives tailored to satisfy the user.<sup>18</sup> Thus, there is a need to bring tobacco products under the type of regulatory framework applicable to drugs and to find scientific evidence that could be used as a basis for regulating tobacco products (Box 7.15).

#### BOX 7.15: Case study: Ban on *paan masala* in Bihar after testing of tobacco

*Paan masala* falls under the category of food items and hence, the fact that it contains magnesium carbonate and nicotine is violative of clause 3.17 of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011. In 2012, the Bihar State Food Safety Commissioner had ordered that *paan masala* should be tested for nicotine content, after a Central Government report presented in the Supreme Court had confirmed the presence of nicotine in the product. Samples of different brands of *paan masala* were tested in the state food testing laboratory and were found to contain magnesium carbonate. On the basis of this report, the state banned the manufacture, storage, transportation and sale of 15 brands of *paan masala*, i.e. *Rajnigandha*, *Rajniwas*, *Supreme*, *Pan Parag*, *Bahar*, *Bahubali*, *Rajshree*, *Raunak*, *Signature*, *Sir Gold*, *Shikhar*, *Vimal*, *Kamla Pasand*, *Pashan* and *Madhu*. Samples of several brands of *paan masala* were later sent to the NTTL, Noida. The NTTL confirmed the presence of nicotine in the popular brands and levels ranged from 0.042% to 2.26%.<sup>21</sup> The state government has urged the Central Government to direct the FSSAI to cancel the licences of 15 *paan masala* brands, the samples of which were found to contain magnesium carbonate and nicotine by the NTTL.

It is necessary to identify the products that need to be regulated and consider these as a testing priority. This reasoning can be further extended to the selection of the chemical substances in the product that need to be measured. Any chemical or chemical compound in a tobacco product or in tobacco smoke: (i) that is or is potentially inhaled, ingested or absorbed into the body; and (ii) that causes or has the potential to cause direct or

indirect harm to users or non-users of tobacco products can be brought under the purview of regulation. A few countries have developed list of potentially harmful chemicals present in tobacco products which can help in prioritizing the analytical regime. The WHO Study Group on Tobacco Product Regulation (TobReg) has evaluated and recommended some analytes and recommended that they be monitored and reduced (Table 7.5).

**Table 7.5: Emissions of combusted tobacco products considered and evaluated for inclusion in lists of priorities for testing, reporting and regulation<sup>20</sup>**

S.No.	Toxicants evaluated by TobReg	Toxicants selected for testing and measuring	Expanded priority list for monitoring and regulation	Proposed for mandatory reduction
<b>Alkaloids</b>				
1	Nicotine	Yes	Yes	-
<b>Aldehydes</b>				
2	Acetaldehyde	Yes	Yes	Yes
3	Acrolein	Yes	Yes	Yes
4	Formaldehyde	Yes	Yes	Yes
5	Crotonaldehyde	-	Yes	-
6	Propionaldehyde	-	Yes	-
7	Butyraldehyde	-	Yes	-
<b>Aromatic amines</b>				
8	3-aminobiphenyl	-	Yes	-
9	4-aminobiphenyl	-	Yes	-
10	Aminonaphthalene	-	Yes	-
11	2-aminonaphthalene	-		-
<b>Hydrocarbons</b>				
12	Benzene	Yes	Yes	Yes
13	1,3-butadiene	Yes	Yes	Yes
14	Isoprene	-	Yes	-
15	Styrene	-	-	-
16	Toluene	-	Yes	-
<b>PAHs</b>				
17	Benzo[a]pyrene	Yes	Yes	Yes
<b>TSNAs</b>				
18	NNK	Yes	Yes	Yes
19	NNN	Yes	Yes	Yes

S.No.	Toxicants evaluated by TobReg	Toxicants selected for testing and measuring	Expanded priority list for monitoring and regulation	Proposed for mandatory reduction
20	NAB	-	Yes	-
21	NAT	-	Yes	-
<b>Phenols</b>				
22	Catechol	-	Yes	-
23	m- and p-cresol	-	Yes	-
24	o-cresol	-	Yes	-
25	Phenol	-	Yes	-
26	Hydroquinone	-	Yes	-
27	Resorcinol	-	Yes	-
<b>Other organic compounds</b>				
28	Acetone	-	Yes	-
29	Acrylonitrile	-	Yes	-
30	Quinoline	-	Yes	-
31	Pyridine	-	Yes	-
<b>Metals and metalloids</b>				
32	Arsenic	-	-	-
33	Cadmium	-	Yes	-
34	Chromium	-	-	-
35	Lead	-	Yes	-
36	Mercury	-	Yes	-
37	Nickel	-	-	-
38	Selenium	-	-	-
<b>Other constituents</b>				
39	Ammonia	-	Yes	-
40	CO	Yes	Yes	Yes
41	Hydrogen cyanide	-	Yes	-
42	Nitrogen oxides	-	Yes	-
CO: carbon monoxide; NAB: N'-nitrosoanabasine; NAT: N'-nitrosoanatabine; NNK: 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone; NNN: N'-nitrosornicotine; PAH: polycyclic aromatic hydrocarbon; TSNA: tobacco-specific N-nitrosamine				

## Summary and next steps

A strategic approach is required to address the complex and dynamic nature of the regulation of tobacco products. The regional regulatory agencies should first identify major public health concerns on the basis of the prevalence of the use of tobacco products specific to their

region. After identification and prioritization of chemicals which are of potential harm by the regional regulatory authority, the NTTLs would develop an analytical regimen specific to the regional tobacco products, flavours and additives. The NTTLs would work closely with the regional regulatory authority. After the standardization and validation/verification of the

testing protocols at the NTTLs, the laboratories would perform the testing on the samples collected by/through regulatory authority and notify the results to the regional regulatory authority. The scientifically derived evidence

from the laboratory can address the gaps and strengthen the policy. This would not only help to intensify the measures for the regulation of tobacco products, but also ensure adherence to quality of tobacco products.

## Key messages

- Other than nicotine, tobacco products contain numerous chemicals and additives which are toxic as well as carcinogenic, and can further contribute to toxicity or alter the chemistry of the tobacco product.
- The testing and regulation of tobacco products and the disclosure of tobacco components are crucial elements of a tobacco control policy. Therefore, it is imperative to have functional testing laboratories, which would ensure that tobacco products adhere to quality standards.
- The use of laboratory-generated scientific data would strengthen measures for the regulation of tobacco products. These measures include banning flavours and additives, limiting nicotine levels, and reducing or eliminating toxicants.

## REFERENCES

1. Singh PK, Yadav A, Singh L, Singh S, Mehrotra R. Social determinants of dual tobacco use in India: an analysis based on the two rounds of global adult tobacco survey. *Prev Med Rep.* 2020;18:101073. doi: 10.1016/j.pmedr.2020.101073.
2. Yadav A, Singh PK, Yadav N, Kaushik R, Chandan K, Chandra A, et al. Smokeless tobacco control in India: policy review and lessons for high-burden countries. *BMJ Glob Health.* 2020;5(7):e002367. doi: 10.1136/bmjgh-2020-002367.
3. United Nations. Transforming our world: the 2030 agenda for sustainable development. United Nations; 2015. Available from: <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>, accessed 9 July 2022.
4. Savell E, Gilmore AB, Fooks G. How does the tobacco industry attempt to influence marketing regulations? A systematic review. *PLoS One.* 2014;9(2):e87389. doi: 10.1371/journal.pone.0087389.
5. Chung-Hall J, Craig L, Gravely S, Sansone N, Fong GT. Impact of the WHO FCTC over the first decade: a global evidence review prepared for the Impact Assessment Expert Group. *Tob Control.* 2019;28(Suppl 2):s119–s128. Doi: 10.1136/tobaccocontrol-2018-054389.
6. Directive 2014/40/EU of the European Parliament and of the Council of 3 April 2014 on the approximation of the laws, regulations and administrative provisions of the Member States concerning the manufacture, presentation and sale of tobacco and related products and repealing Directive 2001/37/EC. *Official Journal of the European Union*; 2014. Available from: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0040>, accessed 9 July 2022.
7. Ministry of Law and Justice. The Cigarette and Other Tobacco Products (Prohibition of advertisement and regulation of trade and commerce, production, supply, and distribution) Act 2003. *The Gazette of India*; 2003. Available from: <https://legislative.gov.in/sites/default/files/A2003-34.pdf>, accessed 9 July 2022.
8. National Tobacco Control Cell. Operational Guidelines, National Tobacco Control Programme, National Tobacco Control Cell, Ministry of Health and Family Welfare, Government of India; 2015. Available from: <https://ntcp.nhp.gov.in/assets/document/Guideline-manuals/Operational-Guidelines-National-Tobacco-Control-Programme.pdf>
9. Reddy KS, Yadav A, Arora M. A comparative analysis of WHO Framework Convention on Tobacco Control and Indian Law regulating Tobacco. *Public Health Foundation of India*; 2008. Available from: <http://rajswasthya.nic.in/Tobacco%20Control%20Resource%20&%20IEC%20Materials%20new/A%20comparative%20analysis%20of%20WHO%20FCTC%20and%20the%20Indian%20>



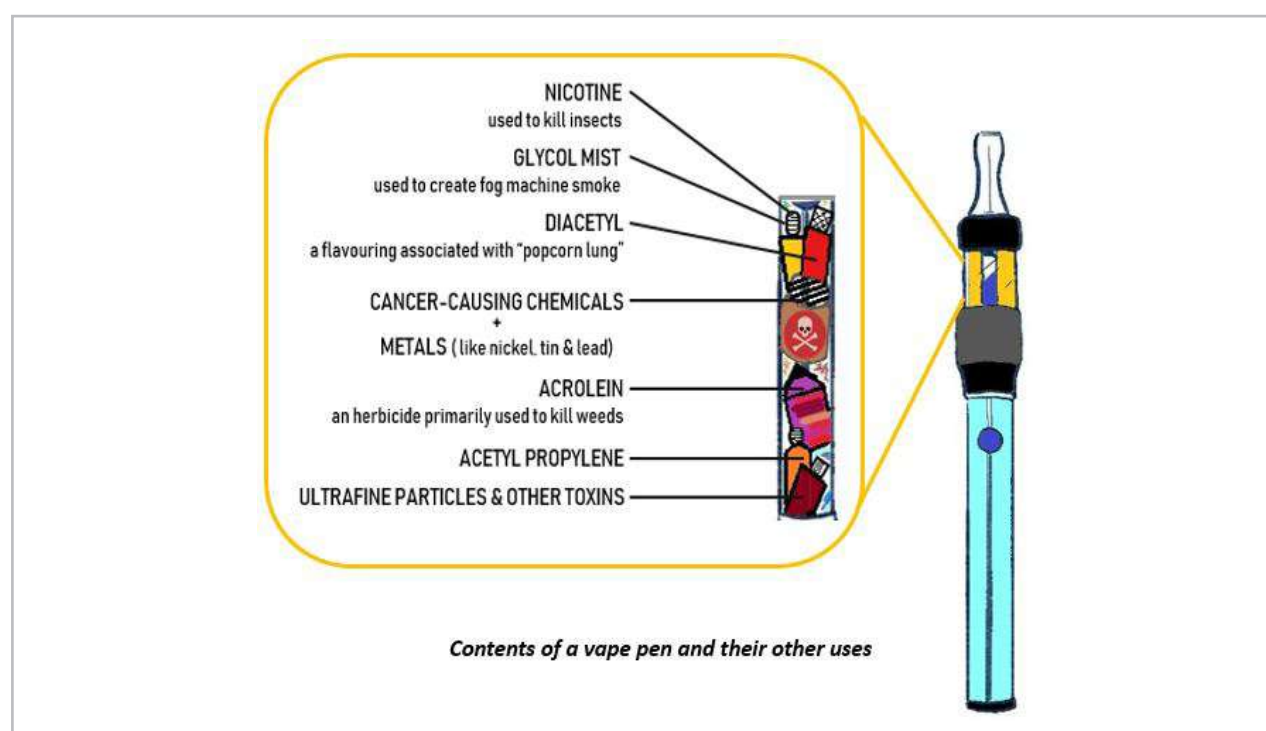
- laws%20regulating%20tobacco.pdf, accessed 9 July 2022.
10. Benowitz NL, Hukkanen J, Jacob P 3rd. Nicotine chemistry, metabolism, kinetics and biomarkers. *Handb Exp Pharmacol*. 2009;(192):29–60. doi: 10.1007/978-3-540-69248-5\_2.
  11. Hecht SS. Research opportunities related to establishing standards for tobacco products under the Family Smoking Prevention and Tobacco Control Act. *Nicotine Tob Res*. 2012;14(1):18–28. doi: 10.1093/ntr/ntq216.
  12. Hoffmann D, Hoffmann I, El-Bayoumy K. The less harmful cigarette: a controversial issue. a tribute to Ernst L. Wynder. *Chem Res Toxicol*. 2001;14(7):767–90. doi: 10.1021/tx000260u.
  13. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Some non-heterocyclic polycyclic aromatic hydrocarbons and some related exposures. *IARC Monogr Eval Carcinog Risks Hum*. 2010;92:1–853. Available from: <https://pubmed.ncbi.nlm.nih.gov/21141735/>, accessed 9 July 2022.
  14. Wigand JS. Additives, cigarette design and tobacco product regulation. Kobe, Japan: World Health Organization, Tobacco Free Initiative, Tobacco Product Regulation Group; 28 June–2 July 2006. Available from: <https://www.jeffreywigand.com/WHOFinal.pdf>, accessed 9 July 2022.
  15. Hofseth LJ. Getting rigorous with scientific rigor. *Carcinogenesis*. 2018;39(1):21–25. doi: 10.1093/carcin/bgx085.
  16. Wagner W. The perils of relying on interested parties to evaluate scientific quality. *Am J Public Health*. 2005;95 Suppl 1:S99–106. doi: 10.2105/AJPH.2004.044792.
  17. National Tobacco Control Programme. Operational Guidelines for National Tobacco Testing Laboratories. Ministry of Health and Family Welfare, Government of India; 2019. Available from: <https://ntcp.nhp.gov.in/assets/document/Operational-Guidelines-for-NTTL.pdf>, accessed 9 July 2022.
  18. WHO Tobacco Free Initiative and Advancing Knowledge on Tobacco Products (2000: Oslo, Norway). Advancing knowledge on regulating tobacco products: monograph. World Health Organization; 2001. Available from: <https://apps.who.int/iris/handle/10665/66741>, accessed 9 July 2022.
  19. World Health Organization. WHO study group on tobacco product regulation: report on the scientific basis of tobacco product regulation: seventh report of a WHO study group. World Health Organization; 2019. License: CC BY-NC-SA 3.0 IGO. Available from: <https://apps.who.int/iris/handle/10665/329445>, accessed 9 July 2022.
  20. Tobacco product regulation: basic handbook. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/tobacco-product-regulation-basic-handbook>, accessed 9 July 2022.
  21. Rumi F. Centre urged to ban 15 pan masala brands. *Times of India*; 14 Oct 2019. Available from: <https://timesofindia.indiatimes.com/city/patna/centre-urged-to-ban-15-pan-masala-brands/articleshow/71569709.cms>, accessed 9 July 2022.

## 7.8: Electronic nicotine delivery systems

Electronic nicotine delivery systems (ENDS) are devices that are used to inhale the vapours of a solution that contains nicotine, propylene glycol, with or without glycerol, and flavouring agents.<sup>1</sup> The solution and the emissions also contain toxic chemicals that can cause harm to the body<sup>2</sup> and discussed in detail in chapter 4.9. Metals such as chromium, nickel and lead have been found in aerosols of some products, with concentrations that are higher than in tobacco cigarettes.<sup>3</sup>

E-cigarettes are the most common type of ENDS devices.<sup>2</sup> *E-hookahs*, vape pens, vapes and tank systems are some other ENDS devices.<sup>4</sup> Most e-cigarettes consist of three components – a cartridge, which holds the solution; a heating device; and a power source. There are various harmful constituents<sup>5</sup> present in e-cigarettes (Figure 7.10).

**Figure 7.10: Harmful substances in e-cigarettes**



Source: HRIDAY

E-cigarettes are a new product as they entered the Indian market in 2012–2013 and only 3.03% of the Indian population is aware of e-cigarettes. The GATS-2 (2016–2017) estimated the prevalence of e-cigarette use among adults in India to be 0.02% overall or 0.6% among those who are aware of e-cigarettes. Awareness among the youngest age group (15–24 years) was highest (nearly 4%) and that among the highest age group (65+ years) was lowest (0.9%).

Among those aware, the prevalence was higher in the age groups of 25–44 years (0.7%) and 65+ years (1.28%). Users were 0.54% among those aware in the 15–24 year age group.<sup>6</sup> Also, as per the GYTS (2019)<sup>7</sup> ever use of e-cigarette was 3% (boys: 3% and girls: 2%). Evidence suggests that e-cigarettes are a “gateway product” to introduce youth to smoking and to encourage relapse among past users.<sup>8</sup>

## Targeting the youth

There is increasing evidence that ENDS are marketed heavily targeting the youth and young adults through all forms of electronic and print media, social media, sporting/cultural events, sponsorship,<sup>9</sup> PoS, etc. As per the advisory issued by the MoHFW, there is sufficient research evidence to warn children and adolescents against the ENDS use and nicotine,<sup>3</sup> and various prospective as well as cross-sectional studies indicate that exposure through marketing uniquely predicts ENDS initiation among youth and young adults.<sup>10,11</sup>

One of the studies (Figure 7.11 and 7.12) conducted in 2018–2020 by HRIDAY and the WHO Country Office for India<sup>12</sup> explored the perceptions of adolescents and their parents about ENDS and assessed the availability of and access to ENDS. The study highlighted some immediate ENDS-related challenges that needed a policy response. It recommended the prohibition of PoS and online advertising; discounts and home deliveries; promotion and sponsorship of ENDS; and sale of ENDS at stationery shops and around educational institutions. It called for restrictions on vaping parlours and urged that tobacco-free educational institution (ToFEI) guidelines be updated to

include policy recommendations to build the capacity of teachers to identify ENDS devices and take appropriate action.

Another study by HRIDAY and the WHO Country Office for India (2019), conducted while the ENDS ban was being introduced, examined the use of ENDS among school-going adolescents and their intention to use ENDS in the future. In-depth interviews of key stakeholders to study ENDS-related policies and implementation

**Figure 7.12 Youth-led monitoring of point of sale for ENDS**



Source: Shrivastav et al (2018)<sup>12</sup>

**Figure 7.11: E-cigarettes displayed at convenience stores before the enforcement of the ban on ENDS; placed near chocolates and offering gift vouchers**



Source: Shrivastav et al (2018)<sup>12</sup>



challenges were conducted. The study was conducted among students (n=2037) enrolled in the grades (8, 9 and 11) in private schools in Delhi, Hyderabad and Ahmedabad. Of the students covered by the survey, 4.12% were ever ENDS users, 2.2% were current (past 30 days) users, and 6.73% said that they intended to use ENDS in the future.<sup>13</sup>

## Advertising and promotion

The harm reduction claim by the tobacco industry to promote ENDS as a safe alternative to smoking is not a new approach. It had made similar claims about filter cigarettes many decades back, but filters did not reduce the harms caused by tobacco or the incidence of lung cancer related to tobacco use.<sup>14</sup> Electronic cigarettes, with many added flavours and the perception of being safer, may become very popular and help the industry to grow and expand.<sup>15</sup> It has even popularized the term “vaping”, as opposed to smoking, to promote the perception of harm reduction. ENDS also offer a greater choice than conventional cigarettes. They come in various shapes and sizes, for example vape pens, boxes, *e-hookahs*, *hookah* pens, and e-pipes, with a vast range (approximately 7000) of flavours. The designs and flavours are created with the preferences of the youth in mind.<sup>16,17</sup>

## Prohibition of electronic nicotine delivery systems

A White Paper on ENDS, developed by the Indian Council of Medical Research (ICMR) in 2019,<sup>18</sup> presented a strong case for a ban on ENDS, stressing the risks they pose to foetal, infant and child brain development. A strong political commitment to protect women in the reproductive age group and youth helped to bring about an Ordinance and later an Act to prohibit ENDS in 2019.<sup>3</sup> Table 7.6 lists the policy and scientific developments from 2012 that led to the prohibition. To protect our youth from tobacco, since a new threat was emanating from the

Western world, a committee of multidisciplinary experts was constituted to examine the matter. This committee, and later a Task force of ICMR, suggested a ban. However the lack of an appropriate legal provision, which turned out to be the Achilles’ heel, was resolved successfully by the GoI and an Ordinance and later an Act were promulgated in 2019.

The role of the civil society in supporting the government’s efforts to prohibit ENDS production, promotion and use throughout this period (2012–2019) has been covered in detail in Chapter 10.3.

## Conclusion

The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act (2019), completely prohibits the production, manufacture, import, export, transport, sale, distribution, storage and advertisement of ENDS. The key features of the law are:

- Applicability all over India;
- Futuristic; banning not only e-cigarettes, but also heat-not-burn devices, *e-hookahs* and other similar devices that could be introduced in the coming years;
- Prohibits direct and indirect advertisement promoting use of ENDS;
- Ban on storage;
- Stringent penalties (example: violation of Section 4 attracts up to 1 year imprisonment or a fine of up to INR 1 lakh or both for first offence and up to 3 years imprisonment and a fine of up to INR 5 lakh for a subsequent offence);
- Provides direction for compliance.<sup>26</sup>

This is a step in the right direction to protect future generations from the perils of emerging nicotine products and a strong measure towards the Tobacco Endgame.

**Table 7.6: Chronology of events that led to the ENDS ban in India**

Year	Event
November 2012	The Punjab and Haryana High Court, in its order dated 05.11.2012, directed the States of Punjab and Haryana and the Union Territory of Chandigarh to constitute a permanent task force for monitoring the abuse of nicotine (CWP No. 14597 of 2007). <sup>19</sup>
September 2013	The Punjab Government imposed a ban on ENDS and filed cases under the Drugs and Cosmetics Act against violators (Circular No. Drugs (7) Pb. 2013/16988-89, (05/09/2013). <sup>20</sup>
July 2014	The MoHFW organized a roundtable discussion on the current evidence on ENDS; the global efforts in combating ENDS; and measures to control the sale, supply, import, manufacture and trade of e-cigarettes under the legislative framework. Three sub-groups were constituted. <sup>21</sup>
2014–2019	19 states and Union Territories (Punjab, Karnataka, Mizoram, Kerala, Jammu & Kashmir, Uttar Pradesh, Bihar, Maharashtra, Tamil Nadu, Jharkhand, Himachal Pradesh, Madhya Pradesh, Puducherry, Rajasthan, Meghalaya, Odisha, Gujarat, Haryana and Nagaland) imposed a ban on ENDS.
November 2016	The Conference of the Parties (COP 7) to the WHO FCTC, held in India, recommended that appropriate steps be taken by the Member States to prohibit these products. <sup>22</sup>
June 2017	Vape Expo an international exhibition on electronic devices in 2017 was not permitted by the MoHFW, as it intended to promote these products. <sup>23</sup>
September 2017	The MoHFW formed three sub-groups of experts to examine the health effects, legal steps and advocacy and public opinion measures. The legal sub-group, in its meeting on 5 September 2017 recommended banning ENDS in public interest.
June 2018	The issue of ENDS was discussed during a National Consultation held to commemorate the World No Tobacco Day. The meeting recommended that the MoHFW frame a policy to prohibit such products based on the existing scientific evidence and global best practices and accordingly send advisories to the states.
August 2018	Advisory (Vide F.No. P-16012/19/2017-TC) on ENDS, including e-cigarettes, heat-not-burn devices, vapes, <i>e-shishas</i> , e-nicotine flavoured <i>hookahs</i> and similar products was issued by the MoHFW (Box 7.16). <sup>3</sup>
May 2019	A white paper issued by the ICMR recommended a prohibition on all types of ENDS products in the country. <sup>24</sup>
September 2019	The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Ordinance, 2019 (DL-04/0007/2003-19), inter-alia banned the production, manufacture, import, export, transport, sale, distribution, storage and advertisement of electronic cigarettes. <sup>25</sup>
October 2019	The MoHFW placed the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Bill, 2019 in the public domain to elicit comments.
December 2019	Both Houses of Parliament passed the Prohibition of E-cigarettes Bill 2019 (DL(-N)04/0007/200319). Presidential Assent obtained on 5 December 2019 notified the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) ACT (PECA) 2019.



## BOX 7.16: Excerpt from an advisory by the MoHFW on ENDS (August 2018)

F. No- P-16012/19/2017-TC  
Government of India  
Ministry of Health & Family Welfare

Dated, the 28<sup>th</sup> August, 2018

### **Advisory on Electronic Nicotine Delivery Systems (ENDS) including e-Cigarettes, Heat-Not-burn devices, Vape, e-Sheesha, e-Nicotine Flavoured Hookah, and the like products**

\*\*\*\*\*

Whereas, Electronic Nicotine Delivery Systems (ENDS) are devices that heat a solution to create an aerosol, which frequently also contains flavours, usually dissolved into Propylene Glycol or/and Glycerin. Electronic cigarettes, the most common prototype, are devices that do not burn or use tobacco leaves but instead vaporise a solution, which the user then inhales. The main constituents of the solution, in addition to nicotine when nicotine is present, are propylene glycol, with or without glycerol and flavouring agents. ENDS solutions and emissions contain other chemicals, some of them considered to be toxicants. Although ENDS is generally considered a single product class, these products constitute a diverse group with potentially significant differences in the production of toxicants and mechanisms for delivery of nicotine;

*And whereas*, Electronic Nicotine Delivery System (ENDS) aerosol contains nicotine, the addictive component of tobacco products. In addition to creating dependence, nicotine can have adverse effects on the development of the foetus during pregnancy. It may contribute to cardiovascular disease to the people who use ENDS. Also, nicotine may function as a “tumour promoter” and seems to be involved in the biology of malignant diseases. Foetal and adolescent nicotine exposure may have long-term consequences for brain development, potentially leading to learning and anxiety disorders. A number of metals - including lead, chromium, and nickel, and chemicals like formaldehyde have been found in aerosols of some ENDS, with concentrations equal to or greater than traditional cigarettes, under normal experimental conditions of use. As such, the evidence is sufficient to warn children and adolescents, pregnant women, and women of reproductive age against ENDS use and nicotine;



## Key messages

- The tobacco industry has been expanding its influence over the youth through the introduction of ENDS, which have been misleadingly marketed as a healthier alternative to conventional cigarettes.
- The solutions and emissions of ENDS have harmful effects on human health.
- The industry uses social media advertisements, PoS strategies, product design characteristics and attractive flavours to promote ENDS.
- In 2019, the GoI imposed a comprehensive ban on the production, manufacture, import, export, transport, sale, distribution, storage and advertisement of ENDS.

## REFERENCES

1. World Health Organization. Electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems. Geneva: WHO; 2015. Available from: [https://www.who.int/news/item/30-03-2015-electronic-cigarettes-\(e-cigarettes\)-or-electronic-nicotine-delivery-systems](https://www.who.int/news/item/30-03-2015-electronic-cigarettes-(e-cigarettes)-or-electronic-nicotine-delivery-systems), accessed 11 July 2022.
2. World Health Organization. Electronic cigarettes (e-cigarettes) or electronic nicotine delivery systems. Available from: [https://www.who.int/news/item/25-01-2017-electronic-nicotine-delivery-systems-and-electronic-non-nicotine-delivery-systems-\(ends-ennds\)](https://www.who.int/news/item/25-01-2017-electronic-nicotine-delivery-systems-and-electronic-non-nicotine-delivery-systems-(ends-ennds))
3. Department of Revenue, Ministry of Finance. Adviosry on electronic nicotine delivery systems (ENDS) including e-Cigarettes, Heat-Not-burn devices, Vape, e-Sheesha, e-Nicotine Flavoured Hookah and the like products – reg. Ministry of Health & Family Welfare, Government of India; 2018. Available from: [http://ntcp.nhp.gov.in/assets/document/CIRCULAR-ADVISORY/Advisory-on-Electronic-Nicotine-Delivery-Systems-\(ENDS\)-and-the-like-devices-which-enable-nicotine-delivery.pdf](http://ntcp.nhp.gov.in/assets/document/CIRCULAR-ADVISORY/Advisory-on-Electronic-Nicotine-Delivery-Systems-(ENDS)-and-the-like-devices-which-enable-nicotine-delivery.pdf), accessed 11 July 2022.
4. Centers for Disease Control. About Electronic Cigarettes (E-Cigrattes). CDC. Available from: [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/about-e-cigarettes.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html), accessed 11 July 2022.
5. Marques, P, Piqueras, L. & Sanz, MJ. An updated overview of e-cigarette impact on human health. *Respir Res* 22, 151 (2021). <https://doi.org/10.1186/s12931-021-01737-5>
6. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey 2 India 2016–17. 2018. Available from: <https://tiss.edu/view/6/mumbai-campus/school-of-health-systems-studies/global-adult-tobacco-survey-2-india-2016-17/outcomespublications-3/>, accessed 11 July 2022.
7. National Tobacco Control Programme. Global Youth Tobacco Survey, Fact Sheet, India 2019. Ministry of Health & Family Welfare, Government of India; 2018. Available from: [https://ntcp.nhp.gov.in/assets/document/National\\_Fact\\_Sheet\\_of\\_fourth\\_round\\_of\\_Global\\_Youth\\_Tobacco\\_Survey\\_GYTS-4.pdf](https://ntcp.nhp.gov.in/assets/document/National_Fact_Sheet_of_fourth_round_of_Global_Youth_Tobacco_Survey_GYTS-4.pdf), accessed 11 July 2022.
8. Miech R, Patrick ME, O'Malley PM, Johnston LD. E-cigarette use as a predictor of cigarette smoking: results from a 1-year follow-up of a national sample of 12th grade students. *Tob Control*. 2017;26(e2):e106–e111. doi: 10.1136/tobaccocontrol-2016-053291.
9. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. E-Cigarette Use Among Youth and Young Adults, A Report of the Surgeon General. Chapter 3, Health Effects of E-Cigarette Use Among U.S. Youth and Young Adults. Atlanta (GA): Centers for Disease Control and Prevention (US); 2016. Available from: <https://www.cdc.gov/tobacco/sgr/e-cigarettes/index.htm#:~:text=E%2DCigarette%20Use%20Among%20Youth%20and%20Young%20Adults%3A%20A%20Report,the%20Surgeon%20General%20on%20tobacco>, accessed 11 July 2022.
10. Padon AA, Maloney EK, Cappella JN. Youth-targeted e-cigarette marketing in the US. *Tob Regul Sci*. 2017;3(1):95–101. doi: 10.18001/TRS.3.1.9.
11. First L. When marketing electronic nicotine delivery systems to adults ENDS up targeting youth and young adults. *American Academy of Pediatrics*; 29 August 2019. Available from: <https://publications.aap.org/journal-blogs/blog/6065>, accessed 11 July 2022.
12. Shrivastav R, Kathuria P, Arora M, Munish V G, Sinha P, Tullu F T. (Mis)perceptions related to Electronic Nicotine Delivery Systems (ENDS) and hookah: making a case for policy strengthening through a multi-stakeholder qualitative study from New Delhi,

- India. *Tob Induc Dis*. 2018;16(1):469. doi:10.18332/tid/84580.
13. HRIDAY. Electronic Nicotine Delivery Systems (ENDS) use and its correlate among school-going adolescents in India: Implications for global tobacco control (Unpublished).
  14. Hall K. Do filtered cigarettes lower the risk of lung cancer? *U.S. News & World report*; 25 July 2017. Available from: <https://health.usnews.com/health-care/patient-advice/articles/2017-07-25/do-filtered-cigarettes-lower-the-risk-of-lung-cancer>, accessed 11 July 2022.
  15. Thomas W. Ferkol, Harold J. Farber, Stefania La Grutta, Frank T. Leone, Henry M. Marshall, Enid Neptune, Charlotta Pisinger, Aneesa Vanker, Myra Wisotzky, Gustavo E. Zabert, Dean E. Schraufnagel on behalf of the Forum of International Respiratory Societies. Electronic cigarette use in youths: a position statement of the Forum of International Respiratory Societies. *European Respiratory Journal* 2018 51: 1800278; DOI: 10.1183/13993003.00278-2018
  16. Vincent D, Potts J, Durbin J, Moore JM, Eley S. Adolescent use of electronic nicotine delivery systems. *Nurse Pract*. 2018;43(3):17–21. doi: 10.1097/01.NPR.0000530308.76316.2b.
  17. Loukas A, Paddock EM, Li X, Harrell MB, Pasch KE, Perry CL. Electronic nicotine delivery systems marketing and initiation among youth and young adults. *Pediatrics*. 2019;144(3):e20183601. doi: 10.1542/peds.2018-3601.
  18. Indian Council of Medical Research. White Paper on Electronic Nicotine Delivery System. *Indian J Med Res*. 2019;149(5):574–83. doi: 10.4103/ijmr.IJMR\_957\_19.
  19. Punjab High Court. *Burning Brain Society Versus Union of India and others*. Available from: <https://indiankanoon.org/doc/110116081/>, accessed 28 October 2022.
  20. Nicotine preparations coming in form of E-Cigarettes is unapproved drug and contravenes the provisions of Drugs and Cosmetics Act, 1940, Food and Drugs Administration, Government of Punjab, Circular No. Drugs (7) Pb. 2013/16988-89, (05/09/2013). Available from: <https://rsrr.in/wp-content/uploads/2020/07/BAN-ON-ELECTRONIC-NICOTINE-DELIVERY.pdf>, 28 October 2022.
  21. Pandey K. Meeting called by health ministry to regulate e-cigarettes inconclusive. *DownToEarth*; 2014. Available from: <https://www.downtoearth.org.in/news/meeting-called-by-health-ministry-to-regulate-ecigarettes-inconclusive-45143>, accessed 11 July 2022.
  22. WHO FCTC. FCTC/COP7(9) Electronic nicotine delivery systems and electronic nonnicotine delivery systems. WHO FCTC; 2016. Available from: [https://fctc.who.int/publications/m/item/fctc-cop7\(9\)-electronic-nicotine-delivery-systems-and-electronic-nonnicotine-delivery-systems](https://fctc.who.int/publications/m/item/fctc-cop7(9)-electronic-nicotine-delivery-systems-and-electronic-nonnicotine-delivery-systems), accessed 11 July 2022.
  23. Jha DN, Salaria S. E-cigarette expo goes up in smoke. *The Times of India*; 7 September 2017. Available from: <https://timesofindia.indiatimes.com/city/delhi/e-cigarette-expo-goes-up-in-smoke/articleshow/60399222.cms>, accessed 11 July 2022.
  24. Department of Health Research – Ministry of Health and Family Welfare, Government of India. Indian Council of Medical Research. Media report on (Electronic Nicotine Delivery System (ENDS)). 2019. Available from: [https://main.icmr.nic.in/sites/default/files/ICMR\\_NEWS\\_ENDS.pdf](https://main.icmr.nic.in/sites/default/files/ICMR_NEWS_ENDS.pdf), accessed 11 July 2022.
  25. The Prohibition of electronic Cigarettes (Production, Manufacture, import, export, transport, sale, distribution, storage and advertisement) Ordinance, 2019. Available from: [https://prsindia.org/files/bills\\_acts/bills\\_parliament/2019/Prohibition%20of%20Electronic%20Cigarettes%20Ordinance,%202019.pdf](https://prsindia.org/files/bills_acts/bills_parliament/2019/Prohibition%20of%20Electronic%20Cigarettes%20Ordinance,%202019.pdf), accessed 11 July 2022.
  26. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement\)-Act-2019.pdf](https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement)-Act-2019.pdf), accessed 11 July 2022.

## 7.9: Public perceptions of tobacco and nicotine products

This sub-chapter explores public perceptions of tobacco use with the aim of helping to strengthen tobacco control efforts in India. Easy availability, the cultural sanction of tobacco use, positive expectations, a lack of knowledge of the need for treatment of addiction, poor knowledge and perception of harm, and habituation are some factors associated with the initiation of tobacco use, as well as its continuation.

### Cultural sanction

In certain communities, it is a custom to serve tobacco (e.g. *hookah*, *bidli*) during weddings and other social functions. In fact, serving tobacco is seen as a token of respect. In rural India, the use of *hookah* in caste-based or class-based groups is reflective of a sense of kinship and solidarity.<sup>1,2</sup>

### Social influences

Peer influence, social desirability, and curiosity are the most commonly reasons cited for initiation of tobacco use across studies.<sup>1,3-9</sup> Some examples are students smoking “for friendship”, “for not wanting to feel left out”, or “for giving company to a best friend who is a smoker”.<sup>9</sup> Young people often look upon tobacco use as a way of asserting their independence. Those who stay in hostels, for example, feel “excited that they do not need their parents’ permission and can take their own decisions”.<sup>3</sup>

Older family members and neighbours often ask young children to get them tobacco products from shops, thus becoming early role models for tobacco use.<sup>1,3</sup> Paradoxically, they disapprove of youngsters smoking in their presence, as they consider it to be a sign of contempt or disrespect. However, this does not apply to the use of SLT. Women often start using SLT because of a female role model (mother, grandmother, sister or friend), with some reporting initiation as early as at the age of 5 years.<sup>4</sup>

Youngsters have reported being influenced by portrayals of smokers in the media as smart, independent and attractive to the opposite gender.<sup>3</sup> They feel that a hero smoking after a fight with his girlfriend or a woman smoking in a film promotes smoking.<sup>3,9</sup> On the other hand, today’s youth claim that awareness advertisements cannot “scare them into tobacco cessation as today’s youth is fearless”.<sup>3</sup>

### Positive expectancies

Many young people believe that smoking is trendy. It “makes a young man appear like a big shot”, and more progressive.<sup>9</sup> Gender-specific explanatory models in young males included beliefs that smoking “enhances one’s manliness”, is a sign of modernity, and reflects maturity.<sup>9</sup>

The belief that tobacco provides relief from stress is almost ubiquitous among users.<sup>1,3-9</sup> The common positive effects of SLT reported by adults as well as young people are lifting of mood (“feeling fresh”), improved alertness, “getting a kick” and relief from boredom.<sup>1,4</sup>

In the case of street children, tobacco provides excitement and relief from “the all-pervasive gloom of street life and serves to suppress hunger and helplessness”.<sup>1</sup> Children are biologically vulnerable to addiction, and those who have underlying emotional or psychological problems, face academic difficulties, are prone to truancy, or are school dropouts often initiate smoking at a younger age.<sup>10</sup> Finally, there is a close association between anxiety, depression, low self-esteem, and smoking among adolescents and adults.<sup>11</sup>

### Health benefits attributed to tobacco use

The commonly cited health reasons for continued tobacco use are weight control,<sup>7,9</sup> dental health,<sup>7</sup>

reduction of dental pain,<sup>7</sup> the feeling of warmth it induces, the reduction of discomfort after meals, and easier bowel movement.<sup>4</sup>

## Shifting from smoking to smokeless forms of tobacco

Besides the low cost and easy availability of SLT, the fear of smoking in the vicinity of the family makes SLT use an attractive alternative for young people.<sup>1</sup> Both men and women report that SLT use is more socially acceptable than smoking. Even from the perspective of law, while the COTPA prohibits smoking in public places across the country, SLT use was not banned; however, some of the local jurisdictions in the country dealt with this by prohibiting spitting in public places.<sup>12</sup>

## Knowledge of harm

Many perceive SLT use as a harmless indulgence,<sup>4</sup> and public knowledge of its ill-effects on health is limited. Besides the low harm perception, the common prevailing beliefs are that the benefits of tobacco use are greater than the risks; only heavy use causes cancer; and a proper diet can offset the harm caused by tobacco.<sup>4</sup> Nevertheless, the GATS-2 (2016–2017) reported that more than 90% of adults believed that smoking as well as smokeless tobacco (SLT) use caused serious illness. On being asked whether smoking or smokeless tobacco causes specific diseases, only 65.8% of participants were aware of the causal relationship between tobacco use and stroke and 76.7% were aware that smoking causes heart attack, but over 90% knew of the relationship between smoking and lung cancer, as well as smoking and tuberculosis. Over 90% were aware that SLT use causes oral cancer as well as dental diseases. About 88% knew that SLT use during pregnancy causes serious illness. GATS-2 also

showed that more than 90% of adults believed that SHS causes serious illness in non-smokers and children.<sup>13</sup>

During a study conducted in Bengaluru, Karnataka and Bangladesh, the husbands' and family members of pregnant women were interviewed regarding the smoking behaviours of the husbands'. Generally, the men who smoked at home often smoked in the presence of others, including their pregnant wives. Knowledge of the ill-effects of SHS in general and the risk to pregnant women and unborn babies in particular was limited among all three groups.<sup>14</sup> Many women reported that their husbands lay next to them and smoked in order to relax, and many pregnant women had experienced a sense of helplessness in negotiating a smoke-free home.

## Knowledge regarding treatment

Fear of withdrawal and craving; the lack of alternatives to cope with stress; and inadequate knowledge of the availability of professional help for quitting are some factors that perpetuate the habit of using tobacco.<sup>3,4</sup> Some tobacco users believe that “self-control is the only way” to quit, and that they should not take treatment to quit. Others are critical of doctors, who they feel make poor role models because “doctors themselves chew tobacco”.<sup>4</sup> Lack of knowledge about the risks of tobacco use and the help available for quitting are more pronounced among SLT users.

## Public response to regulations/restrictions on tobacco use

Increased taxes on tobacco, and restrictions on its sale and its use in public spaces, have led to a reduction in tobacco use.<sup>13</sup> However, the implementation of the restrictions is not uniform. Thus, tobacco products continue to be sold to minors, PoS advertising is still prevalent, and

loose cigarette and *bidi* sticks continue to be sold despite legal restrictions. In a study involving 207 vendors and 204 consumers from four districts in Karnataka, more than 90% of participants (consumers and vendors) were not aware of the ban on loose tobacco products. Some reasons cited for buying loose tobacco were that it “limits smoking”, and “is more affordable”.<sup>15,16</sup>

## Varying perspectives on what works

Some tobacco users are of the view that increasing the price may discourage use. Others feel that banning *gutkha* alone is not enough; all tobacco products must be banned.<sup>4</sup> Service providers, such as doctors and nurses, emphasize the need for educating the community and providing accurate information to make cessation more acceptable. Narratives from successful quitters indicate that prayer, modes of relaxation, and spirituality can be strong motivating factors for cessation.<sup>4</sup> The mCessation programme provides some successful narratives of quitting.<sup>17</sup>

## Perceptions regarding e-cigarettes

A qualitative interview of 42 e-cigarette users in Delhi was conducted before the e-cigarette ban. Results showed that participants expressed greater curiosity and desire to experiment with this product than with the approved cessation options. Flavour, taste, satisfaction, the belief that it was a safer option, and that the nicotine content could be adjusted were common reasons for preferring e-cigarettes. There were varied opinions regarding the cost and availability of these products, and most

were not aware of any regulations on the e-cigarettes.<sup>18</sup>

## Reviewing policy focus

Given the great variability of tobacco use patterns across states,<sup>19</sup> the contextual tailoring of tobacco control policies may prove to be more useful.<sup>20</sup>

In addition to fiscal measures and stronger law enforcement, behaviour change communication could help to decrease the prevalence of tobacco use.<sup>21</sup> Information about tobacco-related harm should be accompanied by skill-building strategies such as problem-solving, assertive communication, stress management, positive thinking and a balanced lifestyle.<sup>3</sup> The involvement of parents and teachers could be immensely useful for intervention programmes for children and youth. Young people need to be made aware of mental health issues; and helped to find ways of dealing with depression and anxiety; managing negative emotions, pressures and temptations; and improving self-confidence.<sup>22</sup> Quitlines and technology-based interventions have the added advantage of ensuring privacy and increasing coverage.

## Conclusion

Greater awareness of the harms of tobacco use and the availability of support to quit are gradually eroding the narrative of normalcy associated with tobacco use, particularly SLT use. Nevertheless, many beliefs and misconceptions about tobacco use, both among the general public and healthcare professionals, continue to maintain tobacco use. Efforts towards tobacco control should address these beliefs to de-normalize tobacco use in the community.



## Key messages

- Peer influence, social desirability and curiosity are the most common reasons cited for initiation of tobacco use across studies.
- Children may be biologically vulnerable to addiction, and those who have underlying emotional and psychological problems, face academic difficulties, are prone to truancy, or are school dropouts often initiate smoking at a younger age.
- GATS data showed that awareness regarding the causal relationship between smoking and lung cancer as well as smoking and tuberculosis is higher compared to other diseases such as stroke and heart attack.
- There is a need for educating the community and providing accurate information to make cessation more acceptable.

## REFERENCES

1. Chadda RK, Sengupta SN. Tobacco use by Indian adolescents. *Tob Induc Dis*. 2002;1(2):111–19. doi: 10.1186/1617-9625-1-2-111.
2. Report on Tobacco Control in India. In: Reddy KS, Gupta PC, editors. Ministry of Health and Family Welfare, Government of India; 2004. Available from: <https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf>, accessed 27 July 2022.
3. Doraiswamy P, Nattala P, Murthy P. How can today's substance-using youth be helped to quit? Perspectives of college students from Bangalore, India. *Int J Soc Psychiatry*. 2020;66(5):469–75. doi: 10.1177/0020764020916745.
4. Murthy P, Subodh BN, Sinha D, Aghi M, Chaturvedi P. Smokeless tobacco (SLT) use and cessation in India: lessons from user and health care provider perspectives. *Asian J Psychiatr*. 2018;32:137–42. doi: 10.1016/j.ajp.2017.11.009.
5. Das S, Ghosh M, Sarkar M, Joardar S, Chatterjee R, Chatterjee S. Adolescents speak: why do we smoke? *J Trop Pediatr*. 2011;57(6):476–80. doi: 10.1093/tropej/fmr003.
6. Rose ML, Chadha D, Bhutia TD. Smokeless tobacco use and perceptions of risk among students in Mumbai municipal schools. *Indian J Cancer*. 2016;53(2):322–4. doi: 10.4103/0019-509X.197720.
7. Shah S, Dave B, Shah R, Mehta TR, Dave R. Socioeconomic and cultural impact of tobacco in India. *J Family Med Prim Care*. 2018;7(6):1173–6. doi: 10.4103/jfmpc.jfmpc\_36\_18.
8. Ghose S, Sardar A, Shiva S, Mullan BE, Datta SS. Perception of tobacco use in young adults in urban India: a qualitative exploration with relevant health policy analysis. *Ecancermedicalscience*. 2019;13:915. doi: 10.3332/ecancer.2019.915.
9. Nichter M, Nichter M, Van Sickle D. Popular perceptions of tobacco products and patterns of use among male college students in India. *Soc Sci Med*. 2004;59(2):415–31. doi: 10.1016/j.socscimed.2003.10.032.
10. Patel DR. Smoking and children. *Indian J Pediatr*. 1999;66(6):817–24. doi: 10.1007/BF02723844.
11. Fluharty M, Taylor AE, Grabski M, Munafò MR. The association of cigarette smoking with depression and anxiety: a systematic review. *Nicotine Tob Res*. 2017;19(1):3–13. doi: 10.1093/ntr/ntw140.
12. Yadav A, Singh PK, Yadav N, Kaushik R, Chandan K, Chandra A, et al. Smokeless tobacco control in India: policy review and lessons for high-burden countries. *BMJ Glob Health*. 2020;5(7):e002367. doi: 10.1136/bmjgh-2020-002367.
13. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global adult tobacco survey GATS 2 India 2016–17. New Delhi: Ministry of Health and Family Welfare, Government of India; 2018. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>, accessed 28 July 2022.
14. Jackson C, Huque R, Satyanarayana V, Nasreen S, Kaur M, Barua D, et al. “He doesn’t listen to my words at all, so I don’t tell him anything” – a qualitative investigation on exposure to second hand smoke among pregnant women, their husbands and family members from rural Bangladesh and urban India. *Int J Environ Res Public Health*. 2016;13(11):1098. doi: 10.3390/ijerph13111098.



15. Chand PK, Sinu E, Murthy P. Knowledge about tobacco cessation services among healthcare providers (doctors, nurses) and health care treatment seekers in 4 districts in Karnataka (Bidar, Vijayapura, Chikmagalur and Mandya). Report submitted to the State Tobacco Control Cell, Department of Health and Family Welfare, Government of Karnataka. NIMHANS; 2020.
16. Sinu E, Murthy P, Chand PK. Extent of implementation of loose tobacco ban in Karnataka. Progress and its implementation challenges. Report submitted to the State Tobacco Control Cell, Department of Health and Family Welfare, Government of Karnataka. NIMHANS; 2020.
17. Preetha GS, Panda P, Swain S, Pathak VK, Abbas A. Evaluation of the Tobacco mCessation programme in India. Report submitted to Ministry of Health and Family Welfare, Government of India and World Health Organization; 2016.
18. Mohanty V. E-cigarettes use behaviour, perceptions and barriers among Indian adults: pilot qualitative research study. *Tob Induc Dis*. 2018;16(Suppl1):A800. DOI: <https://doi.org/10.18332/tid/84620>.
19. Singh A, Ladusingh L. Prevalence and determinants of tobacco use in India: evidence from recent Global Adult Tobacco Survey data. *PLoS One*. 2014;9(12):e114073. doi: 10.1371/journal.pone.0114073.
20. Singh A, Arora M, Bentley R, Spittal MJ, Do LG, Grills N, et al. Geographic variation in tobacco use in India: a population-based multilevel cross-sectional study. *BMJ Open*. 2020;10(6):e033178. doi: 10.1136/bmjopen-2019-033178.
21. Annadurai K, Danasekaran R, Mani G. Knowledge, attitude and practices on anti-tobacco measures imposed under the cigarette and other tobacco products act among adultmales in rural areas of Tamil Nadu, India. *Healthcare in Low-resource Settings*. 2014;2:1883. Available from: <https://doi.org/10.4081/hls.2014.1883>, accessed 28 July 2022.
22. Hameed N, Mehrotra S, Murthy P. Positive youth development program for mental health promotion in college campuses: stakeholder perspectives. *Psychol Stud (Mysore)*. 2020;65:76–86. Available from: <https://doi.org/10.1007/s12646-019-00504-3>, accessed 28 July 2022.





# Progress in tobacco control: What works?

**8.1: National Tobacco Control Programme** 181  
L. Swasticharan, Lalit Pathak, Kamlesh Kumar Jain, Poonam Khattar, Pooja Gupta, Praveen Sinha

**8.2: The smoke-free movement** 186  
Rana J. Singh, Mira B. Aghi, Gopal Chauhan, Selvaraj Markandan

**8.3: Regulating tobacco advertising promotion and sponsorship** 192  
Amit Yadav, Ranjit Singh, Purva Singh, Nalin Singh Negi, Cyril Alexander, Saju V. Itty, Deepika Bahl, Vineet Gill Munish, Sandhya

Bhullar, Monika Arora  
**8.4: Pictorial health warnings** 200  
Vikas Sheel, Pulkesh Kumar, Pooja Gupta, Praveen Sinha, Radhika Shrivastav, Ranjit Singh

**8.5: Public education and stakeholder sensitization** 209  
Vaishakhi Mallik, Manish Pant, Pooja Gupta, Jaspreet Kaur Pal, Binoy Mathew



## 8.1: National Tobacco Control Programme

### Background and introduction

The Ministry of Health and Family Welfare (MoHFW), Government of India (GoI), launched the National Tobacco Control Programme (NTCP) in 2007–2008 to facilitate effective implementation of tobacco control laws and create awareness about the harmful effects of tobacco use. The NTCP was launched in a phased manner as a Centrally sponsored scheme. In pilot phase-I, the programme support was extended for setting up state and district tobacco control cells in 9 states covering 18 districts. However, phase-II in 2008–2009 supported only the district tobacco control cells (DTCCs) in 24 districts in 12 states. By the end of the 11th Five-Year Plan in 2012, the NTCP was implemented in 21 states covering 42 districts. Currently, the programme is being implemented in all 36 states/Union Territories covering 612 districts across the country.

Thereafter, the MoHFW commissioned the Public Health Foundation of India (PHFI) to undertake an independent evaluation of the pilot phases. With the experience of pilot phases, the evaluation recommendations, and after various stakeholder consultations, a full-fledged national programme was designed under the 12th Five-Year Plan (2012–2017). Thus, under the 12th Plan, changes were incorporated for activities at the state and district levels with enhanced financial support.

The objectives of the NTCP under the 12th Plan were to:

- (i) Create awareness about the harmful effects of tobacco consumption;
- (ii) Ensure effective implementation of the provisions under The Cigarettes and Other Tobacco Products (Prohibition of

Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA);

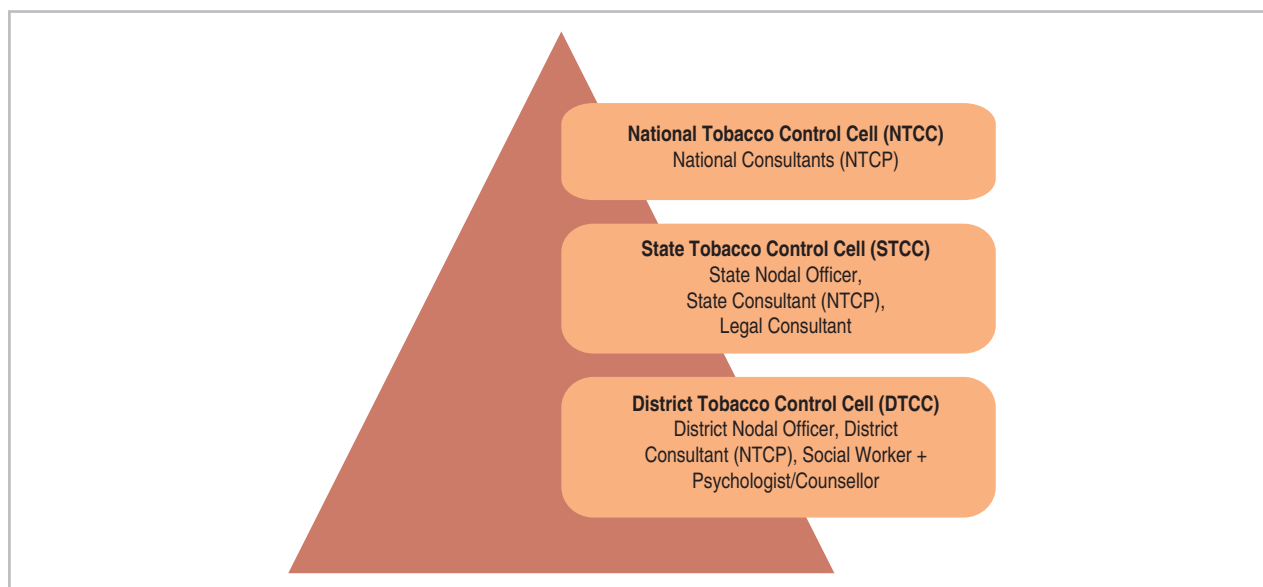
- (iii) Help people quit tobacco use; and
- (iv) Facilitate implementation of strategies for prevention and control of tobacco as advocated by the WHO Framework Convention on Tobacco Control (FCTC).

For smooth and effective implementation, the MoHFW has adopted a three-tier institutional structure under the NTCP, i.e. national, state and district tobacco control cells as shown in Figure 8.1.

The main activities under the NTCP are to:

- (i) Enforce and monitor tobacco control laws/provisions of other laws.
- (ii) Sensitize and train health professionals, social workers, non-governmental organizations (NGOs), school teachers, academicians, enforcement officials and other stakeholders.
- (iii) Conduct information, education, and communication (IEC) activities.
- (iv) Conduct awareness programmes in educational institutions (schools) and implement “Tobacco-Free Educational Institution” (ToFEI) guidelines.<sup>1</sup>
- (v) Do multi-stakeholder engagement, including coordination with *Panchayati Raj* institutions for village-level activities and integration of the NTCP with other public health and social development programmes.
- (vi) Set up and strengthen tobacco cessation facilities, including provision of pharmacological treatment facilities at the district level.

**Figure 8.1: NTCP structure at different levels**



- (vii) Support research, monitoring and evaluation including tobacco surveillance.
- (viii) Strengthen laboratory capacity for tobacco product testing.

## Roles and responsibilities

### National Tobacco Control Cell

The National Tobacco Control Cell (NTCC) at the MoHFW is responsible for overall policy formulation, programme planning, its implementation, monitoring and evaluation of different activities envisaged under the NTCP.<sup>2</sup> Some other key responsibilities are: Coordination with other ministries and states for compliance with provisions of the WHO FCTC; undertaking public awareness/mass media campaigns for awareness building and behavioural change; establishing and strengthening tobacco testing laboratories; mainstreaming research and training on alternative crops and livelihood with other nodal ministries; monitoring and evaluation including surveillance and integrating the NTCP as a part of healthcare delivery mechanism under the National Health Mission (NHM) framework.

### State Tobacco Control Cells

Public health is a state subject and the primary responsibility for enforcement of COTPA lies with state governments. Under the NTCP, every identified state/Union Territory has a State Tobacco Control Cell (STCC) in the State Health Department/Directorate General of Health Services. The STCC is responsible for overall planning, implementation, monitoring, and achieving the physical and financial targets of the programme. The STCC is also responsible for organizing state-level workshops, training of trainers programme for staff appointed at DTCCs under the NTCP, refresher training of the DTCC staff, training on tobacco cessation for healthcare providers, law enforcers' training/sensitization programmes, documentation, monitoring, staff recruitment and periodic reporting to the NTCC.

### District Tobacco Control Cells

Under the NTCP, a DTCC is established in each district under the umbrella of the District Health Society. The role of the DTCC is crucial as most of the activities under the NTCP are to be implemented at the district and sub-district levels. The DTCC is responsible for planning, coordinating and implementation as well as



monitoring the enforcement of the tobacco control law, orientation and capacity building of stakeholders, awareness generation, school health programmes and tobacco cessation services at the district and sub-district levels.

## **Operational structure of the National Tobacco Control Programme under the National Health Mission**

Under the 12th Five-Year Plan, structural changes were introduced in the NTCP to bring in synergy at different levels of healthcare delivery. The programme implementation at the state, district and sub-district level was subsumed under the overarching umbrella of the NHM under the flexi-pool for non-communicable diseases (NCDs). On adoption of the recommendation of the 14th Finance Commission, with effect from 2015–2016, as per the communication of the Ministry of Finance dated 3 November 2015, the state-level activities under the NTCP are Centrally sponsored with the funding pattern between the Centre and the states revised from 75:25 to 60:40 for all states. However, in case of states in the North-East and the three Himalayan states, there is no change in the pattern of the Centre State funding, i.e. 90:10 from the Central Government. Further, from 2018–2019, Union Territories without legislature have become 100% funded by the Central Government except for those with a legislative assembly, i.e. Delhi and Puducherry with a ratio of 60:40.

States work in the Programme Implementation Plan (PIP) mode, wherein the state plans with a broad framework of activities including a proposed outlined budget, which is reviewed and approved for implementation by the National Programme Coordination Committee (NPCC), NHM.

The NTCP with dedicated resources and workforce has provided the framework for implementing tobacco control measures at the national and sub-national levels. The activities and interventions adapted under the programme are designed according to the needs of the country. The strong and bold policies and strategies adopted by the GoI resulted in 17% relative reduction in the prevalence of tobacco use between 2009–2010 and 2016–2017 – proof that adequate commitment and public investment in comprehensive tobacco control policies result in substantial public health gains, even in high prevalence, tobacco-producing countries.<sup>3</sup>

## **Recommendations and the way forward**

1. Considering tobacco use is the single largest risk factor for most of the NCDs, there is a need for continuous efforts towards tobacco control measures. With the launch and expansion of the NTCP, there has been dedicated allocation of funds for implementation of various NTCP activities at the sub-national level and this needs to be supported continuously for sustainability of the programme.
2. Capacity building of the programme staff and other associated workforce related to NTCP: Capacity building of state nodal officers, NTCP staff and other staff related to tobacco control, should be an ongoing process. The National Institute of Health and Family Welfare (NIHFW) may be involved in organizing regular training programmes for the NTCP focal points and develop capacity of the programme staff. The modular training kit developed by the NIHFW in collaboration with the MoHFW and with support from WHO could be the base for face-to-face and online trainings.

3. India being a home to 27 crore tobacco users, quality cessation services need to be scaled-up and expanded using innovative means including but not limited to engagements of private practitioners and staff available at health and wellness centres (HWCs).
4. To increase the footprint and outreach/ impact, activities under the NTCP need to be integrated with other health and social development programmes and schemes through developing policy frameworks such as the tuberculosis and tobacco control collaborative framework.<sup>4</sup>
5. Dedicated training institutes/institutes of excellence (as has been done in the National Oral Health Programme [NOHP]<sup>5</sup>) need to be identified by the MoHFW for providing specialized trainings on aspects such as tobacco cessation, trainings on

implementation of tobacco control and allied laws for various stakeholders.

6. Since tobacco is a multi-stakeholder issue, there is a need for enhanced multi-stakeholder cooperation by involving other departments, public health/institutions, civil society organizations (CSOs), etc. at the national, state and district levels.
7. The online reporting mechanism (Monitoring Information System) with a dashboard for identified indicators is in place and is being widely used (Figure 8.2). The states should report the data and plan future activities accordingly.
8. Districts should be motivated and guided to strengthen the enforcement of the tobacco control and allied laws at the sub-national level through better interdepartmental coordination.

**Figure 8.2: Dashboard of the National Tobacco Control Programme**



## Key messages

- The NTCP is Gol's flagship programme on tobacco control, launched in 2007–2008, and is designed to support implementation of the COTPA and raise awareness about the hazards of tobacco use and related products.
- The NTCP is being implemented pan-India and comprises several components ranging from public awareness, capacity building, promoting ToEFI, tobacco cessation, etc.
- Activities of the NTCP have been integrated into various important health and development programmes, including Ayushman Bharat, National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS), the NOHP, among others.
- Regular monitoring will feed into further strengthening of the programme outreach and outcomes.

## REFERENCES

1. Guidelines for Tobacco Free Educational Institution (revised). Ministry of Health and Family Welfare, Government of India; 2019. Available from: <https://ntcp.nhp.gov.in/assets/document/TEFI-Guidelines.pdf>, accessed 3 August 2022.
2. National Tobacco Control Cell. Operational Guidelines – National Tobacco Control Programme. Ministry of Health and Family Welfare, Government of India; 2015. Available from: [https://nhm.gov.in/NTCP/Manuals\\_Guidelines/Operational\\_Guidelines-NTCP.pdf](https://nhm.gov.in/NTCP/Manuals_Guidelines/Operational_Guidelines-NTCP.pdf), accessed 3 August 2022.
3. WHO report on the global tobacco epidemic 2021: addressing new and emerging products. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789240032095>, accessed 3 August 2022.
4. National Framework for Joint TB-Tobacco collaborative Activities. Central TB Division, Ministry of Health and Family Welfare, Government of India; 2017. Available from: <https://s/tbcindia.gov.in/WriteReadData/TB-Tobacco.pdf>, accessed 3 August 2022.
5. Establishment of Tobacco Cessation Centers in Dental Institutes – An Integrated Approach in India. National Oral Health Programme/NTCP, Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India; 2018. Available from: [https://dciindia.gov.in/Rule\\_Regulation/FinaloperationalguidelinesTCCindentalcolleges.pdf](https://dciindia.gov.in/Rule_Regulation/FinaloperationalguidelinesTCCindentalcolleges.pdf), accessed 3 August 2022.

## 8.2: The smoke-free movement

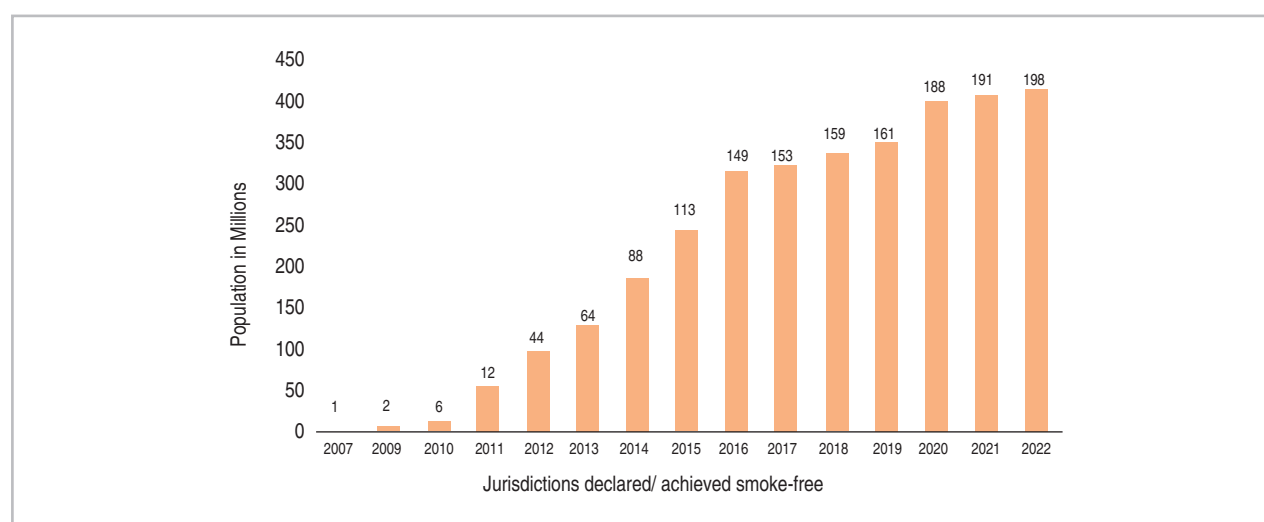
The term “smoke-free” attracted attention in India in 2007 when Chandigarh was declared the first smoke-free city in the country. The same year, the city of Jhunjhunu in Rajasthan also demonstrated its commitment to go smoke-free, followed by an administrative declaration of the smoke-free status of Kottayam district, Kerala in 2009. In 2010, the cities of Shimla (Himachal Pradesh), Bhubaneswar (Odisha), Coimbatore (Tamil Nadu) and Mohali (Punjab); the district of Villupuram (Tamil Nadu) and the state of Sikkim earned the status of being smoke-free.

### The smoke-free journey in India

The COTPA was enacted in 2003 to regulate trade and commerce in, and the advertising, production, supply and distribution of cigarettes and other tobacco products. Section 4 of the Act and the Rules notified under it in 2008 prohibit smoking in public places and indoor workplaces

with the aim of protecting people from exposure to second-hand smoke (SHS). After these Rules came into force on 2 October 2008, a campaign for the enforcement of smoke-free policies was initiated by NGOs and other key stakeholders in collaboration with the Central and state governments. “No smoking” and “Smoke-free” signage campaigns; well-designed mass media campaigns; and locally relevant IEC campaigns were launched across the country, and many national and international sports events, congregations, religious functions and festivals were declared smoke-free. Many villages, *taluks*, cities, districts and states were declared smoke-free by the relevant government authorities after a formal third-party compliance assessment using a robust protocol. Currently, six states and 198 cities and districts have achieved a high level of compliance and/or declared themselves smoke-free, thus protecting million of people from the harms of SHS in India (Figure 8.3).

**Figure 8.3: The smoke-free journey in India: Jurisdictions declared smoke-free and estimated population protected from SHS**



Source: Tobacco and NCD Control Department, The Union South-East Asia, New Delhi, India, 2022.

## Strategies that worked to expand the movement to district and sub-district levels

Collaboration between CSOs and state and district administrations has helped to take the implementation of the smoke-free campaign to the grassroots level. Though the government departments, individuals, academicians, and the media played important roles in implementing smoke-free policies, it is the CSOs that were in the forefront of advocacy to bring the government on board, policy implementation, capacity building, monitoring and evaluation.<sup>1</sup> Advocacy, multi-stakeholder engagement, coordination, strengthening institutional capacity at the local level and continuous monitoring helped to expand the smoke-free movement to the district and sub-district levels.<sup>2</sup> Now, in states such as Himachal Pradesh, Karnataka, Mizoram, Punjab, Tamil Nadu, Uttar Pradesh, Uttarakhand and Madhya Pradesh, the smoke-free movement is percolating down to the village level in coordination with the *gram panchayats*.

## Public support

Opinion polls were conducted in the early phase of the smoke-free campaign in 2008–2010 in the cities of Ranchi (Chhattisgarh), Shimla (Himachal Pradesh), Mohali (Punjab), Villupuram (Tamil Nadu), Coimbatore (Tamil Nadu), Ahmedabad (Gujarat), Chennai (Tamil Nadu), Kochi (Kerala) and Thiruvananthapuram (Kerala) and in the states of Delhi, Sikkim and Mizoram. These polls assessed public knowledge about the harmful effects of smoking and SHS, and of smoke-free provisions of the law, as well as the support for smoke-free laws and their enforcement. The surveys were conducted by the district administration/state government through an external expert research organization with technical support from The Union. All the surveys found massive support for the implementation and enforcement of smoke-free policies. A study conducted by the Post Graduate Institute of Medical Education and Research (PGIMER),

Chandigarh in the district of Mohali (Punjab) concluded that there was high level of knowledge about the deleterious multi-dimensional effects of smoking among residents and a high degree of support for the implementation of the smoke-free provisions of the COTPA.<sup>3</sup> Opinion poll findings often help policy-makers to adopt strategies that can impact public attitudes regarding the harmful effects of tobacco use and the need for stronger implementation of smoke-free laws.<sup>4</sup> Smoke-free Shimla is a case in point. An opinion poll conducted in Shimla in September 2009 revealed that 97% of respondents supported the effective enforcement of the law regarding smoke-free public places.<sup>5</sup> After the poll, the state government-initiated smoke-free enforcement, IEC activities, a signage campaign, when thousands of violators were penalized and finally Shimla was declared smoke-free on 2 October 2010 by the Chief Minister of Himachal Pradesh (Box 8.1).

## Monitoring and evaluation

After the revised Smoke-free Rules were notified in 2008, the MoHFW, GoI, brought out a “Step-by-step guidance for implementation of the Smoke-free Rules”.<sup>6</sup> However, the enforcement of the Rules has not been uniform across the country. Several attempts have been made to monitor the enforcement of the Rules at public places and workplaces through air quality monitoring, air nicotine monitoring and compliance assessment studies. A study conducted in Mumbai (Maharashtra) in 2009 to assess the impact of the implementation of the smoke-free rules on the indoor air quality in bars and restaurants, country liquor bars, *hookah* restaurants and pubs found that the average level of PM<sub>2.5</sub> in non-smoking venues was 97.19 µg/m<sup>3</sup> and in smoking venues it was 363.04 µg/m<sup>3</sup>.<sup>7</sup> Another study in the Bangalore and Dharwad districts of Karnataka found that the patrons and workers in the hospitality sector continue to be exposed to SHS despite the enactment of COTPA, which bans smoking in public places.<sup>8</sup> A cross-sectional survey



### BOX 8.1: Case study – Himachal Pradesh: The first big state to achieve smoke-free status in India

With a population of about 70 lakh, Himachal Pradesh is a hilly state in northern India. Shimla, the capital city, is a famous tourist destination. Higher prevalence of smoking among males (33.4%) than the national average (24.3%) with high passive smoking exposure (82.5%) at home remained a cause of concern in the state (GATS-1, 2009–2010). Tobacco use had a high sociocultural acceptance and smoking was recognized as a status symbol. The strategic partnership between the local NGO named Himachal Pradesh Voluntary Health Association (HPVHA) and the State Health Department started various tobacco control activities with technical support from The Union South-East Asia (The Union) in 2008–2009. The mapping of all key stakeholder ministries, departments, institutions, individuals, media, NGOs was done and their roles and responsibilities were adequately defined for tobacco control. A smoke-free city pilot project was implemented successfully in the capital city Shimla in 2009–2010. The smoke-free movement was scaled up in the entire state in a phased manner. Initially, all the 12 district headquarters were targeted and declared smoke-free, following which the entire state was declared smoke-free based on a third-party compliance assessment of smoke-free rules in 2013. In the state, the funds collected as fine for violation of smoke-free laws are utilized for financing tobacco control activities. A follow-up survey in the entire state was repeated in 2015 to ensure sustainability. As per the GATS-2, 2016–2017, overall tobacco use declined from 21.2% to 16.1%, smoking use declined from 18.3% to 14.2% and passive smoking declined from 82.5% to 32.9% at home since GATS-1, 2009–2010. As per the state-specific e-surveillance system, overall tobacco use has further declined to 13.6% and passive smoking at home has declined to 21.4% in 2019–2020. GYTS, 2019 also shows the lowest prevalence of tobacco use (1.1%) in Himachal Pradesh among the age group of 13–15 years across all states in India. Tobacco control has become a top priority in the state. In summary, the smoke-free movement is becoming popular and is sustainable with coordinated efforts by all stakeholders in the state, which is helpful in substantially reducing the overall tobacco use.



Declaration by the then State Health Minister in July 2013.



conducted in 2008–2009 in Ahmedabad (Gujarat), Chandigarh, Chennai (Tamil Nadu) and Delhi, using passive air nicotine monitoring, found the presence of air nicotine in most of the buildings under the study. The highest median levels of air nicotine were found in entertainment venues and restaurants in all the cities.<sup>9,10</sup> Since 2009, more than 250 compliance assessment studies have been conducted across the country to monitor the level of enforcement of and compliance to the smoke-free rules, using a guide developed jointly by the Johns Hopkins School of Public Health, Campaign for Tobacco Free Kids and The Union.<sup>11–15</sup> In many jurisdictions (cities and districts) in states such as Himachal Pradesh, Punjab and Mizoram, a series of compliance assessment studies were conducted to see improvement in compliance to smoke-free policies. The compliance monitoring tools were regularly updated and refined through Delhi.<sup>15</sup>

## Opportunities for smoke-free expansion

There have been attempts to make homes, housing complexes and apartment buildings smoke-free. Though there cannot be a law to make individual homes smoke-free, the Ministry of Housing and Urban Affairs and the Healthy City Initiatives could work together to frame regulations that new housing complexes and colonies must make some of their towers and units smoke-free. The Punjab State Labour Commissioner has issued a letter to all assistant labour commissioners to ensure that all under construction and completed residential buildings are labelled “Tobacco smoke-free” with a proper display of “No smoking” signages. Other states could follow this example.

Greater efforts must be made to protect women and children from SHS by educating smokers about not smoking at home. In 2003, the Project Quit Tobacco International and the Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), in Kerala, joined

hands to seek a solution to ameliorate women’s discomfort at home due to their husbands’ smoking, especially when they learnt that their husbands were not ready to comply.<sup>16</sup> The Generation Saviour Association, an NGO working in Punjab and Haryana, has been educating students and young people to adopt smoke-free homes. It proposes to develop a criterion to label a home smoke-free/tobacco-free.

A cross-sectional exposure survey was conducted in 2006 to measure air nicotine concentrations in households and hair nicotine concentrations among non-smoking women and children in convenience samples of 40 households each in 31 countries including India. It revealed that the median air nicotine concentration in 31 countries was 17 times higher in households with smokers ( $0.18 \mu\text{g}/\text{m}^3$ ) than in households without smokers ( $0.01 \mu\text{g}/\text{m}^3$ ).<sup>17</sup>

## Key lessons and best practices

Establishing a comprehensive enforcement mechanism is crucial to implementing smoke-free policies. This includes constituting enforcement squads/teams with proper IDs at all levels, making enforcement tools such as a challan book, a receipt book and a head of account available (Head of account can be a government account, a bank account, a treasury account where the penalty amount collected is deposited by enforcement officials) setting up a system for reporting the violation of rules, providing mobility support, and having a daily/weekly enforcement schedule. Experience has shown that enforcement improves with public awareness of the harms of SHS exposure.

The experiences of the city of Chandigarh and the district of Howrah (West Bengal) have been documented as examples of best practices.<sup>18,19</sup> The campaign in Chandigarh was primarily driven by the civil society,<sup>20</sup> while that in Howrah was the result of a collaboration between the government and the civil society. In fact, collaborative efforts have led to the achievement of smoke-free

status in most places, some examples being Kottayam (Kerala), Mohali (Punjab), Shimla (Himachal Pradesh) and Bhubaneswar (Odisha). Sikkim, Ahmedabad (Gujarat) and Delhi are a few places where the smoke-free campaign was led by the government.

## Challenges faced and the way forward

The major challenges to the enforcement of smoke-free rules are gaps in the smoke-free legislation, which allows smoking at large hotels, restaurants and airports with some restrictions in designated smoking areas (DSAs); the low priority accorded to enforcement by sub-national authorities; the limited knowledge and capacity

of enforcement agencies, and interference by the tobacco industry front groups, including hotel and restaurant associations. According to the law, the in-charge of affairs of a public/work place is responsible for ensuring its smoke-free status. Hence, this person should be held accountable for any violation of the law in the public and workplace, and punitive action should be taken according to the provisions of the law. It is recommended that the smoke-free policies should be 100% without any exemption to hotels, restaurants, airports or workplaces and should even include protection from SHS at homes, ensure multi-stakeholder engagement, and establish a comprehensive enforcement mechanism with a violation reporting system in place.

## Key messages

- Smoke-free policy is a cornerstone of tobacco control.
- There are evidence-based strategies and mechanisms to monitor and enforce smoke-free rules.
- The smoke-free movement in India has been a coordinated multi-stakeholder initiative.
- Loopholes such as the provision of designated smoking areas need to be plugged to further strengthen Section 4 of the COTPA.

## REFERENCES

1. Kaur J, Jain DC. Tobacco control policies in India: implementation and challenges. *Indian J Public Health*. 2011;55(3):220–7. doi: 10.4103/0019-557X.89941.
2. Ravindra K, Tripathy J, Tripathy N. Dynamics of multi-stakeholder engagement and its role in achieving high compliance of a tobacco control programme. *World Development Perspectives*. 2016;3:7–11. Available from: <https://doi.org/10.1016/j.wdp.2016.10.002>, accessed 3 August 2022.
3. Goel S, Singh RJ, Sharma D, Singh A. Public opinion about smoking and smoke free legislation in a district of North India. *Indian J Cancer*. 2014;51(3):330–4. doi: 10.4103/0019-509X.146788.
4. Kumar R, Lal P, Singh RJ. Role of compliance studies and opinion polls in strengthening smoke free legislation in India. *Health for the Millions*. 2012;38: 29–33.
5. Department of Health and Family Welfare, Government of Himachal Pradesh. Tobacco Free Initiatives in Himachal Pradesh. Department of Health and Family Welfare, Government of Himachal Pradesh, 2010. Available from: <https://www.rctcpgi.org/pdf/Smoke-Free-Shimla-case-study.pdf>, assessed 20 June 2011.
6. Guidance sheet for implementation of the 'Smoke-free Rules' under Tobacco Control Laws. Available from: [https://forum.chandigarhcity.info/pdf/Guidance\\_sheet\\_for\\_implementation\\_of\\_the\\_Smokefree\\_Rules\\_under\\_Tobacco\\_Control\\_Laws.pdf](https://forum.chandigarhcity.info/pdf/Guidance_sheet_for_implementation_of_the_Smokefree_Rules_under_Tobacco_Control_Laws.pdf), accessed 3 August 2022.
7. Raute LJ, Gupta PC, Pednekar MS. Smoking ban and indoor air quality in restaurants in Mumbai, India. *Indian J Occup Environ Med*. 2011;15(2):68–72. doi: 10.4103/0019-5278.90377.
8. Travers MJ, Nayak NS, Annigeri VB, Billava NN. Indoor air quality due to secondhand smoke: signals from

- selected hospitality locations in rural and urban areas of Bangalore and Dharwad districts in Karnataka, India. *Indian J Cancer*. 2015;52(4):708–13. doi: 10.4103/0019-509X.178447.
9. Kaur J, Prasad VM. Air nicotine monitoring for second hand smoke exposure in public places in India. *Indian J Community Med*. 2011;36(2):98–103. doi: 10.4103/0970-0218.84126.
  10. Yang J, Modi BV, Tamplin SA, Aghi MB, Dave PV, Cohen JE. Air nicotine levels in public places in Ahmedabad, India: before and after implementation of the smoking ban. *Indian J Community Med*. 2015;40(1):27–32. doi: 10.4103/0970-0218.149266.
  11. Lal PG, Wilson NC, Singh RJ. Compliance surveys: an effective tool to validate smoke-free public places in four jurisdictions in India. *Int J Tuberc Lung Dis*. 2011;15(4):565–6. doi: 10.5588/ijtld.10.0372. Erratum in: *Int J Tuberc Lung Dis*. 2012;16(2):284.
  12. Goel S, Tripathy JP, Singh RJ, Lal P. Smoking trends among women in India: analysis of nationally representative surveys (1993–2009). *South Asian J Cancer*. 2014;3(4):200–2. doi: 10.4103/2278-330X.142958.
  13. Kumar R, Goel S, Harries AD, Lal P, Singh RJ, Kumar AM, et al. How good is compliance with smoke-free legislation in India? Results of 38 subnational surveys. *Int Health*. 2014;6(3):189–95. doi: 10.1093/inthealth/ihu028.
  14. Kumar R, Chauhan G, Satyanarayana S, Lal P, Singh RJ, Wilson NC. Assessing compliance to smoke-free legislation: results of a sub-national survey in Himachal Pradesh, India. *WHO South East Asia J Public Health*. 2013;2(1):52–6. doi: 10.4103/2224-3151.115843.
  15. Goel S, Kumar R, Lal P, Sharma D, Singh RJ. Refining compliance surveys to measure the smokefree status of jurisdictions using the Delphi method. *Public Health Action*. 2013;3(4):342–5. doi: 10.5588/pha.13.0063.
  16. Nichter M, Padmajam S, Nichter M, Sairu P, Aswathy S, Mini GK, et al. Developing a smoke free homes initiative in Kerala, India. *BMC Public Health*. 2015;15:480. doi: 10.1186/s12889-015-1815-1.
  17. Wipfli H, Avila-Tang E, Navas-Acien A, Kim S, Onicescu G, Yuan J, et al.; Famri Homes Study Investigators. Secondhand smoke exposure among women and children: evidence from 31 countries. *Am J Public Health*. 2008;98(4):672–9. doi: 10.2105/AJPH.2007.126631.
  18. World Health Organization. Smokefree Howrah - Case Study. WHO; 2017. Available from: [https://cdn.who.int/media/docs/default-source/documents/the-power-of-cities/howrah-case-study-final.pdf?sfvrsn=1af8638c\\_2](https://cdn.who.int/media/docs/default-source/documents/the-power-of-cities/howrah-case-study-final.pdf?sfvrsn=1af8638c_2), accessed 3 August 2022.
  19. Kashiwabara M, Arul R, Goswami H, Narain JP, Armada F. Local governments and civil society lead breakthrough for tobacco control: lessons from Chandigarh and Chennai. *Indian J Public Health*. 2011;55(3):234–9. doi: 10.4103/0019-557X.89937.
  20. Dawson J, Singh RJ. Tobacco Control Case Study- Smoke Free City, Chandigarh. International Union against Tuberculosis and Lung Disease; 2009.

## 8.3: Regulating tobacco advertising promotion and sponsorship

### Introduction

All forms of tobacco advertising, promotion and sponsorship (TAPS) market a tobacco product directly or by means that are false, misleading, deceptive or likely to create an erroneous impression of the characteristics, health effects, hazards or emissions of the product. Tobacco advertising plays an important role in encouraging current tobacco users to continue with their habit, and influencing non-users and past users to begin tobacco use. The world over, the tobacco industry spends enormous amount of money on TAPS every year to market its products. As more than 80 lakh people die globally due to tobacco-induced diseases and the industry needs replacement customers to sustain itself.

Exposure to TAPS is significantly related to the increased use of tobacco among the youth. A cross-sectional study of adolescents in 2004 showed that exposure to tobacco advertisements and receptivity to tobacco marketing in India were significantly related to an increase in tobacco use.<sup>1</sup> Similarly, a longitudinal study showed that adolescents exposed to tobacco advertisements at more than four places were 1.5 times (95% CI 1.12–1.94;  $p < 0.05$ ) more likely to progress towards using tobacco than unexposed adolescents.<sup>2</sup>

### History of TAPS regulations in India

The Cigarettes (Regulation of Production, Supply and Distribution) Act, enacted in 1975, was the first legislation that made it mandatory to display the health warning, “Cigarette smoking is injurious to health” on all advertisements of cigarettes.<sup>3,4</sup> Following this, the governments of the states/Union Territories enacted between 1997 and 2002 local tobacco control laws

envisaging a ban on advertisements of tobacco products. However, it was only with the advent of the COTPA that a concerted effort was made to eventually eliminate all direct and indirect TAPS concerning tobacco. Section 5 of the COTPA specifically bans all direct and indirect advertisements that suggest or promote the use or consumption of cigarettes or any other tobacco product through all mediums.<sup>5</sup> However, the exemptions that COTPA provides for advertisements at the point of sale (PoS) and in-package and on-package advertising has weakened the law, which otherwise envisions a comprehensive ban on tobacco advertisements. The most common modes of TAPS are PoS advertisements, the electronic and print media, the internet OTT (over-the-top), streaming platforms and corporate social responsibility (CSR) activities. Smokeless tobacco (SLT) advertising through surrogate means, celebrity endorsement and brand stretching are rampant.<sup>6</sup>

### Challenges

Despite the existing laws prohibiting TAPS, the tobacco industry manages to promote its products directly or indirectly by circumventing the laws. Indirect or surrogate tobacco advertising, such as brand stretching, CSR activities, and promotion through films, television and new media, including the internet, distribution of free samples, etc., gathered momentum as the tobacco industry came under increasing pressure.<sup>7,8</sup> Some of the industry's main devious strategies are described below.

### Television and films

Tobacco imagery in the films has been shown to generate high levels of exposure of the population at large in India.<sup>9</sup> In October 2012,

after 7 years of litigation, India implemented new Rules, under Section 5 of COTPA, on the display of tobacco products and brands and the use of tobacco, both in domestic and foreign films and television programmes.<sup>10</sup> According to these regulations, any Indian film depicting tobacco use has to fulfil the statutory guidelines (Box 8.2). In 2021, a report showed that the Indian film industry was adhering to the legislation. In a span of 10 years, there has been a significant reduction in the display of tobacco imagery in

films, from 89% in 2005 to less than 48% in 2015.<sup>11</sup> However, primary studies conducted at the state level show that tobacco imagery is more common in regional languages films.<sup>9–12</sup> The youth have become more aware of the fight against tobacco and demand compliance with the Rules on films and TV programmes. This was evident when the students of a school in Delhi wrote a letter to a Bollywood actress, expressing their displeasure with scenes depicting smoking in movies.<sup>12</sup> (Figure 8.4)

### School kids ask Ms. Kareena to stop smoking on-screen

By Bollywood Hungama News Network - September 22, 2012 - 1:42 PM IST

Like 0



Figure 8.4: School students' letter to Ms. Kareena in 2012<sup>12</sup>

#### BOX 8.2: Statutory guidelines under the COTPA film and TV Rules

- A strong editorial justification explaining the necessity of the display of tobacco products or their use in films to the Central Board of Film Certification.
- Anti-tobacco health spots of minimum 30-seconds duration at the beginning and middle of a film/TV programme.
- Anti-tobacco health warning as a prominent static message at the bottom of the screen during the period of display of the tobacco products or their use in the film and television program.
- An audiovisual "disclaimer" on the ill-effects of tobacco use of minimum 20-seconds duration at the beginning and middle of a film/TV programme.



## Advertising at point of sale

Systematic reviews<sup>13–15</sup> found that marketing at PoS increased the youth's susceptibility to the use of tobacco and stimulated impulse purchases among users. Advertisements at PoS are exempted from the ban under Section 5 of

COTPA 2003, undermining the law mandating a total ban on all direct and indirect advertisement of tobacco products. Therefore, the GoI notified rules under COTPA 2003 to regulate advertisement of tobacco at PoS. The specifications under these rules are given in Box 8.3.<sup>16</sup>

### BOX 8.3: COTPA restrictions on tobacco promotion at PoS

- Advertisements are allowed only at the PoS.
- The PoS may have a maximum of two boards for advertisements.
- The size of advertisement boards is to be no more than 90 cm by 60 cm.
- The content of the advertisements should be limited to the brand name or picture of tobacco product.
- At least 25% of the surface area of the advertisement board must include a health warning.

## Advertising on internet and on social media

There is widespread depiction of tobacco use and the practice of tobacco brand placement is rampant on the internet, such as on streaming (or OTT platforms)<sup>17</sup> and social networking sites (SNS). An Indian study (2019) assessed the tobacco imagery in online series that were popular among adolescents and young adults, and found that seven out of ten series had tobacco imagery and none was compliant with the rules.<sup>17</sup> Similarly, the tobacco industry has taken to using social media as a major avenue for TAPS, via celebrity endorsements, influencers, hashtag trends, etc. to glamorize the use of tobacco. Privacy settings allow limited visibility of promotions only to age-specific audiences, making regulation difficult. These practices are being followed globally and in India. There are self-regulatory guidelines for the restriction of the advertisement and promotion of tobacco on Facebook, Instagram, Pinterest and YouTube.<sup>18,19</sup> However, researchers worldwide have highlighted that despite these guidelines, there is a good amount of pro-tobacco content on the SNS.<sup>20–22</sup> Further, the sites use influencers who have a significant following online.<sup>23</sup> Similarly in India, as a part of the campaign conducted by

Public Health Foundation of India (PHFI) in 2020, school and college students (n=53) collated online data (posts) consisting both of photos and videos (n=711) that promoted tobacco, and they identified 148 SNS pages where tobacco was sold online. They also identified various influencers who were uploading photos or videos with tobacco content, and one of these influencers had around 2.26 crore followers all around the world in September 2020.<sup>24</sup>

Thus, there is a need for stricter regulation of digital media/online media platforms. A GoI notification, dated 9 November 2020, brought films and audiovisual programmes made available by online content providers within the ambit of the Ministry of Information and Broadcasting.<sup>25</sup> This is a significant step towards ensuring that tobacco promotion via OTT platforms is regulated, and towards denormalizing TAPS on the internet. To ensure that the objectives of the notification are realized, the proposed amendments to COTPA Section 5 stipulate a ban on TAPS in all mediums in all forms.<sup>26</sup> Following the government's laudable move to ban e-cigarettes in 2019, it is necessary to amend Section 5 of the COTPA as prohibitory measures are essential to regulate TAPS in all



forms of the media, including the Internet and OTT platforms.

## Sponsorship

The tobacco industry also indirectly promotes its products through sponsorships (contribution in any form to any event, activity or individual with the aim, effect or likely effect of promoting a tobacco product or tobacco use, either directly or indirectly). Some examples are a live concert in Hyderabad in 2019 and a cricket match in 2020.<sup>27</sup> One tobacco company has been organizing musical events (*sangeet sammelans*) since 1978. The tobacco industry has also tried to infiltrate schools by introducing competitions such as the “Sunfeast Milky Magic Competitions” and the “Classmate Spellbee Competitions” to attract children and create brand loyalty. This tactic creates an environment in which the youth have increased exposure to tobacco advertisements, as they watch or attend these events or competitions.

## Corporate social responsibility

According to Article 5.3 of the WHO FCTC, CSR activities by tobacco companies fall within the definition of tobacco sponsorship. Hence, this conflict and inconsistency were challenged in the Madras High Court. Pursuant to the High Court’s order, the Ministry of Corporate Affairs brought out a circular dated 16 May 2017, stating that “companies, while undertaking CSR activities under the provisions of the Companies Act 2013, shall not contravene any other prevailing laws of the land, including the COTPA 2003”.

Despite the circular, tobacco companies have been participating in CSR activities, and launching campaigns such as “Well-being Out of Waste” that reflect the Government’s “Swachh Bharat” programme and target school children. They have continued to fulfil their CSR during the COVID-19 pandemic by donating to the funds of the Prime Minister’s Relief Fund and several Chief Ministers Relief Fund, with these high-level public leaders endorsing and appreciating the donations.<sup>28</sup> This is largely due to the lack of a clear provision in

COTPA prohibiting CSR activities and existence of an umbrella provision under the Companies Act 2013 allowing companies to participate in CSR activities. Box 8.4 highlights some national and sub-national case studies on TAPS.

## Challenges and opportunities

The implementation of the ban on TAPS in India is facing several challenges, which are compounded by the conflicting legislation that allows such inconsistency to continue. For example, the Cable Television Network Regulation allows advertisements of co-branded products. The Cinematograph Act, 1952 prohibits “glamorization” of tobacco and smoking in movies, without defining the term,<sup>29</sup> but does not overtly prohibit indirect advertising as does Section 5 of the COTPA regulations and, therefore, the depiction of tobacco imagery continues in films. Hearing a 2016 petition on TAPS on the internet, the Delhi High Court directed the Ministry of Electronics and Information Technology in 2016 to frame appropriate guidelines to ban the advertisement of cigarettes, tobacco products, liquor and other intoxicants on the internet.<sup>30</sup>

The MoHFW constituted a national-level steering committee under Section 5 of COTPA to monitor, and take suo moto cognizance of and specific action against violations of the Section. It also mandated that similar committees be formed at the state and district levels to ensure compliance with and take action against violations of Section 5 of the COTPA. Although such committees have been constituted in most states and districts, the action taken on TAPS is far from adequate at all levels. Himachal Pradesh is an exception. It has prosecuted violations under Section 5, leading to conviction and therefore, more effective enforcement of the provision. To implement the ban on TAPS, the committees at the national, state and district levels must be strengthened and sensitized to monitor and act on violations and the exemption of advertising at PoS and on-pack and in-pack, under COTPA Section 5 must be withdrawn.

## BOX 8.4: Case Studies

### Tobacco Monitor App

Tobacco Monitor is a mobile application that helps in acquiring information regarding the latest tobacco control policies, as well as tobacco cessation.<sup>31</sup> It is a platform for registering complaints of violations of tobacco control policies. The application was launched on 30 May 2015. The version of this application, developed by the Mary Anne Charity Trust, was launched on 29 May 2019.<sup>32</sup>

The Tobacco Monitor app received several complaint checks regarding violations of various tobacco control laws in the Chamundi hills on 28 December 2018. A review found that petty shops in and around the Chamundi hills of Mysuru district, Karnataka had been violating several laws under COTPA and the Food Safety and Standards Act 2006 by selling tobacco products without proper pictorial health warnings (PHWs). With the support of the State Tobacco Control Cells (STCC) and enforcement authorities action was taken against 10 shopowners. Tobacco products violating the tobacco control laws were seized by enforcement officers, and the shopowners were fined.<sup>33</sup>

Another complaint was received regarding a handwriting competition sponsored by the Classmate stationery brand launched by ITC in 2003. Upon review, it was found that the Handwriting Olympiad was a school-level competition which was conducted by Mastermind Pvt. Ltd. and for which Classmate Stationery was a title sponsor. The Olympiad was in its seventh season, and the finale was to be held at the Nakhrali Dhani Resort in Indore, Madhya Pradesh on 23 April 2017. Over 2000 schools and 1.65 lakh students from across the country were to participate in the Olympiad, a year-long exercise conducted in schools. The participants included students in the 2nd to the 12th grades.<sup>33</sup>

The Tamil Nadu School Education Department were urged to stop the tobacco industry from interfering through school competitions. As a result, school children in Tamil Nadu were prevented from participating in the Handwriting Olympiad. The Classmate Handwriting Olympiad itself was stopped. The Tamil Nadu and Madhya Pradesh governments were sensitized on interference by the tobacco industry and the industry's tactic of targeting children was exposed. Thus, the children were protected from the influence of the tobacco industry.<sup>34</sup>

### India's first case against celluloid advertisement of tobacco

The first case related to celluloid promotion of tobacco products in India was registered in Kerala on 12 November 2008 by Mr Joseph Saju, Circle Inspector of Police, Fort Kochi. A suo motu complaint was registered against the actor, Mr Nishanth, for scenes that showed him smoking in the film *Apoorvaragam*, directed by Mr Sybi Malayil. The scenes of smoking were recorded in Kokkers Theatre, Fort Kochi and submitted to the Judicial First Class Magistrate, Ernakulam to obtain permission for registering a case. With the permission of the Magistrate, a first information report (FIR) was registered and a notice issued to Mr Nishanth. The actor appeared before the court and paid a fine, and the case was disposed of. This is the case that was presented before the Kerala High Court as an evidence for the public interest litigation (PIL) filed by the Kerala Voluntary Health Services in 2010. In this case, the FIR and the evidence submitted were the prime exhibits in the PIL.<sup>35</sup>

### Kerala declared a “tobacco advertisement-free” state

The Health and Family Welfare Department, Government of Kerala, in collaboration with CSOs, conducted a state-wide campaign against PoS advertisements. During the one-month-long campaign, lakhs of advertisement boards and other advertisement materials, such as calendars, clocks, display boxes and lighting aids, were removed. Enforcement squads were formed in all primary health centres, with medical officers serving as coordinators and health inspectors as conveners. Members of the police force and civil society representatives were also included in all the squads. In the course of the campaign, more than a thousand PoS were given notice. The compliance studies conducted after the campaign by research organizations reported that the degree of compliance with the advertising regulations for PoS under COTPA was 98%. The then Chief Minister of Kerala declared the state a tobacco advertisement-free state in March 2015.<sup>36</sup>

## Conclusion

One of the important factors contributing to the tobacco epidemic is the increase in TAPS by the tobacco industry. The industry employs TAPS to increase demand for its products, often by targeting specific groups or market segments. The WHO FCTC recommends the implementation of a comprehensive ban on TAPS as part of an effective set of tobacco

control policies. Article 13 of the WHO FCTC and its guidelines mandate a comprehensive ban on all TAPS. Thus, a ban on TAPS is one of the MPOWER strategies and is included in the “best buys” for effective tobacco control. If India is to do away with TAPS, it would need to amend COTPA to prohibit PoS and in-pack and on-pack advertising under Section 5. The proposed draft COTPA Amendment Bill 2020 is a step in the right direction.

## Key messages

- The tobacco industry has expanded its scope to influence people, especially the youth, through TAPS.
- The partial ban on advertisement and promotion of tobacco products in the traditional media, has prompted the tobacco industry to focus on OTT platforms and SNS as these are extensively used by the youth.
- The committees at the national, state and district levels for monitoring violations under Section 5 of the COTPA must be strengthened. Their members should be sensitized on the need to continuously monitor TAPS and conduct regular follow-up with regard to violations.
- Parliament should introduce and pass the COTPA Amendment Bill 2020, which proposes a comprehensive ban on TAPS in all media and the withdrawal of the exemption granted to PoS and on-pack and in-pack advertisements.

## REFERENCES

1. Arora M, Reddy S, Stigler MH, Perry CL. Associations between tobacco marketing and use among urban youth in India. *Am J Health Behav.* 2008;32(3):283–94. Available from: <http://www.fctc.org>, accessed 4 August 2022.
2. Arora M, Gupta VK, Nazar GP, Stigler MH, Perry CL, Reddy KS. Impact of tobacco advertisements on tobacco use among urban adolescents in India: results from a longitudinal study. *Tob Control.* 2012;21(3):318–24. doi: 10.1136/tc.2010.040733.
3. The Cigarettes Act (Regulation of Production, Supply and Distribution). Government of India. Available from: [https://indianrailways.gov.in/railwayboard/uploads/directorate/security/rpf/Files/law/BareActs/cigaretts\\_act1975.html#:~:text=%5B16th%20August%2C%201975.%5D,connected%20therewith%20or%20incidental%20thereto.&text=1.,Short%20title%2C%20extent%20and%20commencement,](https://indianrailways.gov.in/railwayboard/uploads/directorate/security/rpf/Files/law/BareActs/cigaretts_act1975.html#:~:text=%5B16th%20August%2C%201975.%5D,connected%20therewith%20or%20incidental%20thereto.&text=1.,Short%20title%2C%20extent%20and%20commencement,) accessed 4 August 2022.
4. Kaur J, Jain DC. Tobacco control policies in India: implementation and challenges. *Indian J Public Health.* 2011;55(3):220–7. doi: 10.4103/0019-557X.89941.
5. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003. Government of India. Available from: <http://legislative.gov.in/sites/default/files/A2003-34.pdf>, accessed 4 August 2022.
6. Yadav A, Ling BM, Glantz. Smokeless tobacco industry's brand stretching in India. *Tob Control.* 2020;0:1–3. DOI: 10.1136/tobaccocontrol-2019-055382.
7. Mazumdar PD, Narendra S, John S. Tobacco advertising, promotion and sponsorship across south and south east Asia – challenges and opportunities. Centre for Media Studies & Healthbridge, India; 2009. Available from: [https://healthbridge.ca/dist/library/TAPS\\_Report\\_final.pdf](https://healthbridge.ca/dist/library/TAPS_Report_final.pdf), accessed 4 August 2022.
8. National Cancer Institute. Tobacco Control Monograph Series, No 19 – The role of the media in promoting and reducing tobacco use. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health; 2008. Available from: [https://cancercontrol.cancer.gov/sites/default/files/2020-08/m19\\_complete.pdf](https://cancercontrol.cancer.gov/sites/default/files/2020-08/m19_complete.pdf), accessed 4 August 2022.
9. Kulkarni MM, Kamath VG, Cranwell J, Britton J, Nazar GP, Arora M, et al. Assessment of tobacco imagery and compliance with tobacco-free rules in popular Indian films. *Tob Control.* 2020;29(1):119–21. doi: 10.1136/tobaccocontrol-2018-054613.
10. Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Amendment Rules, 2012. Notification G.S.R 708(E). Ministry of Health and Family Welfare, Government of India; 2012.
11. Yadav A, Glantz SA. Tobacco imagery in entertainment media: evolution of tobacco-free movies and television programmes rules in India. *BMJ Glob Health.* 2021;6(1):e003639. doi: 10.1136/bmjgh-2020-003639.
12. School kids ask Kareena to stop smoking on-screen. Bollywood Hungama News Network; 2012. Available from: <https://www.bollywoodhungama.com/news/bollywood/school-kids-ask-kareena-to-stop-smoking-on-screen/>, accessed 4 August 2022.
13. Robertson L, Cameron C, McGee R, Marsh L, Hoek J. Point-of-sale tobacco promotion and youth smoking: a meta-analysis. *Tob Control.* 2016;25(e2):e83–e89. doi: 10.1136/tobaccocontrol-2015-052586.
14. Robertson L, McGee R, Marsh L, Hoek J. A systematic review on the impact of point-of-sale tobacco promotion on smoking. *Nicotine Tob Res.* 2015;17(1):2–17. doi: 10.1093/ntr/ntu168.
15. Paynter J, Edwards R. The impact of tobacco promotion at the point of sale: a systematic review. *Nicotine Tob Res.* 2009;11(1):25–35. doi: 10.1093/ntr/ntrn002.
16. Mistry R, Pednekar MS, McCarthy WJ, Resnicow K, Pimple SA, Hsieh HF, et al. Compliance with point-of-sale tobacco control policies and student tobacco use in Mumbai, India. *Tob Control.* 2019;28(2):220–6. doi: 10.1136/tobaccocontrol-2018-054290.
17. Arora M, Nazar GP, Chugh A, Rawal T, Shrivastava S, Sinha P, et al. Tobacco imagery in on-demand streaming content popular among adolescents and young adults in India: implications for global tobacco control. *Tob Control.* 2021;30(1):42–8. doi: 10.1136/tobaccocontrol-2019-055360.
18. Facebook. Advertising policies.
19. Youtube. Advertiser-friendly content guidelines - YouTube Help.
20. Freeman B, Chapman S. British American Tobacco on Facebook: undermining Article 13 of the global World Health Organization Framework Convention on Tobacco Control. *Tob Control.* 2010;19(3):e1–9. doi: 10.1136/tc.2009.032847.
21. Richardson A, Ganz O, Vallone D. The cigar ambassador: how Snoop Dogg uses Instagram to promote tobacco use. *Tob Control.* 2014;23(1):79–80. doi: 10.1136/tobaccocontrol-2013-051037.
22. Bromberg JE, Augustson EM, Backinger CL. Portrayal of smokeless tobacco in YouTube videos. *Nicotine Tob Res.* 2012;14(4):455–62. doi: 10.1093/ntr/ntr235.
23. New Investigation Exposes How Tobacco Companies Market Cigarettes on Social Media in the U.S.

- and Around the World - Campaign for Tobacco-Free Kids. TobaccoFreeKids.org; 2018. Available from: [https://www.tobaccofreekids.org/press-releases/2018\\_08\\_27\\_ftc](https://www.tobaccofreekids.org/press-releases/2018_08_27_ftc), accessed 4 August 2022.
24. PHFI. 'Let's team up! Youth for #NOTobacco Campaign, 2020. Available from: <https://mk-mk.facebook.com/NMT21C/posts/3097547397002270>, accessed 4 August 2022.
  25. Cabinet Secretariat Notification (GC-DL-E-10112020-223032), 9 November 2020. The Gazette of India: Extraordinary; 2020. Available from: <https://egazette.nic.in/WriteReadData/2020/223032.pdf>, accessed 5 August 2022.
  26. Ministry of Family Health and Family Welfare (Tobacco Control Division). Notification No. F.No.P.16011/04/2020-TC (Part). Government of India; 2021. Available from: [https://ntcp.nhp.gov.in/assets/document/Cigarettes\\_and\\_Other\\_Tobacco\\_Products\\_Prohibition\\_of\\_Advertisement\\_and\\_Regulation\\_of\\_Trade\\_and\\_Commerce\\_Production\\_Supply\\_and\\_Distribution\\_Amendment\\_Bill\\_2020.pdf](https://ntcp.nhp.gov.in/assets/document/Cigarettes_and_Other_Tobacco_Products_Prohibition_of_Advertisement_and_Regulation_of_Trade_and_Commerce_Production_Supply_and_Distribution_Amendment_Bill_2020.pdf), accessed 5 August 2022.
  27. Kapoor S, Lal P, Yadav A. Indirect tobacco advertising, promotion and sponsorships in the Indian Premier League 2020: Tobacco Industry's continuous presence in Indian cricket. *Indian J Tuberc.* 2021;68S:S7-S13. doi: 10.1016/j.ijtb.2021.07.021.
  28. Yadav A, Lal P, Sharma R, Pandey A, Singh RJ. Tobacco industry corporate social responsibility activities amid COVID-19 pandemic in India. *Tob Control.* 2021:tobaccocontrol-2020-056419. doi: 10.1136/tobaccocontrol-2020-056419.
  29. Ministry of Information and Broadcasting. New Delhi Guidelines for Central Board of Film Certification. S.O. 836-(E). Government of India. 1991. <https://www.mib.gov.in/acts/cinematograph-act-1952-and-rules> (accessed December 15 2019)
  30. Rishabh Kapur vs Union of India (Delhi High Court) W.P.(C)3615/2016).
  31. Vini M, Sahana HS, Pradnya K, Abhishek K, Ankita M. Evaluating the effectiveness of a 'Tobacco Monitor' App in reporting violations of tobacco policy in the community. *Bioinformation.* 2021;17(2):306-12. doi: 10.6026/97320630017306.
  32. Chaitanya SVK. Tobacco monitor: India's first mobile app to expose violators. *Deccan Chronicle*; 29 March 2019. Available from: <https://www.deccanchronicle.com/150531/nation-current-affairs/article/tobacco-monitor-india%E2%80%99s-first-mobile-app-expose-violators>, accessed 5 August 2022.
  33. Schools barred from handwriting Olympiad. *The Hindu*; 21 April 2017. Available from: <https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/schools-barred-from-handwriting-olympiad/article18187777.ece>, accessed 5 August 2022.
  34. Don't participate in ITC Group's Olympiad: Government. *dtnext.in*; 22 April 2017. Available from: <https://www.dtnext.in/city/2017/04/21/dontparticipate-in-itc-groups-olympiad-government>, accessed 5 August 2022.
  35. Judgement dated 26.03.2012 in WP(C) No.38513/2010 (PIL of Kerala Voluntary Health Services) of Hon'ble High Court of Kerala (2). G.O.(RT). No. 1479/12/Home dated 17/05/2012: Department of Home Kerala. (3) GSR 708(E),Dt.21/09/2012.
  36. Kerala: India's first tobacco ad-free state. *Blog - Tobacco Control*; 2015. Available from: <https://blogs.bmj.com/tc/2015/09/04/kerala-indias-first-tobacco-ad-free-state/>, accessed 5 August 2022.



## 8.4: Pictorial health warnings

### Introduction

Graphic health warnings are a potent tool to create awareness about the serious and adverse health consequences of tobacco use<sup>1</sup> especially among children, youth, and illiterate and semi-literate persons.<sup>2</sup> Systematic reviews have shown that warning labels with appropriate messages have been found effective in increasing knowledge about risks associated with tobacco use and discouraging intentions to use tobacco among adolescents, persuading tobacco users to quit, and keeping ex-users from starting again.<sup>1,2</sup>

Article 11 of the WHO FCTC calls for Parties to take effective measures to ensure that each unit packet and package of tobacco products and any outside packaging and labelling of such products also carries health warnings describing the harmful effects of tobacco use. Guidelines to Article 11 note that plain packaging “may increase the noticeability and effectiveness of health warnings and messages, prevent the package from detracting attention from them, and address industry package design tactics that may suggest that some products are less harmful than others”. Guidelines to Article 13 recommend parties to consider “adopting plain packaging requirements, to eliminate the effects of advertising and promotion on packaging”.<sup>3</sup>

This sub-chapter introduces efforts undertaken by various stakeholders to support the government in introducing effective pictorial health warnings (PHWs) on tobacco product packages amidst legal and political challenges.

### History and genesis of pack warnings in India

In India, progressively stricter regulations for packaging of tobacco products have been

introduced since 1975 through the Cigarettes (Regulation of Production, Supply and Distribution) Act, 1975, which mandated display of a statutory warning “Cigarette smoking is injurious to health” on all packages of cigarettes. However, the said Act did not include non-cigarette tobacco products such as *bidis*, cigars, chewing tobacco, etc., and the warning specified under the Act was far too mild. Thus, the Parliamentary Committee on Subordinate Legislation, 1995 (CoSL) (10th Lok Sabha) in its 22nd report, recommended enactment of a comprehensive anti-tobacco law that included health warnings.

The CoSL recommended that the health warnings should be made effective by using pictorial depictions and should be extended to cover all tobacco products.<sup>4</sup> In 2001, the Parliamentary Standing Committee on Human Resource Development recommended mandatory pictorial depiction of warnings, such as skull and crossbones, on packages of cigarettes and other tobacco products. Accordingly, the COTPA 2003 was enacted to provide for, among other matters, mandatory depiction of PHWs on tobacco packages which shall be prominent, legible, conspicuous as to its size and colour and depict skull and cross bones as prescribed by the Rules.<sup>5</sup>

The initial set of pack warning rules (The Cigarettes and Other Tobacco Products [Packaging & Labelling Rules] 2006) were notified in July 2006, upon the directions of the High Court of Himachal Pradesh.<sup>6</sup> A Group of Ministers (GoM) was constituted in May 2007 to resolve the various objections raised by the *bidi* industry.<sup>7</sup> In its meeting held on 11 July 2007, the GoM recommended that the MoHFW, Govt consider appropriate modification in the Act, so as to remove the mandatory depiction of skull and cross bones.



Several civil society groups and youth groups made an appeal for early enforcement of PHWs in India to protect and prevent adolescents from initiating tobacco use. In its meeting held on 26 February 2008, the GoM finalized the pictorial warnings and directed the government to notify the same. The government notified the health warnings on 15 March 2008. Scientific evaluations by HRIDAY found these warnings to be ineffective and a need was felt to introduce strong, evidence-based and effective warnings in subsequent rotations.<sup>8</sup> In November 2008, Health for Millions – a CSO – filed a writ petition (WP No. 549 of 2008) on the grounds that the date of implementation of the PHW Rules, 2008 was delayed at the cost of public health. On 6 May 2009, the Solicitor General appearing on behalf of the Union of India gave an undertaking in the Apex Court that the MoHFW will implement the Cigarettes and Other Tobacco Products (Packaging and Labelling) Rules, 2008, from 31 May 2009. As per the 2008 Rules, the size of the PHWs was 40% of the principal display area of the pack and limited to the front of the pack only, with the option of rotation of the images every two years.<sup>9</sup>

In 2011–2012, the MoHFW constituted a committee of experts to review the existing pack warnings and the Rules and suggest appropriate changes within the mandate of COTPA 2003, so that these were in conformity with the guidelines of WHO FCTC and global best practices (Box 8.5). The expert committee recommendations were incorporated into the Rules, 2014 [Cigarettes and Other Tobacco Products (Packaging and Labelling) Amendment Rules, 2014], prescribing specified health warnings covering 85% (60% of PHW and 25% of textual health warning) on both sides/panels of the tobacco product packages. The 2014 Rules were challenged by the tobacco industry on the grounds that they are excessive and unconstitutional.<sup>10</sup>

In 2015, the CoSL, 16th Lok Sabha, in view of the representations received from the tobacco industry recommended keeping in abeyance the implementation of the 2014 Rules till

the committee finalized the examination of the subject and presented its report to the Parliament. Accordingly, a corrigendum was issued on 26 March 2015 suspending the date of implementation. In a PIL filed before the Rajasthan High Court<sup>11</sup> for implementation of 2014 Rules, the High Court vide order dated 3 July, 2015, stayed the operation of the corrigendum, dated 26 March 2015 and directed immediate implementation of the 2014 Rules. On 24 September 2015, the government notified 1 April 2016 as the date of implementation of 2014 Rules.

In a simultaneous development, in cases pending against the 2014 Rules before different High Courts, a stay was granted on the implementation of the Rules. Further, in its final report on 15 March 2016 to the Parliament, the CoSL 16th Lok Sabha, recommended implementation of pack warnings covering 50% of both sides of cigarettes packs and 50% on one side for *bidi* and SLT packs.<sup>11</sup>

The Supreme Court of India amidst the conundrum of challenges [SLP(C) No. 10119-10121 of 2016, Karnataka *Beedi* Association & Anr Vs Union of India & Anr.], vide order dated 4 May 2016, transferred all the matters pending before the different High Courts to the Karnataka High Court and ruled that stay, if any, already granted by any High Court shall not be given effect till the cases are finally disposed of subsequent to the Supreme Court order. The tobacco companies, in compliance with the Packaging and Labelling (Amendment) Rules, 2014, started printing the health warnings covering 85% of the tobacco product packages. The Karnataka High Court, hearing the transferred batch of cases vide judgment order dated 15 December 2017, quashed the 2014 Rules, and restored 2008 health warnings that require printing of warning covering 40% of one side of the principal display area of the pack.<sup>12</sup>

The Supreme Court of India in the appeal against the Karnataka High Court judgment<sup>12</sup>, vide order dated 8 January 2018, stayed the High

### BOX 8.5: Case study – Australia’s plain packaging dispute at the WTO

At the World Trade Organization (WTO), Australia’s plain packaging law was challenged in 2012 primarily on grounds that it was more restrictive of trade than necessary to protect human health, and that it unjustifiably interfered with use of tobacco company trademarks on packaging. In June 2018, a WTO panel rejected these and other claims and opined that tobacco plain packaging was not more trade restrictive than necessary to protect public health, and that it did not infringe any obligations relating to the protection of intellectual property.<sup>16</sup>

Honduras appealed to the Appellate Body against the panel’s report. This appeal was consolidated with the one from the Dominican Republic, into one that ended with the Appellate Body decision published.<sup>16</sup> These appeals have now been rejected. This outcome is in line with litigation in other countries, which has uniformly rejected tobacco industry challenges to plain packaging.

The Appellate Body ruling<sup>16</sup> finally clears the legal hurdle thrown up in the tobacco industry’s efforts to block tobacco control and is likely to accelerate implementation of plain packaging around the globe. This decision represents a landmark victory for global health and a major setback for the tobacco industry.

The WTO decisions on plain packaging signify a comprehensive victory for public health and are important for both their evidentiary and legal findings. The key findings of reports of the panel and the Appellate Body will also provide important guidance for other NCD risk factors, particularly measures to regulate unhealthy foods and alcoholic beverages. In particular, the key legal principles that there is no right to use a trademark under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Article 20, and Article 2.2 (Technical Barriers to Trade), will be relevant across NCD risk factors.<sup>17</sup>

Court judgment, with the following observation:

*“Though a very structural submission has been advanced by the learned counsel for the respondents that it will affect their business, we have remained unimpressed by the said preponement as we are inclined to think that health of a citizen has primacy and he or she should be aware of that which can affect or deteriorate the condition of health. We may hasten to add that deterioration may be a milder word and, therefore, in all possibility the expression ‘destruction of health’ is apposite.”*

This paved the path for the implementation of the large PHWs covering 85% of the front and back principal display areas of pack along with the National Tobacco Quitline number. Thereafter, as per the report “Cigarette Package Health Warnings – International Status Report” (2021) published by the Canadian Cancer Society, India is ranked eighth in an international

overview ranking of 206 countries/jurisdictions based on warning size, and those that have finalized requirements for pictorial warnings. India was at the 136th position in 2014 when the international report was first published.

The journey described above explains India’s remarkable progress in bringing effective PHWs and reaching the eighth position from the dismal 136th global position.<sup>13</sup> Table 8.1 and Box 8.6 provide a timeline of introduction of effective PHWs in India.

### Coordinated action by the government, judiciary, civil society organizations and researchers

Today India is considered among the global leaders with respect to PHWs on tobacco

**Table 8.1: Timeline of pictorial health warnings (PHWs) for tobacco product packages in India**

Notification	Rule	Effective from
July 2006	PHWs for tobacco products notified, skull and cross bones including images of adverse health impact of tobacco to be displayed on tobacco packs. 50% coverage on both sides of the pack	February 2007
January 2007	Group of Ministers (GoM) delays implementation	June 2007
September 2007	Skull and cross bones removed by amendment of the Act	December 2007
December 2007	Implementation delayed by four months due to the order of the Himachal Pradesh High Court	March 2008
March 2008	New rules superseding the 2006 Rules notified with new schedule of mild pictorial warnings	November 2008
November 2008	Implementation delayed; The government gave an undertaking in the Supreme Court to make the notified warnings mandatory from 31 May 2009	May 2009
May 2009	Reduction in size of warnings to 40% on the front panel of the principal display area, while wholesale, semi-wholesale, <i>poora</i> package (wholesale packets) are exempt from displaying warnings	31 May 2009 (implemented)
March 2010	New pictorial warning notified (rotation)	June 2010
May 2010	Implementation delayed	December 2010
December 2010	The cycle of rotation changed to two years; the older warnings continued till 30 May 2011	
2011–2012	The MoHFW's Committee of Experts prescribed specified health warnings covering 85% (60% of PHWs and 25% of textual health warning) on both sides/panels of the tobacco product packages	
March 2015	A corrigendum is issued suspending the date of implementation of 85% PHWs, due to the ongoing CoSL review	
July 2015	The Rajasthan High Court stayed the operation of the corrigendum and directed immediate implementation of the 2014 Rules	
September 2015	The government notified the date of implementation of the 2014 Rules	April 2016
April 2016	85% PHWs are enforced	
December 2017	The Karnataka High Court quashed the 2014 Rules, and restored 2008 health warnings (covering 40% of one side of the principal display area)	
January 2018	The Supreme Court in the appeal against the Karnataka High Court judgment stayed the High Court judgment	
April 2018	85% PHWs, along with the National Tobacco Quitline number, implemented	September 2018

## BOX 8.6: Pictorial health warnings notified by Ministry of Health and Family Welfare, Government of India

July 2006



September 2007



March 2008



March 2010



May 2011





**September 2012**



**October 2014**



**April 2018**



**April 2020**



**July 2022**



product packages. The chronology presented in this chapter highlights the complex pathway to reaching the current 85% PHWs. This journey and its outcomes are a testament to the collective and coordinated efforts of multiple stakeholders, fostering a conducive environment to thwart persistent efforts of the tobacco industry and

its allies, to delay and dilute strong PHWs for tobacco product packages. While the MoHFW and the judiciary provided strong leadership and commitment, they received steadfast support from CSOs, youth, women, people affected by tobacco, academic and research institutions, and policy think tanks, from across the country.

An evidence-based and sustained public narrative was created in support of large and effective PHWs, through the concerted action of each of these stakeholders. This mass movement of multi-pronged action was instrumental in withstanding and negating vested interests, which used false arguments to derail and disrupt the timely implementation of this important tobacco control policy measure. Evidence-generation to inform policy formulation and enforcement was one of the most important factors in this success story. It included: (i) field-testing pictorial warnings to create a repository of effective pictograms and messages; (ii) conducting qualitative studies to gauge public perception of existing and proposed warnings (some of these studies concluded that existing small and diluted warnings were ineffective in conveying the hazards of tobacco use; preventing experimentation and initiation and; promoting cessation); (iii) collating global evidence on effective PHWs and contextualizing those to Indian settings and; (iv) developing and disseminating position papers on the need to prioritize tobacco control as a critical public health and developmental issue.

The MoHFW's resolve received widespread support including from the then Director General of the WHO, Dr Margaret Chan, and many other international organizations. Some key public mobilization activities included: opinion polls, exhibitions, signature campaigns, press conferences, newspaper advertisements, opinion editorials, poster-making competitions, dissemination of policy briefs, monitoring and addressing industry tactics. All these synergistic efforts were instrumental in the notification and enforcement of strong and effective PHWs on tobacco product packages in India.

## Challenges in implementation of pack warnings

While the government is implementing the large pack warnings and rotating the images at regular intervals, there are multiple challenges

as there are a variety of tobacco products (both smoking and smokeless) of various shapes and sizes that are produced in formal and informal settings. Some other challenges are:

- Availability of loose (unpacked) tobacco products and in mini sizes that enables products to be sold without warnings or with ineffective/illegible warnings.
- Illegal sale of banned products such as *paan masala* with tobacco/nicotine and *gutkha*, that bear no warnings and claim to be for export (or export quality), which would exempt them from bearing warnings.
- Absence of standardized/plain packaging provides an opportunity to manipulate the size, shape and appearance of the packages.

## Recommendations and the way forward

As per the WHO Report<sup>14</sup> on the Global Tobacco Epidemic, 2021, India has large PHWs on tobacco packs with all appropriate characteristics. However, a recent study<sup>15</sup> conducted in India has observed that there is very poor compliance with the health warning label law on indigenous products such as *bidi* and SLT products. The large PHWs continue to be an important tool for health education for a country like India where a majority of tobacco users are illiterate or semi-literate. Against this background the following measures are recommended:

- The government should notify only field-tested PHWs.
- The images and messages, which are a key element of PHWs, need to be changed frequently to retain their efficacy.
- The pack warnings and messages should be rolled out and rotated in such a manner that various NCDs caused by tobacco are depicted on tobacco product packs in a phased manner and not limited to one particular disease.



- The enforcement of the pack warnings needs to be strengthened in view of the non-compliance by the tobacco industry. The MoHFW may consider developing an enforcement mechanism in collaboration with other ministries notified under the Rules.
- An assessment of effectiveness of warnings should be included in reporting on Article 11 of the FCTC.
- India implemented larger 85% PHWs on all tobacco products from 1 April 2016. However, to remove the last bit of glamour and attraction from the tobacco packs, it must now consider embracing plain packaging, in line with global best practices. This will disallow on-pack and in-pack advertising, which is currently permitted.

## Key messages

- Strong and evidence-based PHWs are one of the most effective policy measures in tobacco control.
- The current 85% PHWs in India were made possible due to the well-coordinated and strategic action by multiple stakeholders, including the government, the judiciary, CSOs, academics, youth, media and the general public.
- It is important that the warnings are rotated periodically to exhibit a multitude of NCDs caused due to tobacco use.
- As a next step, India should consider plain packaging of tobacco product packages to strengthen the COTPA Packaging and Labelling Rules.

## REFERENCES

1. Pang B, Saleme P, Seydel T, Kim J, Knox K, Rundle-Thiele S. The effectiveness of graphic health warnings on tobacco products: a systematic review on perceived harm and quit intentions. *BMC Public Health*. 2021;21(1):884. doi: 10.1186/s12889-021-10810-z.
2. Francis DB, Mason N, Ross JC, Noar SM. Impact of tobacco-pack pictorial warnings on youth and young adults: a systematic review of experimental studies. *Tob Induc Dis*. 2019;17:41. doi: 10.18332/tid/108614.
3. World Health Organization. Conference of the Parties to the WHO Framework Convention on Tobacco Control. Third Session, Durban, South Africa, 17–22 November 2008. Geneva: World Health Organization; 2008. Available from: [https://apps.who.int/gb/fctc/PDF/cop3/FCTC\\_COP3\\_REC1-en.pdf](https://apps.who.int/gb/fctc/PDF/cop3/FCTC_COP3_REC1-en.pdf), accessed 6 August 2022.
4. Rajasthan State Judicial Academy. Study material for the webinar on Sensitization of Judicial Officers on the Effective Implementation of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003. Rajasthan State Judicial Academy, Jodhpur; 2021. Available from: <https://rajasthanjudicialacademy.nic.in/docs/studyMaterial30012021.pdf>, accessed 6 August 2022.
5. Reddy KS, Gupta PC. Report on Tobacco Control in India. Delhi: Ministry of Health and Family Welfare, Government of India; 2004. Available from: <https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf>, accessed 6 August 2022.
6. High Court of Himachal Pradesh. Ms Ruma Kaushik v. Union of India. CWP No 1223/2004. High Court of Himachal Pradesh; 2006. Available from: <https://www.tobaccocontrolaws.org/litigation/decisions/in-20070510-ruma-kaushik-v.-union-of-india>, accessed 6 August 2022.
7. Arora M, Yadav A. Pictorial health warnings on tobacco products in India: sociopolitical and legal developments. *Natl Med J India*. 2010;23(6):357–9. PMID: 21561050.
8. Arora M, Tewari A, Nazar GP, Gupta VK, Shrivastav R. Ineffective pictorial health warnings on tobacco products: lessons learnt from India. *Indian J Public Health*. 2012;56(1):61–4. doi: 10.4103/0019-557X.96978.

9. Patil BS, Nagarathna BV. The Tobacco Institute of India vs Union of India on 15 December, 2017. Karnataka High Court; 2017. Available from: <https://indiankanoon.org/doc/168588467/>, accessed 6 August 2022.
10. Yadav A, Nazar GP, Rawal T, Arora M, Webster P, Grills N. Plain packaging of tobacco products: the logical next step for Tobacco Control Policy in India. *BMJ Glob Health*. 2018;3(5):e000873. doi: 10.1136/bmjgh-2018-000873.
11. High Court of Rajasthan. Rahul Joshi Vs Union of India & Ors., Writ Petition No. 8680/2015. High Court of Judicature at Rajasthan, Jaipur Bench; 2015. Available from: <https://www.tobaccocontrollaws.org/litigation/decisions/in-20150703-rahul-joshi-v.-union-of-india>, accessed 6 August 2022.
12. Supreme Court of India. Health for Millions Trust v. Union of India, Petition for Special Leave to Appeal (C) No. 37348 of 2017. Supreme Court of India; 2018. Available from: <https://www.tobaccocontrollaws.org/litigation/decisions/in-20180108-health-for-millions-trust-v.-u>, accessed 6 August 2022.
13. Canadian Cancer Society. Cigarette package health warnings: international status report. India Environment Portal; 2016. Available from: <https://cancer.ca/en/about-us/media-releases/2021/international-warnings-report-2021>, accessed 6 August 2022.
14. WHO Report on the Global Tobacco Epidemic 2021: Addressing New and Emerging Products. World Health Organization; 2021. Available from: <https://www.who.int/publications/i/item/9789240032095>, accessed 6 August 2022.
15. Saraf S, Welding K, Iacobelli M, Cohen JE, Gupta PC, Smith KC. Health warning label compliance for smokeless tobacco products and *bidis* in five Indian states. *Asian Pac J Cancer Prev*. 2021;22(S2):59–64. doi: 10.31557/APJCP.2021.22.S2.59.
16. World Trade Organization. Australia—Certain Measures Concerning Trademarks, and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging. Appellate Body Reports WT/DS435/AB/R and WT/DS441/AB/R. World Trade Organization; 2020. Available from: [https://www.wto.org/english/tratop\\_e/dispu\\_e/435\\_441abr\\_e.pdf](https://www.wto.org/english/tratop_e/dispu_e/435_441abr_e.pdf), accessed 6 August 2022.
17. WHO Framework Convention on Tobacco Control, Secretariat - Knowledge Hub. An initial overview of the WTO panel decision in Australia – Plain Packaging. WHO FCTC. Available from: <https://untobaccocontrol.org/kh/legal-challenges/initial-overview-wto-panel-decision-australia-plain-packaging/>, accessed 6 August 2022.

## 8.5: Public education and stakeholder sensitization

### Tobacco control mass media campaigns in India

Evidence-based mass media campaigns, warning against the deadly impact of tobacco use can motivate tobacco users to quit, change social norms as well as prevent early initiation especially among the youth. Campaigns also encourage support for and adherence to effective tobacco control policies. Public education campaigns in India are a key component of policy and regulatory frameworks that seek to limit tobacco usage, including the National Tobacco Control Programme (NTCP), the Cigarettes and Other Tobacco Products Act (COTPA), WHO Framework Convention on Tobacco Control (FCTC) Article 12 (Education Communication, Training and Public Awareness), and WHO's MPOWER strategies.

For campaigns to be effective and achieve the desired impact, the following best practices are recommended:

- Relying on evidence to inform every stage of campaign planning, development and implementation cycle including research, development, broadcast and evaluation.
- Providing relevant, accurate, accessible and clear health information communicated for target audiences to advance public health.<sup>1</sup>
- Using communication channels that have high impact and reach, such as television and radio, and supplementing them with outdoor advertising, digital platforms and social media.
- Sustaining media campaigns over months and years. Since the effects of mass media campaigns, which typically last anywhere from three to five weeks, trail off over time, they are not meant to be “one-off” interventions.

Rather, campaigns must be frequent – conducted over months and sustained over years.<sup>2</sup>

Further, WHO's 2021 Report on the Global Tobacco Epidemic<sup>3</sup> reiterates that there is sufficient evidence to show that well-designed, hard-hitting campaigns are effective in reducing tobacco use, increasing quit attempts, preventing early initiation, and reducing SHS exposure. It also states that mass media campaigns must be of sufficient duration (at least 3 weeks) and sustained using multiple communication channels such as TV, radio, print, hoardings, internet.

The MoHFW, GoI, recognizing that effective mass media campaigns are critical to advance tobacco control strategies and policies in India, has been consistently implementing national tobacco control mass media campaigns. These campaigns have been pre-tested, aired on high reach channels such as TV and in 17 official languages, and focused on mainly three tobacco-related dangers in India – smoking (including *bidis*), SLT use and SHS exposure. The campaigns have also amplified tobacco cessation efforts and policy change by using well-tested graphic imagery and advertisements that provoke negative emotions to depict the health harms of tobacco use.

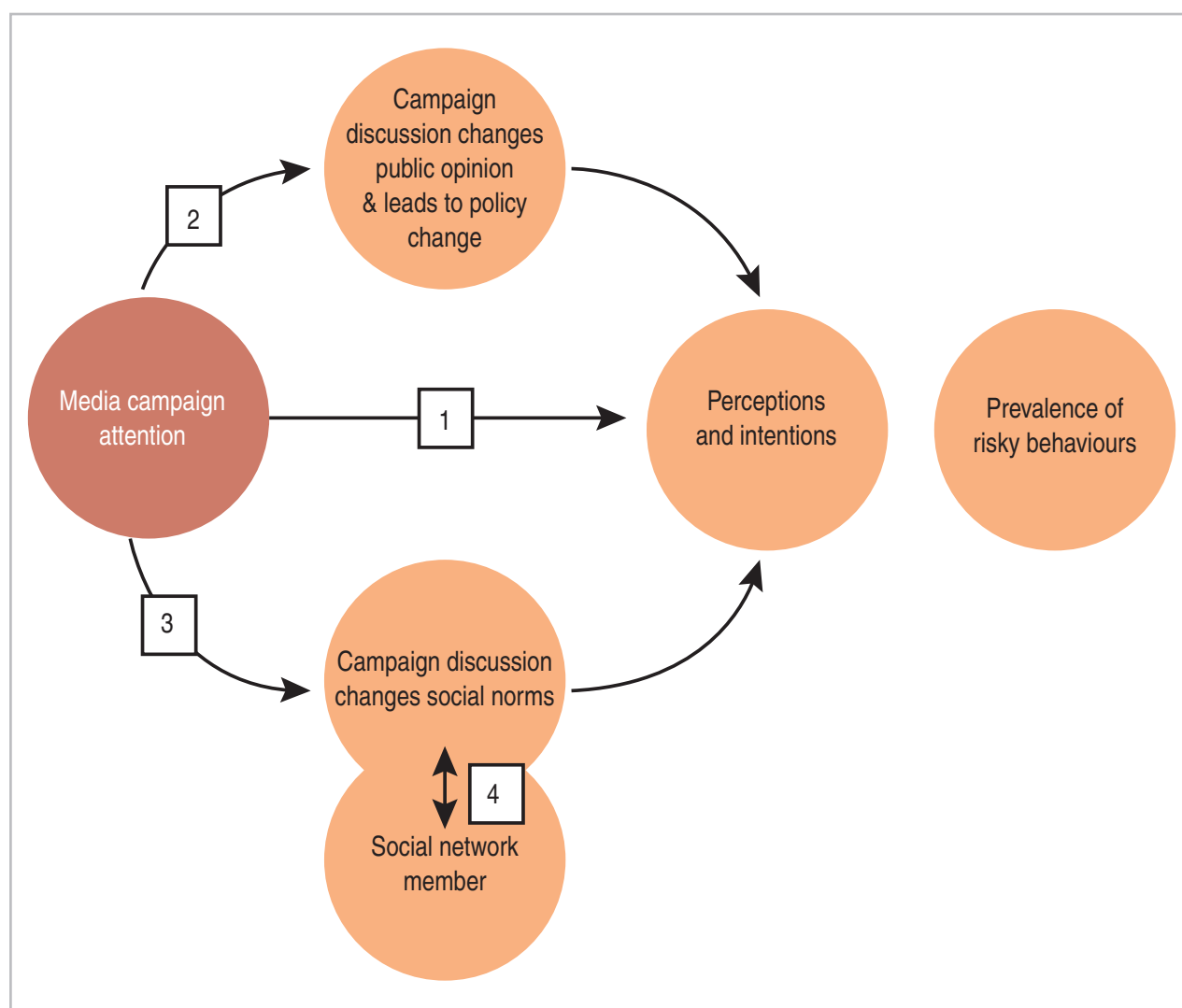
### Campaign models

India's tobacco control campaigns have been based on proven theories and models of behaviour change, including the “Breakthrough Model” and the “Pathway of Effect Model”. The “Breakthrough Model”<sup>4</sup> guides the strategic communication campaign planning process and uses data to inform every step. The “Pathway

of Effect Model” is adapted from Yanovitsky and Stryker Communication Research 2001 (Figure 8.4), which maintains that population level campaigns influence people’s priorities both directly and indirectly through prompting discussion. Thus, the first path of influence is to persuade individuals to change risky behaviours directly. The second, third and fourth path of influence play an additional role in activating audiences who are primed for

action, thus indirect “network effects” can also change attitudes and behaviours. India’s *Dhuan*, *Mukesh* and *Sunita* campaigns (Box 8.7) each exemplify the impact of these so-called indirect network effects: The mass media campaign “*Dhuan*” supported smoke-free policy, while the testimonial campaigns “*Mukesh*” and “*Sunita*” were, respectively, linked to policy support for SLT ban, and 85% PHWs on all tobacco products.

**Figure 8.4: Pathway of Effect Model**



Source: Yanovitsky and Stryker Communication Research 2001

**BOX 8.7: Case study – How the testimonial of Sunita, a victim of tobacco use, got public and policy-makers to support implementation of larger PHWs in India**



In August 2014, the Union Health Minister of India, launched the testimonial of “*Sunita*”, the story of a 27-year-old woman who developed oral cancer due to SLT use, through a national mass media campaign. Sunita Tomar, from Madhya Pradesh, began using SLT at the age of 22 years, and was diagnosed with mouth cancer just six years later. In Mumbai, Sunita underwent life-saving surgery to remove a large tumour from her jaws and cheeks. The surgery saved her life but left her permanently disfigured. In a 30-second public service announcement (PSA), Sunita spoke openly about tobacco use leading to her disease and the financial, physical and mental trauma that Sunita and her family endured.

The *Sunita* campaign was one of the many factors that led to amended rules requiring larger and stronger PHWs on all tobacco products. This was a significant policy change, incrementing from the previous 40% requirement on only one side of the pack, to 85% on both sides. Implementation, however, was delayed due to intense tobacco industry interference (TII). The new rule was to be implemented starting 1 April 2015, but it was delayed. Sunita died on 1 April 2015, the same day when the 85% pack warnings were to be implemented. Before her death, Sunita wrote a letter to the Hon’ble Prime Minister, urging him to implement the health warnings to save lakhs of lives. The *#AnswerSunita* social media campaign, asking the PM to implement the larger PHWs became a critical part of civil society’s efforts to elevate the visibility of this policy issue, unveil the myths propagated by the industry, highlight public and global support, and persuade stakeholders to take action. Sunita’s initial testimonial served as a framing tool, allowing public health advocates to portray the human side of the issue and the devastating health costs. The *#AnswerSunita* social media campaign was hosted on Facebook and Twitter and included a “Death Clock” and “Profit Clock” to show the number of deaths due to the delay in implementing larger PHWs vis-à-vis tobacco industry profits since April 2014. It was supported by the ThunderClap application, which posted in favour of larger PHWs and generated over 200 media reports and a social media reach to 264,000+ accounts and 749,000+ impressions. Other public health groups also highlighted the urgency to implement larger graphic health warnings.

Sunita’s brave fight for larger PHWs eventually yielded the desired result. 85% PHWs were implemented from 1 April 2016, the anniversary of her passing.

## Evidence-based messaging and applying lessons learnt

Message testing is a key component of campaigns in India to ensure ease of understanding, relevance and acceptability, and impact on support for specific policies. This evidence-based approach ensures that the government's media budgets are used efficiently and effectively. Post-campaign evaluation is another critical component of the tobacco control campaigns in India. This helps to measure whether a campaign had the intended impact, as well as to build evidence to increase the effectiveness of future campaigns.

Mass media campaigns in India are guided by lessons learnt from tobacco control communication messaging, which point to a clear connection between the risky behaviour and resulting disease or suffering. Over the years, Gol has successfully launched hard-hitting, evidence-based media campaigns and depicted a range of diseases attributed to tobacco use (smoking or SLT), including oral/mouth cancer, cardiovascular diseases, lung cancer, asthma, emphysema, brain damage, stroke, sudden infant death syndrome and many more. Campaigns have depicted dramatic details, such as operations, amputations, and people in a highly emotional state. They also promote the fear of premature death, featuring people under the age of 50 years dying due to tobacco addiction. Several mass media campaigns using a "raw and real"<sup>5</sup> messaging approach were also developed by featuring real tobacco victims (along with their doctors and families) relating their own experiences and emotions, while showing disturbing images of tobacco-related diseases.

Another hallmark of tobacco control messaging in India is the link between smoking and SHS exposure to TB. In 2017 and 2018, the Gol launched a national mass media campaign, *Cough* to highlight the risk of TB caused by tobacco use, which positioned India as the first country to highlight this link through mass media (Box 8.8).

The mass media campaign, *Clinical*, launched in 2018, was the first tobacco control campaign to promote the National Tobacco Quitline number 1-800-11-2356 (toll-free). Since then, all campaigns have included the quitline as an additional "call to action".

The MoHFW has adopted cost-efficient communications programming by adapting campaign materials found to be effective in other jurisdictions for local use, thereby saving time and production costs. *Sponge*, *Clinical*, *Artery*, *What Damage Will This Cigarettes/Bidi Do*, *Tobacco is Eating Your Baby Alive* and *Every Cigarette Does You Damage* are some examples of campaigns that were tested, adapted and executed successfully in India.

## Promoting positive norms for staying tobacco-free and quitting

Tobacco control campaigns in India have effectively engaged genuine celebrity role models to link abstinence from tobacco use and quitting as positive norms linked to sports, music and social responsibility. Some leading celebrities who have actively participated in developing audio-visual campaigns on tobacco control are: Mr Rahul Dravid, former captain of the Indian National Men's Cricket Team (PSA in multiple Indian languages used in cinema halls as a part of the Tobacco-Free Film and Television Rules; posters); and Mr Shantanu Mukherjee (Shaan), Indian playback singer (song with tobacco control message - *Life Se Panga Mat Le Yaar*). Mr Dravid was declared a brand ambassador for tobacco control by MoHFW, Gol in 2013.<sup>6</sup>



### BOX 8.8: Case study – Integration of tobacco control and tuberculosis messaging

TB is one of the world's top infectious killers, claiming more than 1.4 lakhs lives in 2019. In India, 2.64 lakhs people were affected by TB and it killed nearly 450,000 people in 2019.<sup>7</sup> Globally, TB takes a disproportionate toll on the poorest and the most marginalized sections of society. In India, people living in absolute poverty and those in remote areas often have limited access to quality healthcare.

Several studies have been conducted to assess and analyse the link between TB and tobacco use. It has been found that tobacco use weakens the immunity of TB patients, and tobacco smoke itself contains toxic chemicals that harm the lungs. Tobacco use contributes to almost 38% of TB deaths, and smokers are three times more likely to suffer from recurrent TB than non-smokers; furthermore, the mortality among smokers from TB is higher than among non-smokers.<sup>8–10</sup>

The government aims to eradicate TB from India by 2025, five years ahead of the global TB elimination target of 2030.<sup>11</sup> The National Strategic Plan for TB Elimination provides a roadmap for coordination between TB control and tobacco control programmes.

In May 2017, India became the first country to implement a national mass media campaign showing the link between smoking, exposure to SHS, and increased risk of TB. The campaign, *Cough*, was rebroadcast in March 2018 during the End-TB Summit. The PSA graphically shows that while a smoker's cough tells the smoker they have a health problem, a persistent cough over two weeks or more could indicate that problem is TB.

Pretesting among the target audience of smokers revealed that *Cough* was “easy to understand”, “believable”, “made respondents stop and think”, and “made respondents feel more concerned” about smoking around others. The PSA also made respondents “feel sympathetic to those with TB”, “made them feel concerned about symptoms of TB”, “made them more likely to visit a doctor if they had TB symptoms”, and “increased their confidence to take TB medications if they got sick”.

### Media budget and sustainability of campaigns

Ongoing, large-scale, mass media communication campaigns need substantial and consistent funding as well as a focus to create effective and cost-efficient campaigns that follow international best practices. A study<sup>12</sup> found that a SLT campaign in India was highly cost-effective, costing just INR 4.5 (US\$ 0.06) per quit attempt, INR 189 (US\$ 2.6) per permanent quit and INR 667 (US\$ 9.2) per death averted.

The GoI has a dedicated budget for carrying out mass media campaigns at the national level, mainly through the NTCP. Additional resources are available from the IEC division of the MoHFW and other health programmes, such as the NHM, Revised National TB Control Programme (RNTCP), NPCDCS programme, among others. Over the years, the MoHFW has invested substantially in the media placement of many mass media campaigns nationally (Table 8.2), with each campaign aired in a concentrated burst of at least 3 weeks' duration on far-reaching TV

and radio channels in at least 17 languages for pan-India coverage. States are also allocated a dedicated “IEC budget” under the NTCP.

However, there have been challenges to sustained media investment since campaigns are an effective but expensive strategy to bring about social and behaviour change. Through regional NTCP trainings, recommendations have been provided towards cost-efficient utilization of media budgets by synergizing state-level communication campaigns with the MoHFW-implemented national tobacco control mass media campaigns. For instance, when a national tobacco control campaign goes on air pan-India on TV and radio channels, state departments may plan to run a complementary radio and/or outdoor campaigns using the same campaign materials in their local language. It has been also advised that the state and district departments should not spend their limited funds to create campaign materials, but should adapt and use already existing pre-tested TV, radio and outdoor materials developed by the NTCC.

Several models have emerged to help governments deal with the twin challenges of sustainable funding and independent decision-making. A position paper<sup>2</sup> by Vital Strategies identifies four policy mechanisms that some countries are using to overcome funding barriers and meet the obligations under Article 12 of the WHO FCTC. These include transferring the costs of mass media campaigns to the tobacco industry; dedicating tobacco tax revenue to mass media campaigns; requiring broadcasters to provide free airtime for PSAs; and multi-year funding commitments. An example of one such model – transferring the costs of mass media campaigns to the film/entertainment industry is mandated under the COTPA, that Tobacco Free Films and Movie Rules. Rules requires that whenever tobacco consumption is depicted in a film or television programme, prescribed PSAs and disclaimers about the harms of tobacco must be shown.

Although campaign investment is a vital component of the NTCP, yet sustained media

campaigns at regular intervals are required to make the general public aware of the harmful effects of tobacco use and garner support for tobacco control policies. While India has had considerable success in using best practice, evidence-based and impactful campaign materials, there is still a need to adopt an evidence-based, scientific approach towards media planning, placement, and campaign monitoring to achieve optimum reach and impact, utilize media budgets efficiently, and to inform the media investment for campaigns.

### **Stakeholder sensitization: Engaging media to support and amplify tobacco control initiatives in India**

Understanding the need of the hour to use media tools in a way that results in policy action (Box 8.9); several interesting strategies are often put into play. For example, organizations working in tobacco control use press releases, reports, fact-sheets, op-eds, research findings or study-based approaches to highlight issues which can directly have a policy impact and are a critical driver in decision-making. In this digital age of information overflow, it is certainly very crucial to use tools judiciously so as to garner stakeholder attention and at the same time fulfil underlying objectives.

The Indian media (newspapers, TV and radio channels, online) has played a key role in shaping tobacco-related knowledge, opinions, attitudes, and behaviours among individuals, the public and decision-makers. Regular sensitization and engagement of journalists from national and regional media outlets has helped to keep tobacco control in the news. Well-planned reporting of tobacco control initiatives through well-informed journalists at the national and sub-national levels has been a game changer in terms of providing visibility for key issues, shifting public opinion and building a conducive environment to pass and enforce tobacco control laws and implement effective policies.

### **BOX 8.9: Case study – Mobilizing media to support COTPA implementation at the national and sub-national levels**

The media has been strategically and systematically used to mobilize stakeholders for strengthening the implementation of the COTPA at the national and sub-national levels. Journalists from newspapers and TV channels (English and regional languages) across the country have been sensitized through periodic workshops, meetings, and events for more informed reportage on tobacco control-related issues. Tobacco control groups have been working closely with journalists to highlight the processes and measures being taken by government and non-governmental agencies at the national, state and district levels to strengthen the implementation of COTPA provisions. Timely and regular sharing of information about the provisions, actions, modifications and updates on COTPA guidelines have helped to keep these issues in the news. Clear and concise messages, human interest stories, evidence-based facts and findings conveyed through civil society representatives, doctors, cancer survivors, families of cancer victims, parents and key influencers have prioritized implementation of the COTPA as a newsworthy topic. Regular and sustained media coverage of the efforts being made by all stakeholders, especially by health and police departments, has resulted in highlighting the criticality for effective COTPA enforcement to check tobacco use in the country. Strategically planned reports in influential media outlets (over 100 news stories/social media posts per month) have helped to motivate the enforcement officials and deter violators.

Research on the volume of coverage of tobacco control issues, particularly compared with other health topics, firmly establishes tobacco control as a highly newsworthy issue in India. News media coverage of tobacco control could play a significant impact on tobacco control policy and individual tobacco use. Media resistance to repetition of tobacco-related news is a challenge that needs to be addressed while strategizing and planning media events. Further work needs to be done to elucidate the nature of tobacco-related news coverage and its broader impact

on public health. Research is needed on the process for producing news coverage on tobacco control issues. The results of this work can, in turn, inform future efforts of the tobacco control community pertaining to the news media, including media advocacy, framing of key issues, and appropriate use of media channels in broader policy-making efforts. This could also help frame news in ways that are more likely to interest journalists in tobacco control stories (Box 8.10).

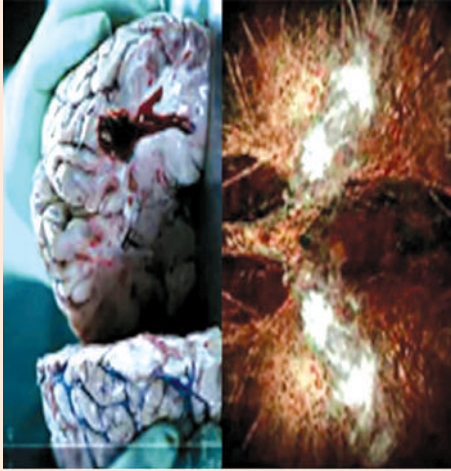

### BOX 8.10: Case study – The longest series of write-ups on tobacco control in the print media

Dr Rakesh Gupta, president of Rajasthan Cancer Foundation contributed uniquely to the media advocacy for tobacco control by publishing a series of 145 articles in a local regional daily *Samachar Jagat* from February 2016 to March 2019. All these articles written in Hindi were published in its Sunday edition on Op-Ed page 6 on a regular basis; and on his Facebook page <https://m.facebook.com/tobacco.rakesh.india> in the follow-up week with an aim to sensitize the Facebook community. These covered almost all aspects related to tobacco control for their contemporary value or as a review to the subject addressed. The aims were to: (i) influence the policy planners and educate the unaware societies and the lay people living in the entire Hindi-speaking belt of India; and (ii) empower those working in tobacco control who find English as a barrier to understand the intricacies of the subject. Later, these articles were compiled into two books placed on the Resource Centre for Tobacco Control, PGIMER Chandigarh (RCTC PGI) website after their release in 5th National Conference on Tobacco or Health (NCTOH) held in September 2021 (<http://www.rctcpgi.org/books.php>). This initiative, aimed to sensitize masses on various issues related to tobacco control, is perhaps the first of its kind in India.

### Key messages

- For mass media campaigns to be strategic, timely and effective, evidence-based data should be used at every stage of campaign planning and implementation, from research and development to broadcast and evaluation.
- Campaigns should not be seen as one-off interventions, but critical components of desired behaviour change. The national government should sustain far-reaching national campaigns over consecutive months and years.
- To sustain the impact of public awareness campaigns, the government must increase its investment to intensify campaign length and frequency.
- Strengthen/leverage policies to achieve added media time such as the Tobacco-Free Film and Television Rules under the COTPA.
- Negotiate for mandatory bonus (50%) or free airtime on government channels.
- To leverage campaign funding sources, integrate tobacco control campaigns with other programmes, such as NCDs, TB and cancer control and other developmental programmes.
- Engage with the media to maximize coverage by national and local news sources about the dangers of tobacco use.
- Invest in strategically amplifying campaigns through digital media.
- Integrate campaigns to counter new challenges, including the COVID-19 pandemic and e-cigarettes.
- Use celebrity endorsement for tobacco control campaigns with caution and by duly checking past, present or anticipated conflicts of interest.

**TABLE 8.2: National mass media campaigns under MoHFW**

<p><b>1. Every Cigarette Does You Damage (2008)</b>  <i>(Anti-smoking campaign, personal consequence style)</i></p> <p>A 30-second pre-tested PSA that illustrates in graphic detail how smoking damages the brain and lungs. The campaign has two 30-second versions, “Brain” and “Lung”. Launched by the MoHFW in March 2008 for pan-India coverage on TV and radio. Technical support by Vital Strategies.</p> <p>(Source: <a href="https://youtu.be/p_-Ujm5DZJU">https://youtu.be/p_-Ujm5DZJU</a>)</p>	
<p><b>2. Dhuan (2008, 2009)</b>  <i>(SHS/smoke-free campaign, enforcement and agenda-settings style)</i></p> <p>This 1-minute pre-tested PSA encourages people not to smoke around others by highlighting the health harms linked with smoking and SHS. It warns about the health costs of smoking and SHS and of the penalties to be faced by violating the smoke-free law. It models the behaviour expected of business managers, advocates, enforcement officials, smokers and non-smokers. Launched by the MoHFW in October 2008 and January 2009 in 17 official languages on TV and radio channels. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies.</p> <p>(Source: <a href="https://youtu.be/1w7yLRfXlZU">https://youtu.be/1w7yLRfXlZU</a>)</p>	



### 3. Child (2008, 2009)

*(SHS/smoke-free campaign, personal consequence style)*

This 45-second pre-tested PSA focuses on the health risks associated with smoking and SHS indoors such as homes. Launched by the MoHFW in October 2008 and January 2009 in 17 official languages on TV and radio channels. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies.

(Source: <https://youtu.be/eJi-7G5Ys-c>)

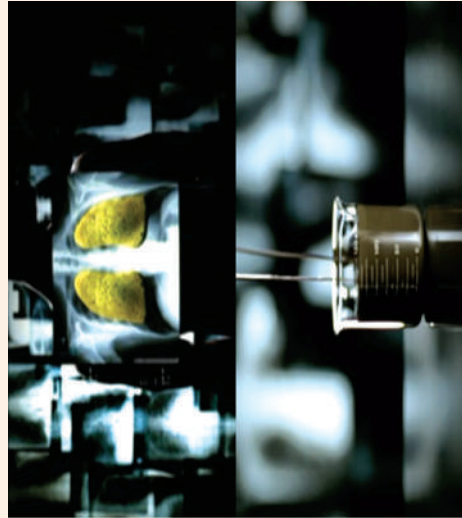


### 4. Sponge (2009)

*(Anti-smoking campaign, metamorphical/graphical style)*

A 30-second pre-tested PSA that visually depicts and demonstrates the shocking amount of cancer-producing tar that goes into the lungs of a smoker over one year. Launched by the MoHFW in July 2009 nationally on TV and radio channels in five languages – English, Hindi, Tamil, Gujarati and Bengali. Also launched in film theatres, movies and TV programmes under the Tobacco Free Film Rule with support from WHO India. Technical support by Vital Strategies.

(Source: [https://youtu.be/18K\\_f4DVWvc](https://youtu.be/18K_f4DVWvc))





### 5. Surgeon (2009)

*(SLT campaign, documentary style)*

This 30-second pre-tested PSA features testimony of a surgeon who treats cancer patients in one of the leading cancer hospitals of India, and describes how he comes across so many patients with horrific cancers due to SLT use. Launched by the MoHFW in November 2009 in 17 official languages on TV and radio channels. Technical support by Vital Strategies and Tata Memorial Centre, Mumbai.

(Source: <https://youtu.be/ozFoAPp3qYE>)



### 6. Cigarettes are Eating You Alive (2010)

*(Anti-smoking campaign, personal consequence style)*

This 30-second pre-tested PSA graphically depicts how cigarettes affect nearly every vital tissue and organ of the body, including the lungs, heart, brain, mouth, teeth and throat. Launched by the MoHFW nationally on TV and radio in August 2010 in 16 official languages. Technical support by Vital Strategies.

(Source: <https://youtu.be/Scx61YO9pHk>)



### 7. Mukesh (2011)

*(SLT campaign, testimonial style)*

This 30-second pre-tested PSA features Mr. Mukesh Harare, a 24-year old SLT user from Maharashtra, who suffered and lost his life from oral cancer because of his chewing SLT, namely *gutkha*. Launched by the MoHFW nationally on television and radio from January through April 2011 in 16 official languages, including an additional concentrated burst in the Northeastern states in April 2011. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies and Tata Memorial Centre, Mumbai.

(Source: <https://youtu.be/5vllHv0CEsA>)



### 8. Heartbreak (2011)

*(Anti-smoking [bidi] campaign, personal consequence style)*

This 45-second pre-tested PSA links *bidi* smoking and its association with cardiovascular disease and describes the burden of the disease on family. Launched by the MoHFW in August 2011 in 17 official languages on TV and radio. Technical support by Vital Strategies.

(Source: <https://youtu.be/XxCu30kEdSg>)



### 9. Tobacco is Eating Your Baby Alive (2012)

*(SHS/smoke-free campaign, personal consequence style)*

This 30-second pre-tested PSA graphically depicts how tobacco smoke exposure can cause sudden infant death syndrome (SIDS), crippling asthma, painful ear infection, pneumonia and low birth weight among newborn infants, and warns people about the deadly effects of SHS exposure on children. Launched by the MoHFW in February 2012 on TV and radio in 16 official languages supplemented by a complementary national outdoor campaign. Technical support by Vital Strategies.

*(Source: <https://youtu.be/aOjnfFeYW8>)*



### 10. Tears You Apart (2013)

*(SLT campaign, testimonial style)*

This 45 and 30 second pre-tested PSA warns against the deadly effects of using SLT, through three personal stories of families that went through physical, emotional and economic burden of tobacco-related diseases. Launched by the MoHFW on TV and radio channels in May 2013 and re-launched in March 2016 in 16 official languages, along with outdoors of 22 trains across 8 states. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies, B. Barooha Cancer Hospital, Guwahati, and Tata Memorial Centre, Mumbai.

*(Source: <https://youtu.be/qjQdVzl3Us4>)*



### 11. Artery (Bidli); Artery (Cigarette) (2014)

*(Anti-smoking campaign, personal consequence plus graphical style)*

This 30-second pre-tested PSA is a graphical representation of the deadly effects of smoking cigarettes and *bidis* and shows how it leads to the build up of dangerous fatty deposits in the heart, leading to stroke, heart disease and heart attack. Launched by the MoHFW in January 2014 on TV and radio in 17 official languages. There have been some repeated smaller bursts aired that are unrecorded. Technical support by Vital Strategies.

(Source: <https://youtu.be/qgv90LPTW1M>;  
<https://youtu.be/m2PGw7kzaVk>)



### 12. Sunita (2014)

*(SLT campaign, testimonial style; also the first ever mass media campaign of a woman tobacco victim)*

This 30-second pre-tested PSA depicts the story of a young woman who developed oral cancer due to SLT use. The PSA highlights the financial, physical and mental trauma that Ms. Sunita Tomar and her family endured and warns people of the deadly harms of using various forms of SLT. Launched by the MoHFW in November 2014 on TV and radio channels in 17 official languages. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies and Tata Memorial Centre, Mumbai.

(Source: <https://youtu.be/Enb1snszGPU>)





### 13. I Don't Believe (2016)

*(SLT campaign, personal consequence style)*

This 30-second pre-tested PSA shows a SLT user who does not believe in tobacco's health harms and continues using it until being diagnosed with oral cancer, and ultimately, dying from it. The campaign also brings to attention the larger graphic health warnings now on tobacco packs in India. Launched by the MoHFW in October 2016 in 17 official languages on TV, radio and outdoor channels. Technical support by Vital Strategies.

(Source: <https://youtu.be/CN4FaJ1ul6o>)



### 14. Cough (2017)

*(Anti-smoking and SHS campaign, personal consequence plus graphical style)*

Also the first national mass media campaign to integrate tobacco use with risk of tuberculosis (TB). This 30-seconds pre-tested PSA became India's first campaign to highlight the link between smoking/SHS and TB. It warns people of how smoking and SHS exposure, through cigarettes or *bidis*, increases the risk of TB and dying from it. Launched by the MoHFW in 17 official languages on TV and radio channels, in May 2017 and a repeat campaign burst in March 2018. Technical support by Vital Strategies.

(Source: [https://youtu.be/h01U\\_0wkCU](https://youtu.be/h01U_0wkCU))

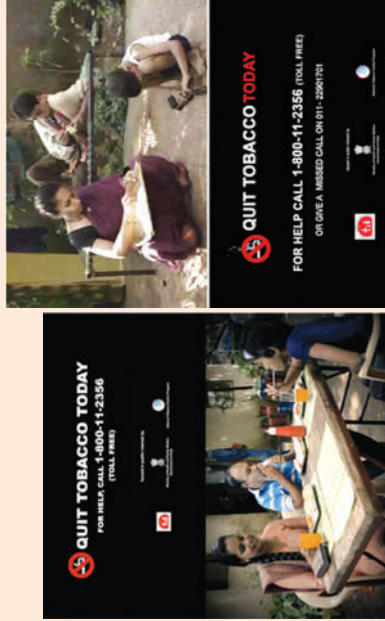


### 15. Clinical (cigarette); Clinical (bidi) (2018)

(SHS/smoke-free campaign, personal consequence plus graphical style)

Also the first national tobacco control campaign to incorporate the National Tobacco Quitline number as a second call to action. This 30-second pretested PSA is in two versions – *bidi* smoking and cigarette smoking, which shows how exposure to SHS may cause stroke and heart attack. It graphically depicts how smoke enters the bloodstream of the person sitting next to a smoker and changes their blood platelets in a way that increases the risk of heart attack and stroke. Launched by the MoHFW in March 2020 in 17 official languages. Technical support by Vital Strategies.

(Source: <https://youtu.be/cMwwGEFdp7E>;  
[https://youtu.be/8C5z8y8q\\_V4](https://youtu.be/8C5z8y8q_V4))



### 16. “What damage will this cigarette/bidi do?” (2018)

(Anti-smoking campaign, personal consequence style)

This 30-seconds pre-tested PSA prompts smokers to think about each cigarette or *bidi* as the path to one of many potential harmful events such as heart attack, cancer, lung disease, emphysema, asthma, stroke. Launched as a national campaign on TV and radio in 17 official languages on World No Tobacco Day 2018. Also launched in film theatres, movies and TV programmes under the Tobacco-Free Film and Television Rules with support from WHO India. Technical support by Vital Strategies

(Source: <https://youtu.be/nDUGOnG6m6U>)





## REFERENCES

1. Bernhardt JM. Communication at the core of effective public health. *Am J Public Health*. 2004;94(12):2051–3. doi:10.2105/ajph.94.12.2051.
2. Sustainable funding mechanisms for population-level tobacco control communication programs. Position paper. Vital Strategies; 2016. Available from: [https://www.vitalstrategies.org/wp-content/uploads/2017/02/VS\\_Sustainpaper\\_Final\\_light.pdf](https://www.vitalstrategies.org/wp-content/uploads/2017/02/VS_Sustainpaper_Final_light.pdf), accessed 6 August 2022.
3. WHO report on the global tobacco epidemic 2021: addressing new and emerging products. Geneva: World Health Organization; 2021. Available from: <https://apps.who.int/iris/bitstream/handle/10665/343287/9789240032095-eng.pdf>, accessed 6 August 2022.
4. Vital Strategies. Available from: <https://www.vitalstrategies.org/wp-content/uploads/Media-planning-guide-.pdf>, accessed 6 August 2022
5. Turk T, Chaturvedi P, Murukutla N, Mallik V, Sinha P, Mullin S. Raw and real: an innovative communication approach to smokeless tobacco control messaging in low and middle-income countries. *Tob Control*. 2017;26(4):476–81. doi: 10.1136/tobaccocontrol-2016-052968.
6. Rahul Dravid is brand ambassador for Tobacco Control Campaign. *The Times of India*; 5 September 2013. Available from: <https://timesofindia.indiatimes.com/sports/off-the-field/rahul-dravid-is-brand-ambassador-for-tobacco-control-campaign/articleshow/22337368.cms>, accessed 6 August 2022.
7. Global tuberculosis report 2020. WHO; 2020. Available from: <https://www.who.int/publications/item/9789240013131>, accessed 6 August 2022
8. Mahishale V, Patil B, Lolly M, Eti A, Khan S. Prevalence of smoking and its impact on treatment outcomes in newly diagnosed pulmonary tuberculosis patients: a hospital-based prospective study. *Chonnam Med J*. 2015;51(2):86–90. doi: 10.4068/cmj.2015.51.2.86.
9. Alavi-Naini R, Sharifi-Mood B, Metanat M. Association between tuberculosis and smoking. *Int J High Risk Behav Addict*. 2012;1(2):71–4. doi: 10.5812/ijhrba.5215.
10. Gegia M, Magee MJ, Kempker RR, Kalandadze I, Chakhaia T, Golub JE, et al. Tobacco smoking and tuberculosis treatment outcomes: a prospective cohort study in Georgia. *Bull World Health Organ*. 2015;93(6):390–9. doi: 10.2471/BLT.14.147439.
11. World Health Organization. States and UTs accelerate action to end TB by 2025. WHO South-East Asia; 2021. Available from: <https://www.who.int/india/news/detail/09-11-2021-states-and-uts-accelerate-action-to-end-tb-by-2025>, accessed 6 August 2022
12. Murukutla N, Yan H, Wang S, Negi NS, Kotov A, Mullin S, et al. Cost-effectiveness of a smokeless tobacco control mass media campaign in India. *Tob Control*. 2018;27:547–51. Available from: <https://tobaccocontrol.bmj.com/content/27/5/547>, accessed 6 August 2022.





---

# Tobacco control: What is needed?

---

**9.1: Bridging gaps between WHO Framework Convention on Tobacco Control and Cigarettes and Other Tobacco Products Act** 229  
L. Swasticharan, Vineet Gill Munish,  
Praveen Sinha, Radhika Shrivastav, Purva Singh

**9.2: Tobacco control, non-communicable diseases and Sustainable Development Goals** 237  
L. Swasticharan, Pulkesh Kumar,  
Vidushi Chaturvedi, Pradeep Joshi,  
R.S. Dhaliwal, Stuti S. Bhargava, Tina Rawal



## 9.1: Bridging gaps between WHO Framework Convention on Tobacco Control and Cigarettes and Other Tobacco Products Act

In 2004, the Government of India (GoI) ratified the WHO Framework Convention on Tobacco Control (FCTC), the first ever international public health treaty focusing on this global public health issue.<sup>1</sup> The WHO FCTC is an evidence-based treaty that obligates the Parties to implement a broad array of measures to reduce the supply of and demand for tobacco products for curtailing the tobacco epidemic.<sup>1</sup> India played a leading role in the negotiations to finalize the provisions of the FCTC and was the Regional Coordinator for the WHO South-East Asia Region during the negotiations.<sup>2</sup> Since the WHO FCTC came into force in February 2005, India has exhibited stewardship in advancing the mandate of the Convention.

The principled positions adopted by India in support of public health were widely acclaimed at the negotiations. India also earned much appreciation for its leadership on issues of vital interest to the developing countries. Two parallel processes culminated in 2003: the passage of the Tobacco Control Act of India by the Indian Parliament (April) and the adoption of the FCTC by the World Health Assembly (May). On 5 February 2004, India ratified the FCTC, which came into force on 27 February 2005, after 40 countries acceded to, ratified, accepted or approved it, making it legally binding.<sup>3</sup>

The FCTC is predominantly a document which sets standards and identifies various measures that should be adopted by the Member States towards the formulation of a comprehensive tobacco control strategy, including binding obligations. The minimum standards set out by the FCTC leave room for operational flexibility and countries are encouraged to go beyond

these standards and implement stronger measures of their own. In November 2012, the Protocol to Eliminate Illicit Trade in Tobacco Products, negotiated by Parties to fight against illicit trade under Article 15 of the WHO FCTC, was adopted. India acceded to this protocol on 5 June 2018, and it came into force on 25 September 2018.<sup>1</sup>

### India's journey through the Conference of Parties

Not only was India in the forefront during the stage of negotiations on the WHO FCTC, it continues to provide leadership and support. The GoI has served the Bureau of the Conference of the Parties as Vice President<sup>4</sup> and President.<sup>5</sup> Further, India hosted the Seventh Session of the Conference of Parties in 2016.<sup>6</sup> In addition, the GoI led and contributed to several working groups as key facilitators or partners for the development of various guidelines under the FCTC.<sup>7</sup>

### Multisectoral implementation of WHO FCTC in India and gap analysis

It would be pertinent to analyse the extent to which the Indian tobacco control laws and policies comply with the WHO FCTC, with a view to paving the way for bridging the gap. Table 9.1 provides a brief overview of the status of implementation of the measures recommended by the FCTC. Table 9.2 provides the status of implementation of MPOWER policies in India based on the WHO report on the global tobacco epidemic, 2021.

**Table 9.1: Status of implementation of FCTC recommendations in India**

WHO FCTC (Articles)	Implementation status	Gaps	Status
General obligations A.5 5.1 Develop, implement and review multisectoral tobacco control policies	The Inter-ministerial Coordination Committee was constituted under the chairmanship of the Cabinet Secretary to coordinate efforts at the national level (2014).		Fully compliant
5.2 Establish a national coordinating mechanism	State- and district-level multisectoral coordination committees were set up as recommended in the National Tobacco Control Programme (NTCP) Operational Guidelines. National focal points were identified in the Ministry of Health and Family Welfare (MoHFW) and a dedicated NTCP launched in 2007–2008.		
5.3 Protect tobacco control policies from commercial and vested interests	The Code of Conduct 2020 was developed by the MoHFW for public officials. It was also notified by many state governments.	The Code of Conduct is applicable only to MoHFW officials and institutions under its administrative control.	Partially compliant
<b>Demand-side measures</b>			
A.6 Price and tax measures to reduce the demand for tobacco	Under the Goods and Services Tax (GST), which came into effect in 2017, all tobacco products fall in the highest tax bracket of 28%. Compensation cess is levied on all tobacco products, except <i>bidis</i> . The budget for 2019–2020 re-introduced central excise on all tobacco products.	Tax as a percentage of the retail price is yet to reach the level of 75%, as recommended by WHO, <sup>8</sup> across all tobacco products, including smokeless tobacco (SLT) and <i>bidis</i> .	Partially compliant
A.7 Non-price measures to reduce the demand for tobacco products			



WHO FCTC (Articles)	Implementation status	Gaps	Status
A.8 Protection from exposure to second-hand smoke (SHS)	Section 4 of COTPA prohibits smoking in all public places.	The Act allows for the creation of designated smoking areas (DSAs) in hotels, restaurants and airports, with pre-set engineering specifications.	Partially compliant
A.9 and A.10 Regulation of tobacco content and product	The Central Government has notified National Tobacco Testing Laboratories (NTTLs) for testing the contents and emissions of tobacco products in accordance with the Act/Rules. <sup>9</sup>	The rules/ regulations for conducting the tests are yet to be notified.	Partially compliant
A.11 Packaging and labelling of tobacco products	The Gol started implementing the provision on health warnings on packages from 31 May 2009, and that of large health warnings covering 85% of the principal display area from April 2016. The number of toll-free national tobacco quitline services started being displayed from 2018.		Fully compliant
A.12 Education, communication, training and public awareness	India is one of the few countries to have made dedicated funds available for public awareness campaigns on tobacco control both at the national and sub-national levels. The implementation of the Tobacco-Free Films and Television Rules has resulted in the availability of free airtime for health education. <sup>10</sup> Structured training modules have been developed by the MoHFW with support from WHO, and civil society organizations (CSOs) have been training various stakeholders across the country.		Fully compliant
A.13 Tobacco advertising, promotion and sponsorship (TAPS)	Section 5 of the COTPA prohibits all forms of advertisement, promotion and sponsorship of tobacco products. This includes regulating the depiction of tobacco products or their use in films and TV programmes.	As an exception, the Act allows advertisements at the point of sale (PoS), with certain restrictions, and in-pack and on-pack advertising.	Partially compliant

WHO FCTC (Articles)	Implementation status	Gaps	Status
A.14 Measures to reduce demand	<ul style="list-style-type: none"> <li>Tobacco cessation is a component of the NTCP at the district level and nicotine replacement therapy (NRT) services are available free of cost.</li> <li>National cessation guidelines have been developed under the NTCP.</li> <li>Toll-free National Tobacco Quitline Services (1800 11 2356) are available. More than 100 counsellors provide services in over 15 languages.</li> <li>mCessation can be accessed by making a missed call to 011-22901701.</li> <li>Under the National Oral Health Programme (NOHP), all dental colleges (public and private) have been encouraged to establish tobacco cessation centres.</li> <li>Under the National Framework for TB–Tobacco, collaborative activities have been developed and implemented.</li> <li>Counsellors have been appointed under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS), to provide tobacco cessation services at the primary level (community health centres).</li> </ul>		Fully compliant
<b>Supply-side measures</b>			
A.15 Illicit trade	<ul style="list-style-type: none"> <li>India signed the Protocol to Eliminate Illicit Trade in Tobacco Products in 2018.</li> <li>WHO organized a study tour for Central Board of Excise and Customs officials to Kenya, and Turkey, so that they could gain knowledge of track and trace and related systems.</li> <li>Allowance of duty-free tobacco products was reduced by 50% through an amendment of the Baggage Rules – 100 cigarettes, 50 cigars or 125 grams of tobacco can be purchased/ brought in the country without payment of customs duty (2016).<sup>11</sup></li> </ul>	Various components of the Protocol are yet to be implemented/ operationalized.	Partially compliant

WHO FCTC (Articles)	Implementation status	Gaps	Status
A.16 Prohibit sales to and by minors	Section 6 of COTPA prohibits the sale of tobacco products to and by minors. It also prohibits the sale of tobacco products within 100 yards of educational institutions and sale through vending machines. The GoI has framed the Tobacco-Free Educational Institution (ToEFI) Guidelines to implement tobacco control initiatives among adolescents and young adults. <sup>12</sup> Section 77 of the Juvenile Justice (Care and Protection of Children) Act, 2015, notified by the Ministry of Women and Child Development, <sup>13</sup> also prohibits the sale of tobacco products to minors.	Tobacco products are sold in loose forms or in small packs, which makes them easier to sell to minors.  There is no ban on visible stacking at PoS.  The minimum legal age for the sale of tobacco products can be increased to 21 years.	Partially compliant
A.17 Provision of support for economically viable alternative activities	The Ministry of Agriculture and Farmers Welfare is implementing the Crop Diversification Programme (CDP) under the <i>Rashtriya Krishi Vikas Yojana</i> to encourage tobacco farmers to shift to alternative crops/cropping systems. The Ministry of Labour and Employment launched a skill development scheme for <i>bidi</i> rollers in 2018, with technical support from WHO.	There is no dedicated national initiative for phasing out tobacco cultivation or <i>bidi</i> rolling with fixed targets.	Partially compliant
A.18 Protection of the environment and health of persons	As per the Plastic Waste Management (PWM) Rules, 2016, there is a complete ban on sachets using plastic material used for storing, packing or selling <i>gutkha</i> , tobacco and <i>paan masala</i> . Further the PWM (Amended) Rules, 2021 (implemented from 1 July 2022), prohibit manufacture, import, stocking, distribution, sale and use of identified single use plastic items and includes cigarette packets, which have low utility and high littering potential. <sup>14</sup>	The 2021 Rules have been recently implemented. Their enforcement needs to be closely monitored over a period of time.	Partially compliant
<b>Other obligations</b>			
A.20 Research, surveillance and exchange of information	Tobacco surveillance – monitoring of tobacco use prevalence and tracking key tobacco control indicators – is a part of NTCP. Four rounds of the Global Youth Tobacco Survey (GYTS) have been conducted in 2003, 2006, 2009 and 2019. Two rounds of the Global Adult Tobacco Survey (GATS) have been conducted in 2009 and 2017.		Fully compliant

**Table 9.2: Status of implementation of MPOWER policies in India (based on the WHO report on the global tobacco epidemic, 2021)<sup>15</sup>**

Tobacco control measure	Classification	Definition of status
Monitor tobacco use and prevention policies	Moderate	GYTS-4 and GATS-3 are under way.
Protect people from tobacco smoke	Moderate	Eight key public places are completely smoke-free.
Offer help to quit tobacco use	Highest status/complete	The costs of the National Tobacco Quitline and of NRT and some cessation services are covered.
Warn about the dangers of tobacco	Health warnings – highest status/complete	Large warnings, with all the appropriate characteristics, are displayed.
	Mass media campaigns – moderate	A national campaign was launched with 5–6 appropriate characteristics.
Enforce bans on advertising, promotion and sponsorship of tobacco	Moderate	Advertisements have been banned on national TV, radio and the print media. Bans have also been enforced on some, but not all, other forms of direct and indirect advertising, the Internet, digital and social media, and OTT (over-the-top) platforms' Regulation.
Raise taxes on tobacco	Moderate	Currently, the burden of taxes is 57.6% of the retail price (for cigarettes).

## Recommendations for making India fully compliant with FCTC by 2040

The GoI has shown strong commitment to the implementation of the various measures recommended by the WHO FCTC. The Parliament passed COTPA in 2003, even before the FCTC came into force. By now, most of the Rules have been notified under COTPA and are under implementation. The following steps would make India fully compliant with the WHO FCTC:

- Section 4 of COTPA 2003 allows DSAs at hotels, restaurants and airports. This provision could be removed through a suitable

amendment to make for a comprehensive smoke-free policy.

- As an exception, Section 5 of COTPA 2003 allows in and on pack advertisement and advertisements at the PoS, with some restrictions. To make the ban on TAPS comprehensive, Section 5 needs to be amended.
- Although NTTLs set up under the NTCP have been notified under Section 11 of COTPA, the rules/regulations for conducting tests need to be notified to strengthen tobacco product regulation.
- As India is now a Party to the Illicit Trade Protocol under Article 15 of the WHO FCTC,

it should include the key provisions of the Protocol in domestic legislation.

- To achieve the overall objectives of tobacco control and to protect tobacco control policies from the vested interests of the

tobacco industry, the Code of Conduct for public officials, 2020 must be adopted and implemented in all departments/branches/ministries through the Department of Personnel and Training.

## Key messages

- There is a need for a National Regulatory Authority to monitor the implementation of the COTPA and FCTC in India.
- All the government ministries working on tobacco control must make constant and sustained efforts to implement COTPA to address India's commitment under the FCTC.

## REFERENCES

1. WHO Framework Convention on Tobacco Control overview. Available from: <https://fctc.who.int/who-fctc/overview>, accessed on 5 October 2022
2. A Comparative Analysis of WHO Framework Convention on Tobacco Control and the Indian Laws Regulating Tobacco. Ministry of Health and Family Welfare, Government of India; 2008. Available from: <http://www.rajswasthya.nic.in/Tobacco%20Control%20Resource%20&%20IEC%20Materials%20new/A%20comparative%20analysis%20of%20WHO%20FCTC%20and%20the%20Indian%20laws%20regulating%20tobacco.pdf>, accessed 13 August 2022.
3. Reddy KS, Gupta PC. Report on Tobacco Control in India. Ministry of Health and Family Welfare, Government of India; 2004. Available from: <https://main.mohfw.gov.in/sites/default/files/4898484716Report%20on%20Tobacco%20Control%20in%20India.pdf>, accessed 13 August 2022.
4. FCTC/COP7(5) Tobacco advertising, promotion and sponsorship: depiction of tobacco in entertainment media. Conference of the Parties to the WHO Framework Convention on Tobacco Control. Fifth session. Seoul, Republic of Korea, 12–17 November 2012. Available from: [https://apps.who.int/gb/fctc/PDF/cop5/FCTC\\_COP5\(23\)-en.pdf](https://apps.who.int/gb/fctc/PDF/cop5/FCTC_COP5(23)-en.pdf), accessed 13 August 2022.
5. FCTC/COP7(30) Election of the President and the five Vice-Presidents of the Conference of the Parties to the WHO FCTC. Conference of the Parties to the WHO Framework Convention on Tobacco Control. Seventh session. Delhi, India, 7–12 November 2016. Available from: [https://fctc.who.int/publications/m/item/fctc-cop7\(30\)-election-of-the-president-and-the-five-vice-presidents-of-the-conference-of-the-parties-to-the-who-fctc](https://fctc.who.int/publications/m/item/fctc-cop7(30)-election-of-the-president-and-the-five-vice-presidents-of-the-conference-of-the-parties-to-the-who-fctc), accessed 13 August 2022
6. FCTC/COP6(28) Date, place and duration of the seventh session of the Conference of the Parties to the WHO FCTC. Conference of the Parties to the WHO Framework Convention on Tobacco Control. Sixth session. Moscow, Russian Federation, 13–18 October 2014. Available from: [https://apps.who.int/iris/bitstream/handle/10665/146382/FCTC\\_COP6%2828%29-en.pdf?sequence=1&isAllowed=,](https://apps.who.int/iris/bitstream/handle/10665/146382/FCTC_COP6%2828%29-en.pdf?sequence=1&isAllowed=,) accessed 13 August 2022.
7. Sessions of the Conference of the Parties to the WHO FCTC. WHO FCTC. Available from: <https://fctc.who.int/who-fctc/governance/conference-of-the-parties>, accessed 13 August 2022.
8. WHO Technical Manual on Tobacco Tax Policy and Administration. Licence: CC BY-NC-SA 3.0 IGO. Geneva: World Health Organization; 2021. Available from: <https://www.who.int/publications/i/item/9789240019188>, accessed 13 August 2022.
9. National Institute of Cancer Prevention & Research (NICPR); Noida – Apex Lab Regional Drug Testing lab, Guwahati – Regional Lab; Central Drug Testing Lab, Mumbai – Regional Lab and National Institute for Mental Health and Neuro Sciences (NIMHANS), Bangalore. Notification of National Tobacco Testing Laboratories. Ministry of Health and Family Welfare, Government of India. Available from: <https://main.mohfw.gov.in/notification/notification-national-tobacco-testing-laboratories>, accessed 13 August 2022
10. Report of the Expert Group on Tobacco Advertising, Promotion and Sponsorship: Depiction of Tobacco in Entertainment Media. WHO FCTC. Available from: <https://fctc.who.int/publications/m/item/>

report-of-the-expert-group-on-tobacco-advertising-promotion-and-sponsorship-depiction-of-tobacco-in-entertainment-media, accessed 13 August 2022.

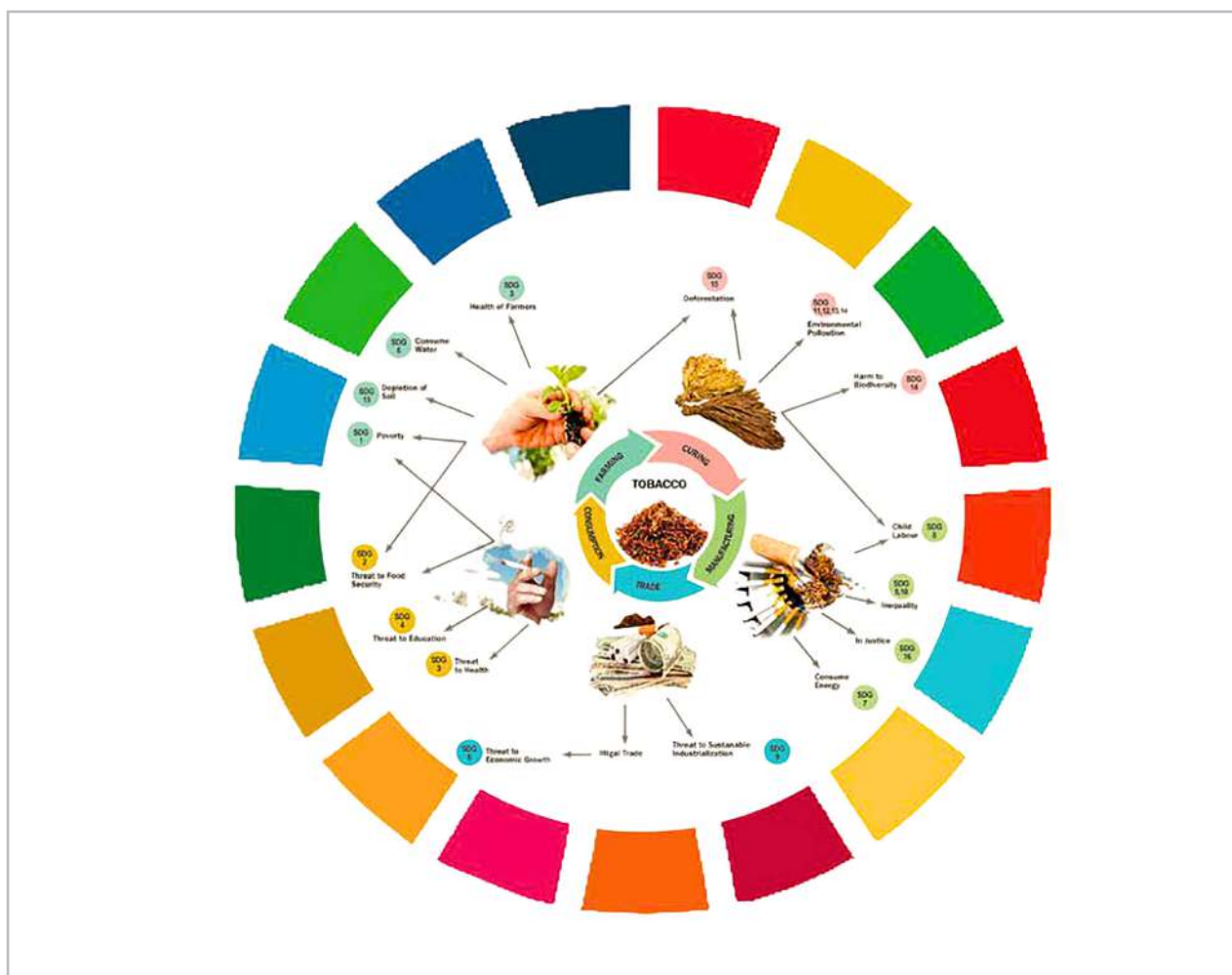
11. Baggage Rules, 2016. Notification No. 30/2016-Customs (N.T.) dated 1.3.2016 as amended by Notification No. 43/2016-Customs (N.T.) dated 31.3.2016 read with corrigendum dated. 1.4.2016. Available from: <https://www.cbic.gov.in/resources/htdocs-cbec/baggage-rules.pdf>, accessed 13 August 2022.
12. Guidelines for Tobacco Free Educational Institution (Revised). Ministry of Health and Family Welfare, Government of India. Available from: <http://ntcp.nhp.gov.in/assets/document/TEFI-Guidelines.pdf>, accessed 13 August 2022.
13. Section 77 of Juvenile Justice Act, 2015. Penalty for giving intoxicating liquor or narcotic drug or psychotropic substance to a child. India Code (Digital Repository of all Central and State Acts). Available from: [https://www.indiacode.nic.in/show-data?actid=AC\\_CEN\\_13\\_14\\_000010\\_201602\\_1517807328168&sectionId=12797&sectionno=77&order no=77](https://www.indiacode.nic.in/show-data?actid=AC_CEN_13_14_000010_201602_1517807328168&sectionId=12797&sectionno=77&order no=77)
14. CPCB takes measures to implement the Single Use Plastic Ban List of SUP items prohibited w.e.f. 1st July 2022 shared SUP Public Grievance App enabling public participation. Ministry of Environment, Forest and Climate Change, Government of India. Available from: <https://pib.gov.in/PressReleasePage.aspx?PRID=1835009>, accessed 13 August 2022.
15. WHO report on the global tobacco epidemic 2021: addressing new and emerging products. Geneva: World Health Organization; 2021. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications-detail-redirect/9789240032095>, accessed 13 August 2022.



## 9.2: Tobacco control, non-communicable diseases and Sustainable Development Goals

Tobacco use in any form is a threat to human health and sustainable growth.<sup>1</sup> The Sustainable Development Goals (SDGs) (Figure 9.1), adopted by United Nations Member States in 2015, call upon nations to formulate strategies for reduction in tobacco use to promote the health of individuals. SDGs are integrated in the sense that action in one area impacts the outcomes in others.<sup>2</sup> Tobacco control is directly or indirectly

associated with almost all SDGs. SDG3.a calls for the strengthening of the implementation of the WHO FCTC. Commitment to strengthen the implementation of the WHO FCTC (Figure 9.2) is a crucial component of action by all stakeholders.<sup>2</sup> It is not only relevant for achieving SDG 3 (Good health and well-being), but also for social, economic and environment-related sustainable development areas.



**Figure 9.1: Tobacco and Sustainable Development Goals**

Source: Tobacco Control for Sustainable Development, 2017<sup>2</sup>



**Figure 9.2: WHO FCTC is a key element of sustainable development**

Source: Tobacco Control for Sustainable Development, 2017<sup>2</sup>

## Tobacco control and SDGs

**SDG1: End poverty in all its forms everywhere**

Tobacco-related mortality continues to increase in Asian countries including India.<sup>3</sup> For tobacco use in both forms (smokeless and smoking), poverty and poor education are strong risk factors in India.<sup>4</sup> The National Sample Survey (NSS) and other nationally representative surveys such as the Global Adult Tobacco Survey (GATS) and community-based studies in India have highlighted that smoking and use of smokeless forms of tobacco are significantly higher in rural areas,<sup>5</sup> among uneducated poor people, and socially disadvantaged communities.<sup>6</sup> Tobacco use contributes significantly to non-communicable diseases (NCDs) and treatment cost associated with these diseases exacerbates poverty and increases health disparities due to lack of access to healthcare and the diversion of household spending which could otherwise be

used for necessities.<sup>7</sup>

**SDG2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

Tobacco use leads to food insecurity as money spent on tobacco reduces that available for food, healthcare and education. A community-level study in Puducherry showed that tobacco-related expenditure is higher in households with low socioeconomic status and thus spending on tobacco use has a negative influence on the household budget<sup>8</sup> including per capita nutrition intake.<sup>9</sup> Health risks associated with tobacco cultivation include crop-induced intoxication such as green tobacco sickness (GTS),<sup>10</sup> pesticide intoxication, respiratory<sup>11</sup> and dermatological disorders and certain types of cancer. Tobacco cultivation diverts the use of fertile agricultural land. Therefore, policies and interventions should aim to address the inequitable burden of tobacco

### BOX 9.1: Tobacco and NCDs in SDG 3

***‘Ensure healthy lives and promote well-being for all at all ages’***

#### **Target 3.a**

Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

#### **Target 3.4**

By 2030, reduce by one third premature mortality from NCDs and promote mental health and well-being



use and of food insecurity especially among disadvantaged populations.<sup>12</sup>

*SDG3: Ensure healthy lives and promote well-being for all at all ages*

Tobacco use is the leading preventable risk factor of NCDs. The total number of NCDs deaths reported in NCDs Progress Monitor 2022 in India is 6,047,000.<sup>13</sup> One in four Indians has a risk of dying from an NCD. In India, tobacco kills more than 10 lakh people each year, i.e. 9.5% of all deaths.<sup>1</sup> The leading cause is cardiovascular diseases (CVDs).<sup>1</sup> Tobacco use including smoking weakens the immune system and is not only associated with NCDs but also with communicable diseases such as tuberculosis and exacerbates the outcome of AIDS<sup>14</sup> and COVID-19.<sup>15</sup>

Target 3.4 (Box 9.1) of SDG3 stipulates “reducing premature deaths from NCDs by one-third by 2030”. The declaration of the Third UN High Level Meeting (HLM) in September 2018 brought about a shift from four-by-four action to a more comprehensive five-by-five approach including air pollution to major risk factors and mental health as the fifth major NCD. India adopted its 10 national NCD targets in 2013 and thereafter, the National Multisectoral Action Plan for Prevention and Control of Common NCDs (2017–2022). Several policies have outlined the government’s efforts to integrate NCD

prevention and control into the broader health and development agenda by strengthening health system through primary healthcare and universal health coverage (UHC). The National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS) aims at the integration of NCD interventions in the National Health Mission (NHM) framework for optimization of resources.<sup>16</sup> The COTPA, a comprehensive tobacco control legislation, was enacted to discourage the consumption of cigarettes and other tobacco products through imposing progressive restrictions. India ratified the WHO FCTC in 2004. The NTCP was initiated in 2007–2008 to complement the law. There is a need to create an enabling environment by implementing an evidence-based comprehensive approach for effective prevention, detection, referrals and treatment strategies through convergence with the ongoing interventions of the NHM, Ayushman Bharat (Health and Wellness Centres and Pradhan Mantri Jan Arogya Yojana [PM-JAY]), NPCDCS, and NTCP, etc.

*SDG4: Ensure inclusive and equitable quality education and promote life long learning opportunities for all*

Nearly 12.4% of young adults in the age group 15–24 years<sup>17</sup> and 8.5% of school-going adolescents aged 13–15 years<sup>18</sup> currently use tobacco in India. Tobacco use negatively

influences academic performance among children and adolescents.<sup>19</sup> The association between tobacco-related child labour and education is complex.<sup>20</sup> Thus, there is a need to create an enabling environment to learn about tobacco harms, implementation of Tobacco Free Educational Institution (ToFEI) guidelines and diversion of resources to promote education and social equality for all through tobacco control programmes and campaigns.

*SDG5: Achieve gender equality and empower all women and girls*

As per the National Family Health Survey (NFHS-5) conducted in 2019–2021, the prevalence of tobacco use among women has declined in almost all Indian states except Mizoram and Sikkim.<sup>21</sup> As per GYTS-4 (2019), 7.4% girls reported as current tobacco users.<sup>18</sup> Despite tobacco control legislation and NTCP in India, it is essential to adopt gender-sensitive research and interventions to curb tobacco use among women.<sup>22</sup>

*SDG6: Ensure access to water and sanitation for all*

Tobacco is a major contributor to water pollution, hazardous waste disposal, and inefficient water use. In India, tobacco cultivation is around 820,000 tonnes per annum and consumes around 2925 cubic metres of water per tonne of raw tobacco.<sup>2,23</sup> Besides farming, curing and manufacturing also consumes lot of water. The non-biodegradable waste from cigarette butts such as nicotine, lead, arsenic, ethyl phenol gets trickled into water bodies and has quantifiable implication on drinking water quality.<sup>24</sup> Similarly, SLT packs and pouches clog and pollute waterbodies and waterways. Without considering the potential ecological risk of tobacco production and tobacco products to water and environment, efforts to achieve clean water and sanitation will be both less comprehensive and less effective.<sup>25</sup>

*SDG8: Promote inclusive and sustainable economic growth, employment and decent work for all*

In India, there are around 457 lakh workers directly and indirectly engaged in tobacco production and distribution<sup>26</sup> who are exposed to occupational health hazards of tobacco cultivation and processing. Moreover, tobacco farm labourers, *tendu* leaf pluckers, *bidi* rollers are exploited by low wages and part-time occupation setting off decent and safe employment requirements.

Tobacco is a major hurdle for sustainable economic growth. Morbidity and mortality from tobacco use diminishes the ability of affected households to contribute fully to economy. Economic costs of tobacco use are estimated to be about 1% of India's gross domestic product (GDP).<sup>27</sup> On the other hand, it is estimated that an increase of *bidi* prices (most commonly smoked product) by 52% would generate an additional revenue of INR 3690 crore (INR 36.9 billion) along with the potential of averting 46 lakh premature deaths due to tobacco-attributable diseases.<sup>28</sup>

*SDG10: Reduce inequality within and among countries*

Tobacco-induced diseases adversely impact household incomes, resulting in lower availability of resources for food and education and pushing millions of families to below the poverty line. GATS-2 has shown that tobacco products are highly consumed by the unemployed (36.8%) and persons who have less than primary education (41.9%), thus further contributing to inequalities.<sup>17</sup> Child labour in the *bidi* sector results in school dropouts.

*SDG11: Make cities inclusive, safe, resilient and sustainable*

As the urban population in India is increasing at a rapid pace, municipal bodies face challenges for making smoke-free cities as a part of safe and resilient interventions. The Smart Cities Mission is an initiative to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of "Smart" solutions. Enforcement of tobacco control measures at



educational institutions workplaces, transport systems and public spaces is needed to protect and enhance the lives of entire city populations.

*SDG13: Take urgent action to combat climate change and its impact*

All phases of cigarette production, from leaf cultivation through cigarette manufacture to transportation, contribute to greenhouse gas emission responsible for global climate change. Tobacco cropping (especially tobacco monocropping) depletes the soil of its nutrients (potassium, phosphorus and nitrogen) and causes soil and water pollution due to the use of various pesticides and fertilizers.<sup>2</sup> Tobacco cultivation requires heavy use of extremely toxic pesticides that contaminate groundwater and thus drinking water.<sup>2</sup> The use of such high levels of pesticides makes the mosquitoes and flies resistant and thus spreads insect-borne diseases such as malaria.<sup>29</sup> Tobacco smoke also leads to indoor air pollution by releasing thousands of harmful chemicals into the air.<sup>2</sup> Therefore, environmental monitoring and surveillance systems need to be improved to restrict tobacco smoke in low- and middle-income countries such as India.<sup>30</sup>

*SDG14: Conserve and sustainably use the oceans, seas and marine resources*

Tobacco manufacturing and production both lead to waste production such as solvents, slurries, oils, plastics, paper, wood and toxic chemicals.<sup>31</sup> Similarly, use of tobacco products leads to generation of waste such as cigarette and *bidi* butts, tobacco pouches, packets and cartons. In the 2013 international coastal clean-up held in 92 countries, cigarette butts were the most common debris item found and made up to 15% of total debris.<sup>32</sup> Spit from SLT is very polluting and stains the environment; moreover there is evidence that SLT has a major role in transmitting contagious diseases such as COVID-19.<sup>15</sup> Leaching chemicals from cigarette butts and unsmoked filters can prove toxic to aquatic life affecting underwater ecology. Cigarette filters do not decompose for 5–7 years,

and can prove hazardous for the environment and for the health of children and stray animals who may accidentally swallow these.<sup>25</sup>

*SDG15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss*

Effect of tobacco cultivation on environment: Forest covers and trees may be cut down for growing, curing tobacco, for making tobacco products and their packaging. Deforestation has serious environmental consequences – including loss of biodiversity, soil erosion and degradation, water pollution and increases in atmospheric carbon dioxide.<sup>25</sup> An estimated 200,000 hectares of forests and woodlands are cut down annually and for tobacco farming and curing. Curing for drying tobacco leaves also uses wood and thus encourages cutting of trees. Tobacco curing accounts for 1.7% of deforestation globally and 4.6% of deforestation in 66 tobacco growing developing countries.<sup>10</sup> SLT in India is packed in small pouches and lakhs of such pouches are produced every year. The paper used in cigarettes and *kattha* used as an important ingredient of SLT products (*gutkha*), both require the chopping down of trees to obtain the wood.

*SDG16: Promote just, peaceful and inclusive societies*

The tobacco industry exploits domestic and international legal systems to escape tobacco control measures and expand its markets. Tobacco companies use trade agreements and law suits to weaken tobacco control efforts in various countries.

*SDG17: Revitalize the global partnership for sustainable development*

Tobacco use negatively impacts the efforts towards the achievement of SDGs. There is a need to address tobacco industry interference (TII) and protect public health policies from commercial and vested interests as TII is one of the most serious barriers to tobacco control measures being implemented under the WHO

FCTC. Sharing of knowledge, experience and technologies for effective tobacco control between various parties and stakeholders will enhance the efforts. The WHO FCTC implementation guidelines were jointly developed by different Parties. Various stakeholders are working together on a global platform to curb the menace of tobacco use. This partnership needs to be strengthened for full implementation of the WHO FCTC. WHO, World Bank, United Nations Development Programme (UNDP), the wider UN system and several other organizations have come together and prioritized tobacco control within the Sustainable Development Agenda. In the outcome document of the third International Conference on Financing for Development

(FfD3), the UN General Assembly has endorsed tobacco control policies and actions.<sup>2</sup>

## Conclusion

Tobacco control measures need to be mainstreamed in the non-health and other development programmes, as well as policies of relevant sectors to achieve SDGs. Therefore, it is important to strengthen the coordination mechanism between sectors, including civil society and other developmental partners, in terms of aligning their priorities, sharing responsibilities, ensuring monitoring and improving effectiveness of joint interventions to achieve sustainable development through tobacco control.

## Key messages

- In 2015, the United Nations included the FCTC in SDGs to advance tobacco control strategies.
- Reducing tobacco use plays a major role in global efforts to achieve the SDG target to reduce premature deaths from NCDs by one-third by 2030.
- Tobacco control measures must be integrated with non-health and developmental programmes and policies to achieve the SDGs.
- Structural governance, political will and effective multisectoral coordination among various stakeholders for tobacco control and NCD prevention can help advance India to meet its FCTC obligations and SDGs commitments.

## REFERENCES

1. WHO. Factsheet 2018: India. WHO Regional Office for South-East. Available from: [https://apps.who.int/iris/bitstream/handle/10665/272672/wntd\\_2018\\_india\\_fs.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/272672/wntd_2018_india_fs.pdf?sequence=1), accessed 13 August 2022.
2. Tobacco control for sustainable development. World Health Organization, Regional Office for South-East Asia; 2017. Available from: <https://apps.who.int/iris/handle/10665/255509>, accessed 13 August 2022.
3. Yang JJ, Yu D, Wen W, Shu XO, Saito E, Rahman S, et al. Tobacco smoking and mortality in Asia: a pooled meta-analysis. *JAMA Netw Open*. 2019;2(3):e191474. doi: 10.1001/jamanetworkopen.2019.1474.
4. Thakur JS, Prinja S, Bhatnagar N, Rana S, Sinha DN. Socioeconomic inequality in the prevalence of smoking and smokeless tobacco use in India. *Asian Pac J Cancer Prev*. 2013;14(11):6965–9. doi: 10.7314/apjcp.2013.14.11.6965.
5. Neufeld KJ, Peters DH, Rani M, Bonu S, Brooner RK. Regular use of alcohol and tobacco in India and its association with age, gender, and poverty. *Drug Alcohol Depend*. 2005;77(3):283–91. doi: 10.1016/j.drugalcdep.2004.08.022.
6. Mohan P, Lando HA, Panneer S. Assessment of tobacco consumption and control in India. *Indian Journal of Clinical Medicine*. 2018;9:1–8. Available from: <https://doi.org/10.1177/1179916118759289>, accessed 13 August 2022.
7. Engalgau MM, Karan A, Mahal A. The economic impact of non-communicable diseases on households in India. *Global Health*. 2012;8:9. doi: 10.1186/1744-8603-8-9.
8. Venkataraman S, Anbazhagan S, Anbazhagan S. Expenditure on health care, tobacco, and alcohol: evidence from household surveys in rural Puducherry.



- J Family Med Prim Care. 2019;8(3):909–13. doi: 10.4103/jfmpc.jfmpc\_91\_19.
9. John RM. Crowding out effect of tobacco expenditure and its implications on household resource allocation in India. *Soc Sci Med*. 2008;66(6):1356–67. doi: 10.1016/j.socscimed.2007.11.020.
  10. Parikh JR, Gokani VN, Doctor PB, Kulkarni PK, Shah AR, Saiyed HN. Acute and chronic health effects due to green tobacco exposure in agricultural workers. *Am J Ind Med*. 2005;47(6):494–9. doi: 10.1002/ajim.20162.
  11. Muniswamy S, Maliakel SF. A comparative study on the health problems and substance abuse among the tobacco farmers and non-tobacco farmers in Hassan District, Karnataka. *Indian J Occup Environ Med*. 2021;25(1):33–8. doi: 10.4103/ijoem.IJOEM\_41\_20.
  12. Kim-Mozeleski JE, Pandey R. The intersection of food insecurity and tobacco use: a scoping review. *Health Promot Pract*. 2020;21(1\_suppl):124S–138S. doi: 10.1177/1524839919874054.
  13. Noncommunicable diseases progress monitor 2022. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO. Available from: <https://www.who.int/publications/i/item/9789240047761>, accessed 16 August 2022.
  14. Jiang C, Chen Q, Xie M. Smoking increases the risk of infectious diseases: a narrative review. *Tob Induc Dis*. 2020;18:60. doi: 10.18332/tid/123845.
  15. COVID-19 pandemic and tobacco use in India. Ministry of Health and Family Welfare, Government of India; 2020. Available from: <https://www.mohfw.gov.in/pdf/COVID19PandemicandTobaccoUseinIndia.pdf>, accessed 16 August 2022.
  16. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). Ministry of Health and Family Welfare, Government of India; 2013. Available from: [https://main.mohfw.gov.in/sites/default/files/Operational%20Guidelines%20of%20NPCDCS%20%28Revised%20-%202013-17%29\\_1.pdf](https://main.mohfw.gov.in/sites/default/files/Operational%20Guidelines%20of%20NPCDCS%20%28Revised%20-%202013-17%29_1.pdf), accessed 16 August 2022.
  17. Global Adult Tobacco Survey: India 2016–17 Report. Ministry of Health and Family Welfare, Government of India; 2017. Available from: <http://www.indiaenvironmentportal.org.in/content/456113/global-adult-tobacco-survey-india-2016-17-report/>, accessed 16 August 2022.
  18. International Institute for Population Sciences, Mumbai. GYTS-4 Global Youth Tobacco Survey, Factsheet, India 2019. Ministry of Health and Family Welfare, Government of India; 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/National\\_Fact\\_Sheet\\_of\\_fourth\\_round\\_of\\_Global\\_Youth\\_Tobacco\\_Survey\\_GYTS-4.pdf](https://ntcp.nhp.gov.in/assets/document/National_Fact_Sheet_of_fourth_round_of_Global_Youth_Tobacco_Survey_GYTS-4.pdf), accessed 16 August 2022.
  19. Dhavan P, Stigler MH, Perry CL, Arora M, Reddy KS. Is tobacco use associated with academic failure among government school students in urban India? *J Sch Health*. 2010;80(11):552–60. doi: 10.1111/j.1746-1561.2010.00541.x.
  20. Ramos AK. Child labor in global tobacco production: a human rights approach to an enduring dilemma. *Health Hum Rights*. 2018;20(2):235–48.
  21. Rai B, Bramhankar M. Tobacco use among Indian states: key findings from the latest demographic health survey 2019–2020. *Tob Prev Cessat*. 2021;7:19. doi: 10.18332/tpc/132466.
  22. Singh S, Jain P, Singh PK, Reddy KS, Bhargava B. White paper on smokeless tobacco & women's health in India. *Indian J Med Res*. 2020;151(6):513–21. doi: 10.4103/ijmr.IJMR\_537\_20.
  23. Zafeiridou M, Hopkinson NS, Voulvoulis N. Cigarette smoking: an assessment of tobacco's global environmental footprint across its entire supply chain. *Environ Sci Technol*. 2018;52(15):8087–94. doi: 10.1021/acs.est.8b01533.
  24. Novotny TE, Bialous SA, Burt L, Curtis C, da Costa VL, Iqtidar SU, et al. The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption. *Bull World Health Organ*. 2015;93(12):877–80. doi: 10.2471/BLT.15.152744.
  25. Novotny TE, Slaughter E. Tobacco product waste: an environmental approach to reduce tobacco consumption. *Curr Environ Health Rep*. 2014;1(3):208–16. doi: 10.1007/s40572-014-0016-x.
  26. Statista. Number of employees in tobacco industry in India as of May 2021. 2021. Available from: <https://www.statista.com/statistics/1124225/india-employment-size-in-tobacco-industry-by-type/>, accessed 16 August 2022.
  27. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res*. 2021;23(2):294–301. doi: 10.1093/ntr/ntaa154.
  28. Jha P, Guindon E, Joseph RA, Nandi A, John RM, Rao K, et al. A rational taxation system of *bidis* and cigarettes to reduce smoking deaths in India. *Econ Polit Wkly*. 2011;42:44–51. Available from: <https://tobacconomics.org/uploads/misc/2014/02/A-rational-taxation-system-of-bidis-and-cigarettes-to-reduce...India-2011.pdf>, accessed 16 August 2022.
  29. Alout H, Roche B, Dabiré RK, Cohuet A. Consequences of insecticide resistance on malaria transmission. *PLoS Pathog*. 2017;13(9):e1006499. doi: 10.1371/journal.ppat.1006499.
  30. Bush KF, Luber G, Kotha SR, Dhaliwal RS, Kapil V, Pascual M, et al. Impacts of climate change on public health in India: future research directions. *Environ Health Perspect*. 2011;119(6):765–70. doi: 10.1289/ehp.1003000.

31. Genilo JWR, Sharif MR. Tobacco industry governance and responsibility discourses in Bangladesh. *South-East Asia Journal of Public Health*. 2015;5(2):13–22. Available from: <https://doi.org/10.3329/seajph.v5i2.28308>, accessed 16 August 2022.
32. International Coastal Cleanup – Ocean Conservancy. Working for Clean Beaches and Clean Water: 2013 Report. Available from: <https://oceanconservancy.org/wp-content/uploads/2017/04/2013-Ocean-Conservancy-ICC-Report.pdf>, accessed 16 August 2022.



# Tobacco control: What is possible? A vision for 2040 and beyond

- |  |   |
|--|---|
| <b>10.1: National Tobacco Control Policy: India</b> 247<br>Vikas Sheel, Pulkesh Kumar, L. Swasticharan,<br>Vineet Gill Munish, Monika Arora, Shalini Bassi,<br>Pankaj Chaturvedi, Praveen Sinha, Purva Singh,<br>Vijay Prakash Mathur, Sharmila Pimple | <b>10.4: Positioning tobacco control in response<br/>to public health emergencies</b> 265<br>Monika Arora, Vineet Gill Munish,<br>Mukesh Kumar Sinha, Purva Singh, Aastha Chugh |
| <b>10.2: Capacity building for tobacco control</b> 255<br>Poonam Khattar, Rana J. Singh, Praveen Sinha,<br>Sonu Goel, Harshad Thakur   | <b>10.5: Tobacco vendor licensing</b> 273<br>Narender Kumar, Nidhi Pouranik, Satish Tripathi,<br>Lalit Pathak, Nirmalya Mukherjee, Deepak Mishra                                |
| <b>10.3: Implementing bans on electronic nicotine<br/>delivery systems</b> 261<br>L. Swasticharan, Rakesh Gupta, Nirlep Kaur,<br>Rana J. Singh, Neha Jain, Prachi Kathuria   | <b>10.6: Tobacco-Free Future Generation</b> 280<br>Radhika Shrivastav, Jyotsna Govil, Tshering Bhutia,<br>Opinder Preet Kaur Gill, Anita Peter                                  |



## 10.1: National Tobacco Control Policy: India

### Background

Over the past two decades, India has made significant progress in tobacco control, following a multisectoral approach. The impact of India's tobacco control efforts has been well documented as 17% relative reduction in overall tobacco use in the past two Global Adult Tobacco Surveys (GATS-1; 2009–2010<sup>1</sup> and GATS-2; 2016–2017<sup>2</sup>). The recent fourth round of Global Youth Tobacco Survey (GYTS-4) in 2019 highlights a 42.5% relative reduction in tobacco use among 13–15 years old school-going children in the past decade.<sup>3</sup> The Government of India's (GoI's) commitment and public investment in implementing comprehensive tobacco control policies has resulted in substantial public health gains. It is important that India's tobacco control laws are largely aligned to the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) and other global best practices. While most tobacco control measures target demand-side measures, the Endgame would require reducing supply side measure, as India is a tobacco-producing country. Additionally, tobacco cultivators' buy-outs schemes are important to provide incentives and cash support to tobacco farmers to exit tobacco cultivation, in producer countries like India.

India now needs to take tobacco control to the next level of the Endgame<sup>4</sup> vision, formulating a comprehensive National Tobacco Control Policy, following a multisectoral and multi-stakeholder approach, with clear reduction in prevalence targets and timelines. The National Tobacco Control Policy will be drafted by adopting best practices from other countries, Finland,<sup>5</sup> New Zealand,<sup>6</sup> Serbia,<sup>7</sup> and in accordance with India's existing tobacco control laws,<sup>8</sup> India's adopted Sustainable Development Goals (SDGs),<sup>9</sup> National Health Policy (NHP)<sup>10</sup> and GoI's National Multisectoral Action Plan for Prevention and

Control of Non-communicable Diseases (NCDs) (2017–2022),<sup>11</sup> to de-normalize tobacco use and ensure less than 5% prevalence of tobacco use in the country by 2040.

### Vision of India's Tobacco Control Policy

The National Tobacco Control Policy will envisage creating a healthy, economically self-reliant and tobacco-free future for all in India, and accord pivotal importance to protect all Indians, especially the vulnerable groups including women and children, from the menace of the tobacco epidemic. The policy will serve as a roadmap for a 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040.

### Goal

The policy will envisage de-normalizing tobacco use and ensure less than 5% prevalence of tobacco use (among 15+ year population) in India by 2040.

### Key policy principles

Some fundamental principles that will represent the ethos of this policy are discussed below.

#### Protect the right to health for all

Tobacco control measures should be strengthened to reduce the health, socioeconomic and environmental burden of tobacco use, with a special focus on vulnerable populations, towards a healthier future for all Indians. This would be possible by enforcing Article 5.3 of the WHO FCTC to protect policy-making processes from tobacco industry interference (TII) and to ensure accountability and transparency among all stakeholders.

#### Tobacco-Free Future Generation

Adolescents and youth should be fully protected and dissuaded from any form of tobacco use

or use of ENDS (electronic nicotine delivery system)/ENNDS (electronic non-nicotine delivery systems) or flavoured tobacco products or nicotine in any form, ever in their lifetime, through a comprehensive intervention for ‘Tobacco-Free Future Generation’. The NMT21C (No More Tobacco in the 21st Century) campaign<sup>4</sup> and interventions for ‘Tobacco-Free Future Generation’ will be coordinated with Gol’s ongoing efforts of implementing Tobacco-Free Educational Institution (ToFEI) guidelines.<sup>12</sup> The ultimate goal of this policy will be to meaningfully involve adolescents as ‘Tobacco-Free Health Ambassadors’.

### **Protect Indian economy by reducing tobacco-attributable economic burden**

As discussed in chapter 5, the economic burden of diseases and premature deaths attributable to smoking and smokeless tobacco (SLT) use, by persons over 35 years of age in India, stands at INR 1,77,341 crore, which is more than 1% of India’s gross domestic product (GDP).<sup>13</sup> This annual drain is envisaged to be minimized under this policy. Tobacco is a monocrop and leads to deforestation and other forms of environmental degradation. Growing tobacco requires excessive use of fertilizers and other chemicals that degrade the soil and contaminate water. Curing of tobacco needs huge quantities of fuel wood causing air pollution and rolling cigarettes also requires paper by cutting trees. Tobacco product packages, butts, etc. create large quantities of toxic waste which pollute the air, water, and soil and threaten biodiversity. Therefore, diversifying crop cultivation and introducing commercially viable alternative cropping for tobacco farmers will be another important strategic goal of this policy.

### **Strengthening and aligning existing tobacco control efforts with national and international frameworks, policies, other health and development agendas**

- The NHP of the Gol aims at achieving universal health coverage (UHC) and delivering quality healthcare services to all at affordable cost.<sup>10</sup>

- The FCTC, the first evidence-based international treaty negotiated under the auspices of WHO, developed in response to the globalization of the tobacco epidemic that reaffirms the right of all people to the highest standard of health.<sup>14</sup>
- The SDGs, adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.<sup>15</sup>
- United Nations Development Action Framework (UNDAF), is a strategic, medium-term results framework that describes the collective vision and response of the UN system to national development priorities and results on the basis of normative programming principles.<sup>16</sup>
- Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) that aims to help the economically weaker section of the society who need healthcare facilities.<sup>17</sup>
- India’s National Multisectoral Action Plan for Prevention and Control of Common NCDs (2017–2022), a national blue print to provide a clear direction to the nation’s pursuit to tackle the growing burden of NCDs.<sup>11</sup>

### **Multisectoral action and whole-of-society interventions for policy implementation**

Given the multisectoral nature of tobacco control measures, the policy will actively engage with all relevant non-health sector government stakeholders, adopting a “whole-of-government” approach, with community and civil society under a “whole-of-society” approach. This holistic National Tobacco Control Policy will have no conflicts of interest or contradictions at the policy level. A “Health in All Policies” approach will be adopted by all ministries with an aim to promote public health, equity and equality in health. A high level inter-ministerial group for tobacco control shall be formed under the Prime Minister’s Office (PMO) to guide and monitor the achievements of goals under the National Tobacco Control Programme (NTCP).



## Strengthening implementation of tobacco control laws and policies

The policy will ensure full enforcement of existing tobacco control laws and allied laws, policies and guidelines with monitoring of key indicators for accountability and to track the progress in their implementation.

## Strategic thrust areas

### Measures for reduction of demand for tobacco

Table 10.1 gives details of the proposed measures for reduction of demand for tobacco and Table 10.2 gives strategies to reduce tobacco use among Indians.

### Measures for reduction of tobacco supply

- The Protocol to Eliminate Illicit Trade in Tobacco Products was acceded to by India on 5 June 2018 and entered into force on 25 September 2018.<sup>20</sup> India needs to work towards the implementation and operationalization of various components of the Illicit Trade Protocol and needs to include the elements of the Protocol in domestic legislation.
- Effective enforcement of tobacco vendor licensing (TVL) is an effective measure to check illegal tobacco sale and marketing.
- Draw concrete diversification plan for tobacco growers and workers and address environmental damage.

**Table 10.1: Proposed measures for reduction of demand for tobacco**

S. No.	Measures
1	Undertake strategic steps towards a <b>'Tobacco-Free Future Generation'</b> by aligning the activities of a <b>'Tobacco-Free India'</b> with those of "Azadi ka Amrit Mahotsav". All children born after 2022, not to be exposed to tobacco advertising, promotion or visual use in any form in order to eliminate youth initiation, addiction, disease, and premature deaths and economic loss caused by the tobacco products.
2	Make all <b>educational institutions completely tobacco-free</b> by ensuring effective and stronger implementation of Tobacco-Free Educational Institution (ToFEI) guidelines, <sup>12</sup> in all government and private educational institutions, including colleges, throughout the country. Introduce guidelines to implement NMT21C, a youth campaign and institute a reward system for 'Tobacco-Free Health Ambassadors'.
3	<b>Strictly implement ENDS ban nationwide</b> , to protect children and youth from the ongoing tobacco epidemic. Set up a high-level intersectoral committee to monitor the implementation of the "Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019"
4	Adopt a comprehensive <b>tobacco-free public places policy</b> by prohibiting all forms of tobacco use, in all public places including restaurants, hotels and airports, without any exceptions. This will de-normalize tobacco use behaviours for minors and restrict their access to tobacco products and also protect them from exposure to second-hand smoke (SHS).
5	<b>Ban all new and emerging tobacco products/novel tobacco/nicotine products/flavoured tobacco products</b> and venues such as <i>hookah</i> bars, which may catalyse transition to the use of other tobacco products or recreational products especially among youth.
6	<b>Widely disseminate information on and strengthen the available cessation support</b> (National Tobacco Quitline and mCessation) in the country, right up to the district level, to help tobacco users quit successfully. Further, strengthen cessation by making it a part of the existing healthcare delivery system. Introduce personalized applications to promote quitting behaviours among existing users.
7	Rigorously enforce the current legal provisions with respect to <b>pictorial health warnings for all tobacco products and a move towards plain packaging</b> , to prevent in-pack and on-pack advertising by the industry.

S. No.	Measures
8	Protect Indian children and youth from <b>exposure to any form of tobacco advertising, promotion and sponsorship</b> including surrogate advertisements and indirect promotion, by any medium, including digital, social media (including blog posts, WhatsApp messages), over-the-top (OTT) platforms and other new forms of media.
9	Ban all forms of <b>point of sale (PoS) advertisements</b> and <b>boards</b> (including stacking, display) as these advertisements also influence children and youth to initiate use of tobacco products.
10	<b>Ban online sales of tobacco products</b> via home delivery, social media and OTT platforms, to prevent access to children and youth.
11	<b>Price and tax measures:</b> Increasing tobacco tax to make tobacco products unaffordable.
12	<b>Tobacco Product Regulation:</b> All three National and Regional Tobacco Testing Laboratories (NTTLs) and that at the National Institute of Mental Health and Neuro Sciences (NIMHANS) to be fully operational and equipped to enable regular testing of contents and emissions of all existing and future tobacco products and accurate disclosure to authorities. The laboratories should follow established protocols for sample collection and fulfil all the relevant legal and evidentiary requirements while maintaining the chain of custody of samples ensuring the admissibility of evidence in the courts of law.

**Table 10.2: Proposed strategies to reduce tobacco use among Indians by increasing tobacco tax**

S. No.	Proposed strategies
1	<b>Uniformly tax all tobacco products</b> in a similar way and at the highest level, with no exceptions, to discourage the shift to relatively cheaper products.
2	<b>Increase tobacco tax every year and also adjust it to inflation</b> and income growth of citizens in the country so that the tobacco products do not get cheaper in relation to income affordability. <sup>18</sup>
3	<b>Increase tax across tobacco products to at least 75% of the retail price</b> for all tobacco products, including cigarettes, SLT and <i>bidis</i> , to align with the WHO recommendation. <sup>19</sup>
4	Stop the <b>distinction of tax rates between hand-made and machine-made <i>bidis</i></b> .
5	Need to <b>prohibit the sale of loose smoking tobacco products and small packs of other tobacco products</b> , pan India, to reduce access and not to make them affordable for children and adolescents.
6	<b>Discontinue all forms of subsidy or exemptions</b> for supporting manufacture and promotion of tobacco products.
7	Implement and <b>increase tax on raw materials</b> used for manufacture of various tobacco products, including raw tobacco. The possibility of a “dedicated cess” on tobacco products to be used for promotion of alternative livelihood measures for the farmers and <i>bidi</i> rollers and health promotion, can also be explored.
8	State governments to <b>deploy additional human resources to improve tax administration</b> for increasing tax compliance.

Creating alternative livelihood opportunities for tobacco farmers, *bidi* rollers, and for people employed by the industry is an immediate need. Reconsideration of the “Barn Buy-Out” scheme by the government to motivate tobacco growers to shift from tobacco cultivation, intensive behaviour change communication clubbed with an end-to-end business plan and post training support, linking them to schemes and

departments will ensure sustainability of the initiative<sup>2s</sup> in alignment with Article 17 of the WHO FCTC.<sup>14</sup> All stakeholder ministries must come together to develop a staggered but comprehensive diversification plan for tobacco cultivation (Table 10.3).

- Environmental degradation associated with tobacco cultivation must be addressed. Diversifying crop cultivation and introducing commercially viable multi-crop farming

**Table 10.3: A roadmap for phasing out tobacco cultivation in the next 20 years**

Ministries	Roles and Responsibilities
Ministry of Commerce and Industry	There is a need to set fixed target to reduce the acreage of tobacco cultivation land in India from the existing 4.5 lakh hectares. <sup>21</sup> This can be achieved by reducing the number of licences being issued to grow flue-cured virginia (FCV) tobacco as well as ensuring a minimum support price (MSP) for substitute crops that the farmers choose to cultivate.
Ministry of Agriculture and Farmers' Welfare	Reconsider the "Barn Buy-out Scheme", which provides a support of INR 500,000 per barn to farmers who are willing to shift from tobacco cultivation to other crops. <sup>22</sup> The National Agriculture Insurance Scheme (Rashtriya Krishi Bima Yojana) under the Ministry of Agriculture, Small Farmers Agro-Business Consortium, National Bank for Agriculture and Rural Development (NABARD) and United Nations Development Action Framework (UNDAF) to be approached to organize farmer groups and support alternative cropping.
Ministry of Rural Development	The National Rural Livelihoods Mission, Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and other poverty-reduction programmes to provide a viable umbrella to support <i>bidi</i> rollers and tobacco workers for shifting to alternative vocations and sources of livelihood.
Ministry of Labour and Employment	Need to launch large-scale training programmes on alternative vocations across states for <i>bidi</i> rollers who want to shift to other occupations. Launching of pilot initiatives in <i>bidi</i> rolling districts, upscaling and replicating effective pilots undertaken by civil society organizations (CSOs) on alternative livelihoods.
Ministry of Skill Development and Entrepreneurship Ministry of Labour and Employment	Provide alternative livelihoods for <i>bidi</i> workers by the Ministry of Skill Development and Entrepreneurship (MoSDE) and Ministry of Labour and Employment (MoLE) with a target of shifting <i>bidi</i> rollers to other vocations.
Ministry of Environment, Forest and Climate Change	To come on board to assess tobacco growing from the perspective of deforestation and soil damage.
Ministry of Tribal Affairs Ministry of Environment, Forest and Climate Change	The Ministry of Environment and Forests and Ministry of Tribal Affairs in consultation with state governments to develop clear policies for protecting the rights of tribal and forest dwellers. The state governments to provide support to <i>tendu</i> leaf pluckers, to move to alternative forest produce and alternative livelihoods from the seasonal occupation.
Ministry of Health and Family Welfare Ministry of Agriculture and Farmers' Welfare	The Ministry of Health and Family Welfare (MoHFW) and the Ministry of Agriculture in collaboration with State Agriculture Department, Agriculture Universities and Krishi Vigyan Kendras (KVKs) to initiate sensitization and awareness programmes for tobacco farmers as well as policy-makers on health impacts and environmental impacts of tobacco farming, and long-term benefits of shifting to other crops.
Ministry of Agriculture and Farmers' Welfare Ministry of Rural Development Ministry of Labour and Employment	The Ministry of Agriculture, Ministry of Labour and Employment and Ministry of Rural Development to initiate a comprehensive, national initiative on economically viable alternative vocations for tobacco workers and growers, in coordination with all key stakeholders through public-private partnership across states.
Ministry of Commerce and Industry Ministry of Agriculture and Farmers' Welfare	Dedicate special funds and create options of contractual engagement for farmers who are interested to shift to other viable farming alternatives. Incentives and support to be given by Ministry of Agriculture and Ministry of Commerce, through a separate fund towards alternative cropping initiatives for tobacco growers to shift.

options to tobacco farmers is another important strategic goal. It is essential to adopt a multi-pronged approach involving various Ministries including those of the Environment, Forest and Climate Change, Agriculture, Labour and Employment, Commerce and Industry, and Tribal Affairs to enable diversification, conduct impact assessment of tobacco growing, and take initiatives to reduce tobacco farming.

## Surveillance

The National Tobacco Control Policy will be reviewed every five years along with results of GATS and GYTS to understand the prevalence of tobacco use among adults, youth and children to be able to understand the trends, patterns of tobacco use and to track key tobacco control indicators (Table 10.4).

## Article 5.3 of the WHO FCTC

### Code of conduct for public officials and key stakeholders

The National Code of Conduct for Public Officials is restricted to “Officials of Ministry of Health and Family Welfare, its departments and all the autonomous institutions and Offices under its jurisdiction and to any person acting on their behalf”.<sup>23</sup> The scope of this code needs to be widened to cover all departments and ministries

of the government, professional associations, medical, public health and dental associations, elected leaders, educational institutions, civil society organizations (CSOs) working in tobacco control and public health, to prevent TII and effectively protect public health policies from commercial and vested interest of the tobacco industry and its allies.

### Redirect and restrict corporate social responsibility activities by the tobacco industry

WHO opines that activities of the tobacco industry related to corporate social responsibility (CSR) are “an inherent contradiction”, as the core functions of the industry are directly in conflict with the public health goals to reduce the burden of tobacco use.<sup>24</sup> There is an urgent need to de-normalize CSR activities undertaken by tobacco companies<sup>25</sup> and make it obligatory for the tobacco companies to contribute 2% of their average net profit to the Prime Minister’s National Relief Fund through the national treasury which can then be used for the benefits of the related stakeholders. The tobacco companies and their allied entities should be strictly prohibited from conducting any CSR activities or events in relation to children or their education in the form of scholarships or activities in educational institutions and supporting other development programmes.

**Table 10.4: Tobacco Endgame Targets for India**

Target	Source
Less than 5% prevalence of tobacco use by 2040 (among 15+ years population)	Lancet 2015 <sup>26</sup>
30% relative reduction in prevalence of current tobacco use and 25% cut in premature mortality related to NCDs by 2025	Cross-sectoral goals related to health under National Health Policy 2017, Sustainable Development Goal and India’s NCD targets under the Multisectoral Action Plan for the prevention and control of NCDs (2017–2022). <sup>11</sup>
>75% retail price of all tobacco products, uniformly with no exception	WHO recommendation
Redirect and restrict CSR activities by the tobacco industry	Article 5.3 of the WHO FCTC

## Conclusion

The proposed National Tobacco Control Policy for India is intended to serve as a roadmap for achieving a vision of 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040, including tobacco control demand reduction measures, as well as a comprehensive diversification roadmap for phasing out tobacco cultivation (supply reduction measures). To move India towards Endgame solutions, key tobacco

control demand reduction measures should be effectively implemented. The policy should also envisage to safeguard and dissuade adolescents and youth for using any form of tobacco or use of ENDS/ENNDS, or flavoured tobacco products or nicotine in any form, at any stage during their lives and to meaningfully engage adolescents and youth as 'Tobacco-Free Health Ambassadors'. This can be achieved through a comprehensive intervention for 'Tobacco-Free Future Generation'.

## Key messages

- India needs to take tobacco control to the next level of the Endgame vision by formulating a comprehensive National Tobacco Control Policy, following a multisectoral and multi-stakeholder approach, with clear reduction in prevalence targets and timelines.
- The policy is intended to serve as a roadmap for achieving a vision of 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040 as well as a comprehensive diversification roadmap for phasing out tobacco cultivation.
- The proposed policy envisages to safeguard and dissuade adolescents and youth for using any form of tobacco or use of ENDS/ENNDS, flavoured tobacco products or nicotine in any form.

## REFERENCES

1. Global Adult Tobacco Survey (GATS) India Report 2009–2010. Ministry of Health and Family Welfare. Government of India. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-India-2009-2010-Report.pdf>, accessed 26 August 2022.
2. Tata Institute of Social Sciences (TISS), Mumbai and Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey GATS 2 India 2016–17. Available from: <https://ntcp.nhp.gov.in/assets/document/surveys-reports-publications/Global-Adult-Tobacco-Survey-Second-Round-India-2016-2017.pdf>, accessed 26 August 2022.
3. Global Youth Tobacco Survey (GYTS)-4; 2019. Available from: <https://www.iipsindia.ac.in/content/global-youth-tobacco-survey-gyts-4>, accessed 26 August 2022.
4. International Conference on Public Health Priorities in the 21st Century: The Endgame for Tobacco. New Delhi; September 2013. Available from: <https://www.who.int/india/news/detail/12-07-2017-who-director-general-addresses-the-endgame-for-tobacco-conference>, accessed 26 August 2022.
5. WHO Framework Convention on Tobacco Control. FINLAND-Action plan to make country smoke-free by 2040. WHO FCTC. Available from: <https://untobaccocontrol.org/impldb/finland-%C2%96-action-plan-to-make-the-country-smoke-free-by-2040/>, accessed 26 August 2022.
6. Ministry of Health. Smoke-free 2025. New Zealand. Available from: <https://www.health.govt.nz/our-work/preventative-health-wellness/tobacco-control/smokefree-2025>, accessed 26 August 2022.
7. Strategic Plan for Tobacco Control. Official Gazette of the Republic of Serbia. Available from: [https://untobaccocontrol.org/impldb/wp-content/uploads/reports/r\\_serbia\\_annex5\\_tobacco\\_control\\_strategy\\_eng.pdf](https://untobaccocontrol.org/impldb/wp-content/uploads/reports/r_serbia_annex5_tobacco_control_strategy_eng.pdf), accessed 29 October 2022.
8. National Health Mission. Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 [COTPA 2003] and Related Rules. Ministry of Health and Family Welfare. Government of India. Available from: <https://nhm.gov.in/index4.php?lang=1&level=0&linkid=459&lid=692>, accessed 26 August 2022.



9. NITI Aayog. Available from: <https://www.niti.gov.in/verticals/sustainable-dev-goals>, accessed 26 August 2022.
10. National Health Policy, 2017. Ministry of Health and Family Welfare, Government of India. Available from: [https://www.nhp.gov.in/nhpfiles/national\\_health\\_policy\\_2017.pdf](https://www.nhp.gov.in/nhpfiles/national_health_policy_2017.pdf), accessed 26 August 2022.
11. Ministry of Health and Family Welfare. Government of India. National Multisectoral Action Plan for Prevention and Control of Common Noncommunicable Diseases (2017–2022). Available from: [https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29\\_1.pdf](https://main.mohfw.gov.in/sites/default/files/National%20Multisectoral%20Action%20Plan%20%28NMAP%29%20for%20Prevention%20and%20Control%20of%20Common%20NCDs%20%282017-22%29_1.pdf), accessed 29 October 2022.
12. Guidelines for Tobacco Free Educational Institutions (Revised). Ministry of Health and Family Welfare, Government of India. Available from: <https://ntcp.nhp.gov.in/assets/document/TEFI-Guidelines.pdf>, accessed 26 August 2022.
13. John RM, Sinha P, Munish VG, Tullu FT. Economic costs of diseases and deaths attributable to tobacco use in India, 2017–2018. *Nicotine Tob Res.* 2021;23(2):294–301. doi: 10.1093/ntr/ntaa154.
14. WHO Framework Convention on Tobacco Control. Available from: <http://apps.who.int/iris/bitstream/handle/10665/42811/9241591013.pdf;jsessionid=29A9F1F97BBC00B7FBBCA2C6A45D8461?sequence=1>, accessed 26 August 2022.
15. Sustainable Development Goals. Available from: <https://www.un.org/sustainabledevelopment/development-agenda/>, accessed 26 August 2022.
16. United Nations Development Assistance Framework Guidance. Available from: <https://unsdg.un.org/resources/united-nations-development-assistance-framework-guidance>, accessed 26 August 2022.
17. National Health Authority. Pradhan Mantri Jan Arogya Yojana (PM-JAY). Available from: <https://pmjay.gov.in>, accessed 26 August 2022.
18. John RM, Rao RK, Rao MG, Moore J, Deshpande RS, Sengupta J, et al. The Economics of Tobacco and Tobacco Taxation in India. Paris: International Union Against Tuberculosis and Lung Disease. 2010. Available from: [https://www.tobaccofreekids.org/assets/global/pdfs/en/India\\_tobacco\\_taxes\\_report\\_en.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/India_tobacco_taxes_report_en.pdf), accessed 26 August 2022.
19. WHO report on the global tobacco epidemic, 2015: raising taxes on tobacco. World Health Organization; 2015. Available from: <https://apps.who.int/iris/handle/10665/178574>, accessed 26 August 2022.
20. India ratifies WHO's protocol to eliminate illicit trade in tobacco products (ITP). Available from: <https://theunion.org/news/india-ratifies-protocol-to-eliminate-illicit-trade-in-tobacco-products#:~:text=The%20Protocol%20is%20based%20on,for%20effective%20global%20tobacco%20control>, accessed 26 August 2022.
21. Teja IK, Rajeswari S, Devi IB, Reddy BR. Economics of tobacco and its alternative crops in Nellore and Prakasam districts of Andhra Pradesh. *IMPACT: International Journal of Research in Applied, Natural and Social Sciences.* 2016;4(10):115–22. Available from: [https://www.researchgate.net/profile/Krishna-Indurupalli/publication/324703756\\_ECONOMICS\\_OF\\_Tobacco\\_AND\\_ITS\\_ALTERNATIVE\\_CROPS\\_IN\\_NELLORE\\_AND\\_PRAKASAM\\_DISTRICTS\\_OF\\_ANDHRA\\_PRADESH/](https://www.researchgate.net/profile/Krishna-Indurupalli/publication/324703756_ECONOMICS_OF_Tobacco_AND_ITS_ALTERNATIVE_CROPS_IN_NELLORE_AND_PRAKASAM_DISTRICTS_OF_ANDHRA_PRADESH/) accessed 29 October 2022.
22. World Health Organization. Regional Office for South-East Asia. Expert group consultation on alternative livelihoods for tobacco farmers and workers: WHO Regional Office for South-East Asia, New Delhi, 30–31 July 2015. WHO Regional Office for South-East Asia; 2015. Available from: <https://apps.who.int/iris/handle/10665/205051>, accessed 26 August 2022.
23. Ministry of Health and Family Welfare. Code of Conduct for Public Officials in Compliance to Article 5.3 of WHO FCTC. 2020. MoHFW, Government of India. Available from: <https://landing.ggfc.world/dmdocuments/Code%20of%20Conduct%20for%20Public%20Officials%202.cdr.pdf>, accessed 26 August 2022.
24. World Health Organization. Tobacco Industry and Corporate Social Responsibility ... an Inherent Contradiction. UCSF: Center for Tobacco Control Research and Education. 2004. Available from: <https://escholarship.org/uc/item/6kf7q7v9>, accessed 26 August 2022.
25. Government of India. The Companies Act 2013. Available: <https://www.mca.gov.in/Ministry/pdf/CompaniesAct2013.pdf>
26. Beaglehole R, Bonita R, Yach D, Mackay J, Reddy KS. A tobacco-free world: a call to action to phase out the sale of tobacco products by 2040. *Lancet.* 2015 Mar 14;385(9972):1011–8. doi: 10.1016/S0140-6736(15)60133-7. PMID: 25784348.



## 10.2: Capacity building for tobacco control

An effective and sustained exercise to build capacity for tobacco control to meet the national targets for NCDs and the SDGs would have to address a range of issues related to technical capacities and inputs. It would require the development of a cadre of well-trained committed individuals with technical and managerial skills and identification of organizations and institutions

to plan, implement and monitor various policies/programmes and evaluate outcomes.

### Where are we?

Various activities for capacity building to strengthen tobacco control in India have been undertaken by the GoI and key stakeholders (Box 10.1).

#### BOX 10.1: Need-based capacity building activities for tobacco control for stakeholders at different levels

- 1. Trainings (MoHFW):** Routine trainings under the NTCP with thrust on field experiences (for key aspects such as planning, monitoring and implementation, enforcement of COTPA, financial, engagement with stakeholders/others, SLT and social behaviour change communication)
- 2. Sensitization trainings:** for policy-makers, police personnel, legal consultants, vendors, school teachers, etc.
- 3. Advocacy activities:** to develop effective advocacy campaigns
- 4. Management trainings:** for leadership in tobacco control
- 5. Technical trainings on specific topics/issues:** cessation, NRT, recent post COVID-19 developments, enforcements for *hookah* bars, e-cigarettes, seizing and testing of tobacco products, etc.
- 6. Trainings on specific issues:** SLT, TII, MPOWER, enforcement of COTPA

### Multisectoral training workshops

During 2007, several multisectoral training workshops were organized by the Ministry of Health and Family Welfare (MoHFW), GoI in partnership with the HRIDAY and Public Health Foundation of India (PHFI) to build capacities of various government departments and CSOs to understand and enforce various provisions of the Cigarettes and Other Tobacco Products Act, 2003 (COTPA), as relevant.

### Capacity building activities

After the launch of the National Tobacco Control programme<sup>1</sup> (NTCP) in 2007–2008, the GoI

made strategic investments towards capacity building. The MoHFW in collaboration with the Johns Hopkins Bloomberg School of Public Health (JHSPH), the National Institute of Health and Family Welfare (NIHFW) and WHO curated a training programme for the newly appointed state nodal officers (SNOs) and NTCP consultants. To augment the capacity of managers/programme staff under the NTCP, the MoHFW nominated many SNO/consultants to the annual tobacco control leadership programme organized by the JHSPH, which still continues.

Customized programmes have been organized with support from WHO for officials of GoI to visit

the Centers for Disease Control and Prevention (CDC), Atlanta for orientation to tobacco testing laboratories; officials of the Ministry of Finance (MoF) to visit Kenya and Turkey to understand the track and trace mechanism; and officials of the Tax Research Unit (MoF) to visit Geneva, Switzerland, for gaining knowledge about the global best practices for tobacco taxation. The MoHFW has been nominating its officials and from other ministries for various global capacity building programmes on various thematic areas

pertaining to tobacco control including legal aspects.

### **Capacity building activities by national/state level institutions**

The NIHFW in collaboration with WHO and The Union under the overall guidance of the MoHFW has conducted several trainings of trainers (ToT) for the programme staff and other stakeholders at the national and state levels (Box 10.2).

#### **BOX 10.2: Case study – Empowering programme and other staff by organizing trainings of trainers**

The NIHFW with support from the WHO and under the guidance of the MoHFW developed structured training modules for the NTCP programme managers. To develop this module, a training needs assessment was done by engaging state/district nodal officers. The training curriculum was finalized with the help of experts in the field. A training compendium comprising *Handbook, The Facilitators' Guide and key resource material* was developed. It was pilot-tested in the first training and finalized after modifications suggested by the experts.

In 2018, the NIHFW with support from the MoHFW rolled out of the training modules in a systematic manner by organizing ToT programmes for all 36 states/Union Territories in India.

In 2019, six ToTs were conducted and a total of 164 master trainers were trained. Despite the COVID-19 situation, two virtual trainings were organized in 2020. Technical and faculty support for this training were provided by the WHO, The Union and other resource persons.

### **Educational and training activities by academic/research institutions**

#### **Public Health Foundation of India (PHFI): e-Course on Tobacco Control**

In 2011, an eCourse on Tobacco Control<sup>2</sup> was launched at the PHFI. This 3-month course aims to build the public health capacity of participants to improve their knowledge and understanding of tobacco control strategies and enhance their skills and proficiency in designing and implementing tobacco control programmes. In the first batch, 50 candidates from State Tobacco Control Cells were nominated by the MoHFW for training. It has been observed that off late dental students are keen on participating in this course. Since 2011, nearly 400 candidates from various

backgrounds have been trained. Tobacco control has also been introduced in the ePost Graduate Programme in Health Promotion.<sup>3</sup>

#### **Post Graduate Institute of Medical Education and Research (PGIMER)**

In 2017–2018, a module on tobacco control for healthcare professionals<sup>4</sup> was developed by the Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, in collaboration with The Union-South East Asia and Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry. This module has been integrated in the curriculum of the Masters of Public Health (MPH) at the JIPMER and other colleges.

In 2018, Resource Centre for Tobacco Control (RCTC) in India was launched by PGIMER with technical support of The Union which houses correct and reliable information of tobacco control initiatives, policies and guidelines, circulars and notifications, and other resource materials from the sub-national and national level.

In 2021, two online courses on tobacco control (Basics and Advanced) for academicians, programme managers and civil society advocates were rolled out. Fifty professionals and programme managers were trained in the first batch (3-month Basic Course on Tobacco Control).

During the last decade, PGIMER, Chandigarh; JIPMER, Puducherry; PHFI; All India Institute of Medical Sciences (AIIMS), New Delhi; Maulana Azad Institute of Dental Sciences (MAIDS), New Delhi and various other state medical and dental colleges have been periodically conducting trainings with components related to tobacco control for health professionals, dentists, teachers, ASHA (accredited social health activist) workers and other stakeholders. Many short courses were delivered to postgraduate medical students during public health conferences.<sup>5</sup>

### **National Institute of Cancer Prevention and Research (NICPR): An online certificate course on smokeless tobacco cessation**

The WHO FCTC Global Knowledge Hub on Smokeless Tobacco<sup>6</sup> (KH-SLT) at the Indian Council of Medical Research, National Institute of Cancer Prevention and Research India (ICMR-NICPR) in collaboration with the Department of Health Sciences, University of York, UK, offers an online course on SLT cessation. Spread over 4 months, the course has four modules, a weekly online session and an assessment exercise at the end of the course.

### **Activities by development partners and civil society**

During the past decade, the WHO India Office, The Union South-East Asia, Vital Strategies,

HRIDAY, Salaam Bombay, Healix Sekhsaria Institute for Public Health, the Voice of Tobacco Victims (VoTV), and the Voluntary Health Association of India (VHA) have been actively conducting training and capacity building workshops and programmes including but not limited to implementers, doctors, law enforcers, vendors, school teachers and other stakeholders.

In 2007, under the Bloomberg Initiative, The Union South-East Asia (The Union) and its partners across India initiated a sensitization and training programme. This included technical courses on various components of FCTC and MPOWER, TII and the NTCP; International Management Development Programmes (IMDPs) in tobacco control such as leadership and management, project management, management of managers, strategic planning and innovation, and budget and finance management. At the sub-national level, CSOs and academic partners conducted sensitization programmes for more than 2500 senior and intermediate officials/managers and more than 500,000 district and grassroots-level stakeholders. For more than a decade, WHO and The Union have been regularly conducting such courses on various aspects of FCTC, MPOWER, implementation of the NTCP and best practices, Article 5.3 of the FCTC and other domains of tobacco control.

### **Development of training resources**

The MoHFW with support from partners has developed a range of technical and training resource materials for undertaking various training programmes in India.<sup>1</sup> These include: *Health Worker's Guide; Manual on Tobacco Control in Schools; Training Manual for Doctors; NTCP Operational Guidelines; Guidelines for Law Enforcers for Effective Implementation of Tobacco Control Laws; Establishment of Tobacco Cessation Centres in Dental Institutes, An Integrated Approach in India – Operational Guidelines, 2018; Tobacco Dependence*

*Treatment Guidelines; Training Module and Facilitator Guide for ToT for Programme Staff under the NTCP; Revised Guidelines for Tobacco Free Educational Institutions; Operational Guidelines for National Tobacco Testing Laboratories.*<sup>1</sup>

## Role of stakeholders

The development of national capacity for tobacco control concerns a range of stakeholders in the public and civic domains, and at the Central and local levels.<sup>7</sup> Stakeholders have a key role of establishing collaborative partnerships to enrich each other with requisite technical expertise for capacity building including on 'how to conduct

advocacy' (Box 10.3). At the national level, many institutions and resource centres such as the NIHFW, NICPR, PGIMER, MAIDS, three NTTLs, National Tobacco Quit Line Services are contributing towards tobacco control activities in India. Nevertheless, the scope for establishing and implementing training and educational programmes through strong public-private partnerships and collaborations needs to be further explored. Partnerships with international institutions having technical expertise needs to be strengthened. A consortium/forum should be created with all stakeholders to identify critical aspects that require capacity building and address those by adopting a phased planning approach.

### BOX 10.3: Case study – Capacity building by strengthening collaborations for advocacy

In 2009–2010, the MoHFW in partnership with WHO and grants from Bloomberg Initiative organized one national and four regional level advocacy workshops for enhancing engagement with diverse stakeholders. The success of these workshops culminated in a series of state level advocacy workshops in over 20 states in India and resulted in sensitization of over 3000 stakeholders from different departments, the media and CSOs, which was pivotal for the roll out and implementation of the newly launched NTCP.

## Challenges

India faces multiple challenges such as SLT, spitting, e-cigarettes (in spite of a nationwide ban), *hookah* bars, and strengthening the enforcement activities. Capacity building for tobacco control is a continuous process of sustainable educational, training and research activities reflecting national priorities and international commitments. This necessitates inputs from diverse multi-disciplinary domains and involvement of technical, legal and financial experts. Given the heavy training load, it is an enormous challenge to establish and implement comprehensive educational/training/research activities by integrating them into a national strategy.

## The way forward

There is a need to constitute a core team of professionals to plan implement, monitor, evaluate and sustain various tobacco control initiatives in the long term. The following measures are proposed:

- Undertake a needs assessment exercise for capacity building: Initially, a national capacity assessment should be done to identify specific efforts required for capacity building for implementation of tobacco control policies. It would provide an analysis of commitment, organizational structure, status of partnerships, human and financial

resources,<sup>8</sup> focusing on the national NCD and SDGs targets.

- Identify potential training institutions and set up infrastructure at the national and state levels: Resource centres should be created for providing technical training.
- Develop need-based training programmes at all levels using latest technology (virtual platforms/mobile-based technology): All modes of education/training should be explored as per the priorities identified from situation analyses/needs assessment. Key national institutions, academic/research and CSOs can actively engage in educational/training as per their vision and mission towards enhancing the technical skills.
- Conduct faculty development programmes as potential means to develop competencies for addressing a wide range of issues such as sustainable tobacco cessation programmes.
- Organize workshops to sensitize medical professional organizations and their associations including public health associations, voluntary organizations associated with industry tactics and unethical practices so as to empower them to stop association in any manner with the tobacco industry. This calls for developing a plan of action and implementation strategy for the priority areas identified.
- Build capacity in tobacco control to look beyond the health sector: Priority areas for capacity building of various stakeholders (within and beyond health) at the national/state level should be identified. Tobacco control initiatives should be integrated in all national health programmes and across other multisectoral activities.
- Identify potential opportunities with the WHO, The Union, and other national and international technical, scientific and non-governmental organizations (NGOs) to work closely with the government to strengthen the NTCP.
- Analyse and review the financial resources available for capacity building in tobacco control in view of the goals and targets in the context of national and international commitments. Adequate funding should be allocated under the NTCP at the state and district levels to strengthen training activities and infrastructure.
- Set up institutions of excellence in the country to provide momentum to the existing tobacco control mechanisms.

## Key messages

- Capacity building of the states/Union Territories and various stakeholders through in-person trainings, workshops and virtual training programmes is essential for robust tobacco control action at the national, sub-national and regional levels.
- Capacity building for tobacco control is an ongoing process of long-term educational, training and research efforts that reflect national interests and international obligations.
- There is a need for hands-on training with practical sessions backed up by modules that can help health professionals, law enforcers, CSOs and other stakeholders to improve their knowledge, attitudes, and skills related to tobacco control.
- It is important to develop a national strategy for capacity building, with dedicated fund allocation.

## REFERENCES

1. National Tobacco Control Programme. Guidelines and Manuals. Available from: [http://ntcp.nhp.gov.in/guidelines\\_manuals](http://ntcp.nhp.gov.in/guidelines_manuals), accessed 26 August 2022.
2. Public Health Foundation of India, Centre for eLearning. eCourse on Tobacco Control. Available from: <https://cdl.phfi.org/portal/node/107>, accessed 26 August 2022.
3. Public Health Foundation of India, Centre for eLearning. ePost Graduate Program in Health Promotion. Available from: <https://cdl.phfi.org/portal/node/113>, accessed 26 August 2022.
4. Tobacco Control – a module for public health professionals. Available from: <https://www.rctcpgi.org/pdf/MPH-Tobacco-Module.pdf>, accessed 26 August 2022.
5. Resource Centre for Tobacco Control. About Resource Centre. Available from: <https://www.rctcpgi.org/about-resource-centre.php>, accessed 26 August 2022.
6. WHO FCTC Global Knowledge Hub on Smokeless Tobacco. Available from: <https://extranet.who.int/fctcapps/fctcapps/fctc/kh/slt>, accessed 26 August 2022.
7. WHO Tobacco Free Initiative. Building blocks for Tobacco Control: A Handbook. World Health Organization; 2004. Available from: [https://apps.who.int/iris/bitstream/handle/10665/42993/9241546581\\_eng.pdf;jsessionid=DC78F5079678DB051B866EF958C72711?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/42993/9241546581_eng.pdf;jsessionid=DC78F5079678DB051B866EF958C72711?sequence=1), accessed 26 August 2022.
8. World Health Organization. Assessing the national capacity to implement effective tobacco control policies: operational manual on planning, conduct and follow-up of joint national capacity assessments; 2013. Available from: <https://apps.who.int/iris/handle/10665/85383>, accessed 26 August 2022.



## 10.3: Implementing bans on electronic nicotine delivery systems

### Regulation of ENDS products in India

On 5 December 2019, The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019 (PECA 2019) was enacted.<sup>1</sup> The prohibition of electronic cigarettes (e-cigarettes) includes all forms of electronic nicotine delivery systems (ENDS), “heat not burn” products, *e-hookah*, and similar devices. This Act bans the sale and advertising of e-cigarettes and e-cigarette components. The main provisions of the Act, which are uniformly applicable throughout the country, are: prohibition on production, manufacturing, import, export, transport, sale, distribution, advertisement of e-cigarettes and storage of e-cigarettes. Designated officers (sub-inspector or other designated officers) are authorized to enter and search and seize without a warrant if he/she believes that provisions of the Act have been violated. Violation of the Act invites monetary fines and/or imprisonment.

To facilitate a successful implementation of the Act, the Revenue Department, Ministry of Finance asked customs officials to ensure strict adherence to the prohibition on import of e-cigarettes.<sup>2</sup> The MoHFW directed state authorities to undertake required measures to implement the law.<sup>3</sup> State authorities were requested to conduct a month-long drive to ensure implementation of the provisions of the Act. States such as Haryana<sup>4</sup> and Punjab<sup>5</sup> reportedly carried out a month-long drive to enforce the Act. In Punjab, the State Tobacco Control Cell (STCC) and the police department jointly organized various activities, including capacity building workshops for police officials. Senior state officials in Punjab reiterated their commitment to implementing the PECA in the state by strengthening ties between the police

department and the health department. The state of Punjab has been one of the first in the country to take action against e-cigarettes. In 2012, the High Court of Punjab and Haryana set-up a Permanent Task Force to monitor the use and abuse of nicotine. In 2013, Punjab became the first state in India to prohibit e-cigarettes by declaring ENDS as unapproved under the Drugs and Cosmetics Act. Since then, 18 more states and Union territories have banned e-cigarettes. Cases were filed against the sale of e-cigarettes under the Drugs and Cosmetics Act and two of the violators from District Mohali and Sangrur in Punjab were imposed fines and imprisonment as per the Act.<sup>6</sup> A shopkeeper from Mohali district was sentenced to 3 years in jail and also fined INR 1 lakh for selling e-cigarettes.<sup>7</sup>

A review conducted by the Global Center for Good Governance in Tobacco Control found that by February 2021, a total of 42 countries worldwide were regulating nicotine (and/or other) content/s of e-cigarettes and 81 countries allowed selling of e-cigarettes under restrictions/regulations.<sup>8</sup> By enacting the PECA, India is among the 38 countries that have imposed a ban on selling of e-cigarettes.<sup>8</sup>

### Role of CSOs and other non-state actors

CSOs and other non-state actors have supported the government in introducing and implementing the PECA. Members from NGOs have chaired the expert committee of a government white paper (published in May 2019),<sup>9</sup> which summarized the harms of ENDS and recommended a complete prohibition of ENDS in India. NGOs have formed coalitions to advocate for stricter tobacco control rules, including for e-cigarettes.<sup>10</sup> Several non-state actors are also involved in monitoring the sale of ENDS after the ban, hence providing actionable evidence.

## Challenges in implementation of ban on ENDS products

A survey conducted between November 2019 and January 2020 shows that despite a nationwide ban, ENDS products are available in 18.6% of the surveyed retail storefronts in nine cities – Bengaluru, Chandigarh, Dehradun, Delhi, Indore, Kolkata, Ludhiana, Raipur and Ranchi. The majority of the non-compliant sellers were found to be tobacco retailers, who sold both e-cigarettes and e-cigarette accessories.<sup>11</sup> In 2020, 35.6% of internet electronic cigarette vendors (IEVs) continued to sell vaping devices in an Indian city despite the implementation of PECA. Among them, half were general e-commerce sites/portals, 75% did not apply any sort of age verification methods, and 56.3% did not feature health or safety warnings on their websites.<sup>12</sup> While the PECA warrants a complete ban on sale of e-cigarettes, these findings indicate the ease with which e-cigarettes are marketed and sold in India. Even after the prohibition, these products are advertised on the internet with a wide range of promotional strategies, such as price discounts, health benefit claims, and use of social networks.<sup>12</sup> A recent study (2020) shows that almost 90% of the non-compliant stores advertised their ENDS products in shop counters in full view of the customers.<sup>9</sup>

## Industry tactics

Manufacturers of e-cigarettes and other industry stakeholders are a major roadblock in the implementation of any tobacco control policies, including the PECA. In 2013, major tobacco companies had purchased or developed a plethora of ENDS products with the dual commercial intent of expanding their range of tobacco products while offering a product that they claimed causes lesser harm.<sup>13</sup> Industry tactics of glamorizing ENDS among the youth was to trap potential customers, who may not have wished to experiment with conventional cigarettes, and those who were trying to

quit smoking, eventually making them dual users and addicts.<sup>4</sup> At least 12 incidents were identified and enlisted in the India Tobacco Industry Interference Index 2020,<sup>14</sup> where the industry or industry-linked support groups approached governments with their demands concerning ENDS or e-cigarettes, mainly asking governments not to ban such products and to consider regulating these products as “harm-reduction” products. When the ban on e-cigarettes was announced in India, a leading American vape company provided funds to Indian companies to fight the government’s decision.<sup>15</sup> Advocacy groups supporting e-cigarettes called for countrywide protests against the ban on e-cigarettes in India.<sup>16</sup> The tobacco lobby is known to float multiple narratives to undermine the government’s decision to ban ENDS.<sup>17</sup> Many misleading advocacy articles by pro e-cigarette lobbies were published in scientific and non-scientific print media, which challenge the government’s actions and regulations.

## Recommendations for strengthening the implementation of PECA

The implementation of PECA 2019 has been facing multiple challenges, which undermine the public health measures taken by the government to preclude ENDS from becoming another epidemic in the country. The following recommendations are made to strengthen the implementation and compliance of PECA at the national and sub-national levels:

- Build capacity of law enforcers and the police department to identify the plethora of ENDS products available and various tactics used for circumventing the law.
- Strengthen enforcement of restrictions on products such as *e-hookah*, especially in restaurants, pubs and bars.
- Enforce multiple check-points to counter e-cigarette availability. The first check should be at the social media level and the second

should be at the customs level (to prevent illegal import of e-cigarettes into the country).

- Strictly regulate sale and advertising, promotion of ENDS products on the internet, online stores and through home deliveries. A high-level inter-ministerial committee should take cognizance of these violations and appropriate action should be taken.
- Increase vigilance and monitoring by public health advocates and CSOs to identify online sale and PoS of ENDS products.
- Update ToFEI guidelines to support effective implementation of PECA 2019
- Coordinate efforts between government and non-governmental agencies to build

awareness of local shopkeepers regarding harms of ENDS products and laws pertaining to their restriction.

- Organize public health campaigns to raise awareness on the harms of ENDS products and myths surrounding their use. Mass media campaigns should be context-specific and based on scientific evidence and social marketing strategies.
- Constitute committees, tasked specifically with disseminating information via print media – in the form of op-eds, commentaries, etc. to disseminate information on harms of e-cigarettes and advocate for stricter regulations. Misinformation by pro e-cigarette groups should be countered.

## Key messages

- By enacting the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019 (PECA 2019), India is now among 37 countries to ban ENDS, including e-cigarettes.
- Several states of India have successfully implemented PECA 2019 – with states such as Punjab and Haryana conducting month-long drives to reinforce the Act, under the directive of the MoHFW, Gov.
- CSOs and various NGOs have played crucial roles in implementing and monitoring the ban on ENDS. They have formed coalitions to monitor the ban and conducted online and offline surveys to assess the implementation of the ban.
- Several studies conducted in India have found that despite the ban, ENDS continue to be sold in some storefront and via online stores. Furthermore, many companies continue to market ENDS using tactful strategies, such as offering discounts and advertising on social media platforms.
- Multi-partisan coordination is required to enforce the ban on ENDS with special emphasis on monitoring and vigilance of online and offline platforms.

## REFERENCES

1. Ministry of Law and Justice. The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage and Advertisement) Act, 2019; Government of India; 5 December 2019. Available from: [https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement\)-Act-2019.pdf](https://ntcp.nhp.gov.in/assets/document/The-Prohibition-of-Electronic-Cigarettes-Production-Manufacture-Import-Export-Transport-Sale-Distribution-Storage-and-Advertisement)-Act-2019.pdf), accessed 27 August 2022.
2. Ensure strict implementation on ban of import of e-cigarettes, says Revenue department; 8 October 2019. Available from: <https://www.oneindia.com/india/ensure-strict-implementation-on-ban-of-import-of-e-cigarettes-says-revenue-dept-2959431.html>, accessed 27 August 2022.

3. Proper Implementation of the provisions laid down in the Prohibition of Electronic Cigarettes, (production, manufacture, import, transport, sale, distribution, storage and advertisement) ordinance, 2019. Ministry of Health and Family Welfare, Government of India Notification No. D.O.No.P.16012/23/2019-TC (23/12/2019). Available from: <http://www.odishapolicecidcb.gov.in/sites/default/files/Ordinance.pdf>, accessed 27 August 2022.
4. Haryana police to undertake month-long drive to enforce e-cigarette prohibition. ANI News; 10 November 2019. Available from: <https://aninews.in/news/national/general-news/haryana-police-to-undertake-month-long-drive-to-enforce-e-cigarette-prohibition20191110164936/>, accessed 27 August 2022.
5. Punjab police to enforce ban on e-cigarettes, *hookah* bars. ANI News; 7 February 2020. Available from: [https://www.business-standard.com/article/news-ani/punjab-police-to-enforce-ban-on-e-cigarettes-hookah-bars-120020701650\\_1.html](https://www.business-standard.com/article/news-ani/punjab-police-to-enforce-ban-on-e-cigarettes-hookah-bars-120020701650_1.html), accessed 27 August 2022.
6. E-Cigarettes & Illicit Tobacco Products Seized in Raid at Amritsar. Directorate of Information and Public Relations, Punjab, India; 12 July 2018. Available from: <http://www.diprpunjab.gov.in/?q=content/e-cigarettes-illicit-tobacco-products-seized-raid-amritsar>, accessed 27 August 2022.
7. E-cigarette seller gets 3-year jail in Mohali. The Tribune; 14 April 2016. Available from: <https://www.tribuneindia.com/news/archive/features/e-cigarette-seller-gets-3-year-jail-in-mohali-222736>, accessed 27 August 2022.
8. E-cigarette ban & regulation: Global Status as of February 2022. Global Center for Good Governance in Tobacco Control. Available from: <https://ggtc.world/library/e-cigarette-ban-regulation-global-status-as-of-february-2022>, accessed 29 October 2022.
9. Indian Council of Medical Research. White Paper on Electronic Nicotine Delivery System. Indian J Med Res. 2019;149:574–83. Available from: [https://ntcp.nhp.gov.in/assets/document/White\\_Paper\\_by\\_Indian\\_Council\\_of\\_Medical\\_Research.pdf](https://ntcp.nhp.gov.in/assets/document/White_Paper_by_Indian_Council_of_Medical_Research.pdf), accessed 27 August 2022.
10. Coalition Against Tobacco. Over 40 NGOs and Eminent Citizens Form Coalition against Tobacco with Support from Industry Veterans. Cision PR Newswire; 31 May 2017. Available from: <https://www.prnewswire.com/in/news-releases/over-40-ngos-and-eminant-citizens-form-coalition-against-tobacco-with-support-from-industry-veterans-625456224.html>, accessed 27 August 2022.
11. Amalia B, Kapoor S, Sharma R, Singh RJ. E-cigarette retailer storefront availability following a nationwide prohibition of e-cigarettes in India: a multi-centric compliance assessment. Tob Prev Cessat. 2020;6:42. doi: 10.18332/tpc/123822.
12. Amalia B, Kapoor S, Sharma R, Fu M, Fernández E, Rana JS. Online sales compliance with the electronic cigarettes ban in India: a content analysis. Int J Public Health. 2020;65(8):1497–505. doi: 10.1007/s00038-020-01480-6.
13. Solanki A, Kashyap K, Kashyap S. Electronic cigarettes: facts and myths. Indian J Chest Dis Allied Sci. 2014;56(4):263–5. PMID: 25962203.
14. Amin A, Bhojani U; Tobacco Control Working Group. India Tobacco Industry Interference Index 2020: A Report on Implementation of the WHO Framework Convention on Tobacco Control Article 5.3; 2020. Available from: <https://globaltobaccoindex.org/upload/assets/3Z3etsFtAPNhMM3sovQgfULM4uTjafVS7mLvQe2He5CHQOmy49.pdf>, accessed 27 August 2022.
15. Davies M, Chapman M, Kaspercevic J, Stockton B. E cigarette manufacturer Juul worked closely to challenge India's ban. The Wire; 25 November 2019. Available from: <https://thewire.in/health/e-cigarette-juul-challenge-india-ban>, accessed 27 August 2022.
16. Rakheja H. Association of Vapers India to protest against ban on E-cigarettes. But is vaping safe? Inc42; 17 September 2020. Available from: <https://inc42.com/buzz/association-of-vapers-india-to-protest-against-ban-on-e-cigarettes/>, accessed 27 August 2022.
17. Chaturvedi P, Gupta PC. Four fake narratives the tobacco lobby is floating to undermine India's e-cigarette ban. Scroll.in.; 30 September 2019. Available from: <https://scroll.in/article/938799/four-fake-narratives-the-tobacco-lobby-is-floating-to-undermine-indias-e-cigarette-ban>, accessed 27 August 2022.

## 10.4: Positioning tobacco control in response to public health emergencies

Tobacco users are more vulnerable than others during public health emergencies, such as the COVID-19 pandemic. This is due to their compromised immune systems which makes them more susceptible to the adverse health effects of an infection, be it tuberculosis, severe acute respiratory syndrome (SARS) or COVID-19.<sup>1</sup> Studies have shown that smokers are twice as likely than non-smokers to contract influenza and have more severe symptoms. It has also been reported that the mortality rate was higher among smokers than among non-smokers during the Middle East Respiratory Syndrome (MERS)-CoV outbreak.<sup>2,3</sup> Recent literature has shown that morbidity and mortality related to COVID-19 is higher among smokers than non-smokers.<sup>4</sup> According to WHO, smoking products such as water pipes often involve the sharing of mouth pieces and hoses, which may facilitate the transmission of COVID-19 in community and social settings.<sup>5</sup> Spitting while using smokeless tobacco (SLT) products may also contribute to the spread of COVID-19. Therefore, it is important to scale up tobacco control measures to address public health emergencies, with stringent measures for addressing both communicable diseases and NCDs (Figure 10.1).<sup>6</sup>

### Measures for tobacco control during COVID-19

Many countries took stringent measures, including bans on the sale, production, supply and marketing of tobacco products, to control the use of tobacco during the COVID-19 public health emergency. Table 10.5 lists the measures taken by some countries.

#### Ban on sale and use of tobacco

In May 2020, India imposed a national ban on the sale and spitting of tobacco products in public

#### OPINION: World No Tobacco Day during the time of Coronavirus Crisis

Authors: Monika Arora, Fiona Davidson, Linda Bauld

##### Affiliations:

- Monika Arora: Director and Professor, Health Promotion Division, Public Health Foundation of India & Executive Director, HRIDAY, New Delhi, India
- Fiona Davidson: Research Manager, Usher Institute, University of Edinburgh
- Linda Bauld: Bruce and John Usher Professor of Public Health, Usher Institute, University of Edinburgh

The COVID-19 pandemic has affected almost all aspects of life for much of the world's population. Although evidence on who is most vulnerable to COVID-19 is still emerging, it is clear that individuals with underlying chronic health conditions are more at risk. Many of these conditions, such as heart or respiratory disease, cancer and diabetes, are more common among smokers(1) and tobacco users. Smokers may also be at greater risk of poorer outcomes if they require hospital admission for COVID-19, as smoking is a significant risk factor for respiratory infections and complications during recovery(2)(3). Although 8 million deaths are attributed to tobacco use annually, the tobacco industry continues to nurture this global pandemic.

**Figure 10.1: Opinion article on World No Tobacco Day<sup>6</sup>**

places to avoid the risk of transmission of the infection (Box 10.4).<sup>7</sup> The national ban covered both smoking and smokeless forms of tobacco. Concurrently, some states enforced regulations to restrict the availability of tobacco products at the sub-national level (Box 10.5 and 10.6). Table 10.6 lists the regulations at the national and sub-national levels.

The ban was effective in reducing the availability of tobacco products and promoted cessation across all tobacco products.<sup>8</sup> This strong and comprehensive measure is a step towards the vision of Tobacco Endgame by 2040 (as discussed in chapter 10.1).

### Raised taxes and strict monitoring of illicit trade

Public health groups, along with doctors and economists, requested the GST Council to increase the compensation cess on all tobacco products, including *bidis*.<sup>9</sup> This win-win proposition was made to discourage tobacco consumption, while also bringing in an additional tax revenue of INR 49,740 crore.<sup>10</sup> In August 2020, revised submissions were made to the Union Minister of Finance and key ministry officials; state finance ministers; and members of the GST Council Secretariat and Fitment Committee.



**Table 10.5: Efforts to strengthen tobacco control measures during COVID-19 pandemic**

Country	Measure
Bangladesh	Suspended production, supply, marketing, and sale of all kinds of tobacco products
South Africa	Banned sale of cigarettes, snuff, water pipes and e-cigarettes to protect workers in the supply chain of these industries
Egypt	Banned <i>hookah</i> (water pipe)
Abu Dhabi and Dubai, UAE	Banned <i>hookah</i>
Iran, Kuwait, Iran, Kuwait, Pakistan, Qatar and Saudi Arabia should be in one line	Banned the use of <i>shisha</i> in public places such as cafes, <i>shisha</i> bars and restaurants
Israel	Banned all tobacco and smoking products
Botswana	Banned import and sale of cigarettes and related products
India	Banned sale and spitting of tobacco products in public places

**Table 10.6: National and state-level measures to curb the use of tobacco during COVID-19**

State/UT Date	Order/Advisory/Act	Measure
April 2020	Appeal to the general public <sup>11</sup>	The ICMR appealed to the general public not to consume and spit SLT in public, to prevent the spread of COVID-19.
April 2020	Letter by Joint Secretary, MoHFW <sup>12</sup>	Letters were sent to all states/Union Territories to raise awareness on adverse effects of COVID-19 on smokers.
	Letter by Under Secretary, MoHFW (Tobacco Control Division) <sup>13</sup>	In the letter by the MoHFW it was advised to take action on “not to consume and spit smokeless tobacco in public” under the Epidemic Disease Act 1897, the Disaster Management Act, 2005 and also under various provisions of the Indian Penal Code 1860 and the Code of Criminal Procedure to deal with COVID-19.
May 2020	Order by the Ministry of Home Affairs, Gol (under National Disaster Management Act, 2005) <sup>14</sup>	National ban on smoking, chewing tobacco products.
Rajasthan April 2020	Rajasthan Epidemic Diseases Act, 1957 <sup>15</sup>	Ban on spitting <i>paan</i> and chewing tobacco.
Haryana May 2020	Disaster Management Act, 2005 <sup>16</sup>	Ban on consumption of <i>paan</i> , <i>gutkha</i> and other tobacco products; spitting in public places punishable with fine; maintaining a distance of 6 feet while selling tobacco.
Himachal Pradesh April 2020	Epidemic Disease Act, 1897; various provisions of Indian Penal Code, 1860 <sup>17</sup>	Prohibition on spitting of chewing/SLT products and sputum or non-tobacco products in public places.
Delhi July 2020	Delhi Epidemic Diseases (Management of COVID 19) Regulations, 2020 <sup>18</sup>	Prohibition on consumption of <i>paan</i> , <i>gutkha</i> , tobacco, etc. in public places; and spitting in public places.



State/UT Date	Order/Advisory/Act	Measure
Andhra Pradesh April 2020	Epidemic Diseases Act, 1897; Disaster Management Act, 2005 <sup>19</sup>	Prohibition on the chewing of SLT/non-tobacco products and spitting in public places.
Telangana April 2020	Notification <sup>20</sup>	Ban on spitting of <i>paan</i> /chewable tobacco or non-tobacco product, sputum, etc. in public spaces.
Uttar Pradesh March 2020	Sections 188, 269 of IPC, 1860; <sup>21</sup> Sections 52 and 60 of Disaster Management Act; Section 7 of COTPA 2003	Ban on manufacture, distribution and sale of <i>paan masala</i> .
Goa April 2020	Epidemic Diseases Act, 1897; Disaster Management Act, 2005; Goa Prohibition of Smoking and Spitting Act, 1997 <sup>22</sup>	Ban on sale of tobacco products and liquor. Spitting in public places became punishable with fine.
Gujarat March 2020	Disaster Management Act <sup>23</sup>	Ban on spitting in public places; closed the shops selling <i>paan</i> and chewing tobacco.
Maharashtra March 2020	Infectious Disease Act and Disaster Management Act <sup>24</sup>	Ban on consumption of tobacco products and spitting in public places.
Assam June 2020	Section 34 of Disaster Manage- ment Act; Section 188 of Indian Penal Code <sup>25</sup>	Ban on consumption and sale of liquor, <i>paan</i> , <i>gutkha</i> , tobacco in public places. Spitting in public places became punishable with fine.
Jammu and Kashmir July 2020	Disaster Management Act <sup>26</sup>	Prohibition on chewing tobacco products and spitting in public places.
Bihar April 2020	Epidemic Diseases Act; Bihar Epidemic Diseases (COVID 19) Regulations, 2020 <sup>27</sup>	Prohibition on smoking and consumption of any form of tobacco in public places; ban on spitting in public places and imposed fine or 6 months of imprisonment for violation.
Karnataka May 2020	Section 4(2) A of Karnataka Epidemic Diseases Ordinance 2020; and Indian Penal Code, 1860 <sup>28</sup>	Ban on consumption and spitting of tobacco products in public places.
Kerala July 2020	Epidemic Disease Act; Kerala Epidemic Disease Ordinance, 2020 <sup>29</sup>	Prohibition on spitting in public places.
West Bengal April 2020	West Bengal Prohibition of Smoking & Spitting & Protection of Health of Non-Smokers & Minors Act <sup>30,31</sup>	Ban on spitting in public places, such as auditoriums, hospital buildings, health institutions, educational institutions, libraries, court buildings, public offices and public conveyances including railways.
Madhya Pradesh April 2020	Sections 418-A and 426-A of Madhya Pradesh Nagar Palika Nigam Act, 1956 and 346 of MP Nagar Palika Act, 1961 <sup>32</sup>	Penalty on those who were found violating the ban by spitting in public places. Banned sale of <i>gutkha</i> and <i>paan masala</i> .
Punjab May 2020	Disaster Management Act; Epidemic Diseases Act <sup>33</sup>	Made spitting in public places punishable with fine Prohibited consumption of liquor, <i>paan</i> , <i>gutkha</i> , tobacco in public places.

### BOX 10.4: The use of law to curb tobacco use during the COVID-19 pandemic

1. **The Epidemic Diseases Act, 1897**

Empowers the state governments to take special measures for the state or any part of the state to prevent the outbreak and contain the spread of dangerous epidemic diseases. A person disobeying any regulation or order made under the Act can be punished under Section 188 of the Indian Penal Code, i.e. punishment for disobedience to an order duly promulgated by a public servant with imprisonment or with fine or both.

2. **Epidemic Diseases Ordinance, 2020**

Some states promulgated epidemic diseases ordinances to deal with epidemic diseases by taking special measures and framing special regulations, with stringent penal provisions. The notifications issued under such ordinances specifically notified COVID-19 as an epidemic disease and banned the sale of tobacco and spitting in public places. The ordinances also amended the Epidemic Diseases Act, 1897, to include protections for healthcare personnel combatting epidemic diseases and expanding the powers of the Central Government to prevent the spread of such diseases.

3. **The Indian Penal Code, 1860**

Covers all substantive aspects of criminal law and has been referred to in several directions issued both at the national and sub-national levels for prohibiting the sale, use and spitting of tobacco to contain the spread of COVID-19. The relevant sections in this context are: Section 188 (Disobedience to order duly promulgated by public servant); Section 268 (Public nuisance); Section 269 (Negligent Act likely to spread infection of disease dangerous to life); Section 270 (Malignant Act likely to spread infection of disease dangerous to life); Section 278 (Making atmosphere noxious to health).

4. **The Criminal Procedure Code, 1973**

Section 144 of the Code empowers magistrates to issue orders/directions for prevention of danger to human life, health or safety etc. Such order is made to deal with an emergency situation and is limited to a maximum period of two months. However, state governments can issue a notification to extend the order for 6 months.

5. **The Disaster Management Act, 2005**

The national lockdown to prevent the spread of COVID-19 was announced under the Disaster Management Act, 2005. The National Disaster Management Authority (NDMA) is the nodal body constituted under this Act for coordinating disaster management, with the Prime Minister as its Chairperson. It lays down policies, plans and guidelines for the management of disasters and may take such measures for the prevention of a disaster, or the mitigation, or preparedness and capacity building for dealing with a threatening disaster situation or a disaster as it may consider necessary. State, district and local disaster management authorities work in coordination with the NDMA. The guidelines issued during the national lockdown *inter alia* included: ban on sale of *gutkha*, tobacco, etc. and spitting in public spaces; and ban on use/spitting of *gutkha*, tobacco etc. in offices, factories and other establishments.

6. Unlike other countries, in India, tobacco products were not listed under the Essential Commodities Act, 1955, during the pandemic.

7. Public interest litigations (PILs) were filed to seek a ban on the sale and use of tobacco products before the Rajasthan High Court; Delhi High Court and Allahabad High Court.

### BOX 10.5: Case study – Madhya Pradesh Voluntary Health Association's COVID-related work



The COVID-19 crisis also created new opportunities for law enforcers, NGOs and implementers of tobacco control to make the tobacco control programme more effective.

The Madhya Pradesh Voluntary Health Association (MPVHA) played a vital role in sensitizing senior government officials on the close linkage between tobacco use and the spread of the COVID-19 infection. MPVHA provided technical guidance and shared background papers with state and district level officials. This resulted in an announcement by the Chief Minister to ban the sale, transport and use of tobacco products in the state. Several urban administrations banned spitting at public places and 40 district collectors issued orders using COTPA and different national and state laws, for example, Sections 144, 188, 268 and 269 of the IPC; the Epidemic Diseases Act, 1897; the MP Epidemic Disease COVID-19 Regulation; and the MP Public Health Act, 1949.

### BOX 10.6: Case study – Ban on *hookah* bars in Uttar Pradesh

On 27 August 2020, an Allahabad High Court bench comprising Justice Shashi Kant Gupta and Justice Shamim Ahmed, issued a directive to the Chief Secretary of the state “not to permit bars, restaurants and cafes serving *hookahs* until further orders of this Court, with immediate effect...”

Mentioning restrictions on *hookah* use amid the pandemic in other countries, the court highlighted that *hookahs* are: communal in nature (i.e. involve sharing of a single mouthpiece between users, in social settings); contain difficult-to-clean long pipes and a cold water reservoir and expose smokers to several hazardous chemicals in addition to tobacco that may injure the respiratory lining.

## The way forward

### Effective cessation services

There is evidence to show that quit attempts increased (incidence risk ratio 5.7; 95% CI 2.8–11.8) compared to those with poor knowledge during the national lockdown, with a ban on the sale and consumption of tobacco products.<sup>8</sup> Since tobacco users face a greater risk during such public health emergencies and the restricted availability of tobacco may result in cessation attempts, it is crucial to enhance cessation services, support and widely publicize them at such times. Tele-medicine and digital platforms to promote cessation can be strengthened under a stronger health system response to such pandemics in the future.

### Enforce FCTC and avoid conflicts of interest

During the COVID-19 pandemic, the tobacco epidemic added to the increased burden on the healthcare system. To ensure that its culpability goes undetected, the tobacco industry attempted to improve its image through donations, CSR programmes and health webinars. The world's major tobacco companies intensified their CSR efforts to present themselves as allies of public health in the fight against COVID-19, as gaining credibility has become more important than ever for the tobacco industry.<sup>34</sup> However, it is well known that the benefits of CSR activities are not proportionate to the cost of the damage done by tobacco to the economy.<sup>35</sup>

During the pandemic, several COVID-related webinars were organized by the tobacco industry in India in collaboration with chambers of commerce, and often hiding behind their non-tobacco brands. *In July 2020, India's tobacco giant along with the Associated Chambers of Commerce and Industry of India (ASSOCHAM) organized many "Vocal for Local, Moving Towards Self-Reliant India" webinars under their WISDOM Series, in collaboration with premier non-government and government institutions. The Director of All India Institute of Medical Sciences (AIIMS) (Delhi) was also invited to participate, but he declined. In August 2020, as a part of the "Illness to Wellness" campaign [sponsored by Savlon, which is a brand of a leading Indian tobacco manufacturing company], ASSOCHAM invited an FSSAI official along with a representative of the tobacco industry, in clear violation of the Code of Conduct for Public Officials. Also, Sunfeast Biscuits, owned by the leading tobacco manufacturing company, organized "Sunfeast India Run As One," in partnership with the Fit India Movement, in August 2020.*

There is a clear conflict of interest when the tobacco industry partners with renowned medical professionals to organize webinars to promote health. Thus, there is a need to develop sensitization material for medical associations so that they can adopt the FCTC guidelines and protect reputed medical professionals from being seen supporting the tobacco industry.

## Key messages

- Tobacco use in all forms (smoking and smokeless) is associated with severe COVID-19 outcomes and tobacco users have higher risk of contracting coronavirus infection than non-users.
- Association of tobacco use and COVID-19 influenced tobacco users to quit.
- Telemedicine and digital platforms to promote cessation can be strengthened under a stronger health system response to such pandemics in the future.



## REFERENCES

1. Grundy EJ, Suddek T, Filippidis FT, Majeed A, Coronini-Cronberg S. Smoking, SARS-CoV-2 and COVID-19: a review of reviews considering implications for public health policy and practice. *Tob Induc Dis.* 2020;18:58. doi: 10.18332/tid/124788.
2. Vardavas CI, Nikitara K. COVID-19 and smoking: a systematic review of the evidence. *Tob Induc Dis.* 2020;18:20. doi: 10.18332/tid/119324.
3. Park JE, Jung S, Kim A, Park JE. MERS transmission and risk factors: a systematic review. *BMC Public Health.* 2018;18(1):574. doi: 10.1186/s12889-018-5484-8.
4. Cattaruzza MS, Zagà V, Gallus S, D'Argenio P, Gorini G. Tobacco smoking and COVID-19 pandemic: old and new issues. A summary of the evidence from the scientific literature. *Acta Biomed.* 2020;91(2):106–12. doi: 10.23750/abm.v91i2.9698.
5. World Health Organization. Tobacco and waterpipe use increases the risk of COVID-19. Available from: <https://www.emro.who.int/tfi/know-the-truth/tobacco-and-waterpipe-users-are-at-increased-risk-of-covid-19-infection.html>, accessed 27 August 2022.
6. Arora M, Davidson F, Bauld L. OPINION: World No Tobacco Day during the time of Coronavirus Crisis. Available from: <https://www.ed.ac.uk/usher/news-events/news-2020/opinion-world-no-tobacco-day>, accessed 27 August 2022.
7. The Economics Times. 28 states, UTs ban smokeless tobacco products, spitting due to coronavirus 2020. Available from: <https://www.wionews.com/india-news/coronavirus-spitting-in-public-places-in-kolkata-might-invite-arrest-by-police-295757>, accessed 27 August 2022.
8. Arora M, Nazar GP, Sharma N, Jain N, Davidson F, Mohan S, et al. COVID-19 and tobacco cessation: lessons from India. *Public Health.* 2022;202:93–99. doi: 10.1016/j.puhe.2021.11.010.
9. GST council urged to hike compensation cess on tobacco products. *The Hindu*; 24 August 2020. Available from: <https://www.thehindu.com/news/national/gst-council-urged-to-hike-compensation-cess-on-tobacco-products/article32430594.ece>, accessed 27 August 2022.
10. Moneycontrol. Compensation cess on tobacco products can generate Rs 49,740 crore: GST council. 25 August 2020. Available from: <https://www.moneycontrol.com/news/business/economy/compensation-cess-on-tobacco-products-can-generate-rs-49740-crore-gst-council-5751101.html>, accessed 27 August 2022.
11. Indian Council of Medical Research. Appeal to the General Public - Not to consume and spit Smokeless Tobacco in Public. Available from: [https://www.icmr.gov.in/pdf/covid/techdoc/Appeal\\_to\\_the\\_General\\_Public.pdf](https://www.icmr.gov.in/pdf/covid/techdoc/Appeal_to_the_General_Public.pdf), accessed 27 August 2022.
12. Ministry of health and Family Welfare, Government of India. Factsheet on COVID-19 and NCDs. Available from: DO letter NTCP 10 April 2020 (maharashtra.gov.in), accessed 27 August 2022.
13. Ministry of Health and Family Welfare, Government of India. COVID-19 and spitting of Smokeless Tobacco in Public. Available from: <https://arogya.maharashtra.gov.in/pdf/covidupload23.pdf>, accessed 27 August 2022.
14. Ministry of Home Affairs, Government of India. COVID-19 Order. Available from: MHA Order Dt. 1.5.2020 to extend Lockdown period for 2 weeks w.e.f. 4.5.2020 with new guidelines.pdf (pib.gov.in), accessed 27 August 2022.
15. Ministry of Health and Family Welfare, Government of Rajasthan. COVID-19 Order. Available from: 09292020172136PM1586632025Corona Tobacco Order 10-04-2020.pdf (rajasthan.gov.in), accessed 27 August 2022.
16. Office of District Magistrate, Panchkula. COVID-19 Order. Available at: <https://cdn.s3waas.gov.in/s39b8619251a19057cff70779273e95aa6/uploads/2020/05/2020052024.pdf>, accessed 30 August 2022.
17. Department of Health and Family Welfare, Government of Himachal Pradesh. Office Order. Available from: [http://nrhmhp.gov.in/sites/default/files/files/Prohibition of spitting of smokeless tobacco etc.pdf](http://nrhmhp.gov.in/sites/default/files/files/Prohibition%20of%20spitting%20of%20smokeless%20tobacco%20etc.pdf), accessed 30 August 2022.
18. Government of National Capital Territory of Delhi, Disaster Management Authority. COVID-19 Notification. Available from: <http://health.delhigovt.nic.in/wps/wcm/connect/b21de9004f0b3ced9c95bd5dc9149193/ORD258.pdf?MOD=AJPERES&mod=94324498&CACHEID=b21de9004f0b3ced9c95bd5dc9149193>, accessed 30 August 2022.
19. Department of Health and Family Welfare, Government of Andhra Pradesh. Compendium of Instructions-COVID-19 Management and Preparedness. Available from: COMPENDIUM OF INSTRUCTIONS - COVID19.pdf (ap.gov.in), accessed 27 August 2022.
20. Health Medical and Family Welfare Department, Government of Telangana. COVID-19 Notification. Available from: [http://manupatra.com/covid\\_19/Telangana/Govt/Spitting%20Ban%20Public%20Places.pdf](http://manupatra.com/covid_19/Telangana/Govt/Spitting%20Ban%20Public%20Places.pdf), accessed 27 August 2022.
21. NDTV Coronavirus Full Coverage. Uttar Pradesh bans pan masala amid lockdown over coronavirus pandemic. Available from: Coronavirus Pandemic: Uttar Pradesh Bans Pan Masala Amid Lockdown Over COVID-19 (ndtv.com), accessed 27 August 2022.

22. myGov. Goa fights COVID-19. Available from: 96.pdf (nidm.gov.in), accessed 27 August 2022.
23. City Population. Smokeless tobacco control for COVID-19 containment: Ahmedabad, India. Available from: ahmedabad\_final\_oct-2020.pdf (cities4health.org), accessed 27 August 2022.
24. Government of Maharashtra. COVID-19 Notification. Available at: 2020032888.pdf (s3waas.gov.in), accessed 27 August 2022.
25. Government of Assam. Assam State Disaster Management Authority. Orders. Available from: https://asdma.assam.gov.in/resource/guidelinesorders-on-covid-19, accessed 27 August 2022.
26. Government of Jammu and Kashmir, Department of Disaster Management, Relief Rehabilitation and Reconstruction. Guidelines/ Instructions on lockdown Measures in Union Territory of Jammu and Kashmir w.e.f.04.07.2020. Available from: 159.pdf (nidm.gov.in), accessed 27 August 2022.
27. Government of Bihar. COVID-19 Notification. Available from: Directions regarding safeguards to be observed during operation of restaurants dhabas canteens along National and State Highways.pdf (manupatrafast.com), accessed 27 August 2022.
28. Government of Karnataka. COVID-19 Orders and Notifications. Available from: ndcp\_ncd\_ntcp (karnataka.gov.in), accessed 27 August 2022.
29. Government of Kerala. COVID-19 Notification. Available from: https://rdd.lsgkerala.gov.in/system/files/2020-08/5647\_B3\_2020\_06\_08\_2020\_Probation\_guidelines.pdf, accessed 27 August 2022.
30. Indianemployees.com. West Bengal Prohibition of Smoking and Spitting and Protection of Health of Non-Smokers and Minors Act, 2001. Available from: https://www.indianemployees.com/acts-rules/details/west-bengal-prohibition-of-smoking-and-spitting-and-protection-of-health-of-non-smokers-and-minors, accessed 27 August 2022.
31. Wion. Coronavirus: Spitting in public places in Kolkata might invite arrest by police. Available from: https://www.wionews.com/india-news/coronavirus-spitting-in-public-places-in-kolkata-might-invite-arrest-by-police-295757, accessed 27 August 2022.
32. The Indian Express. Spitting in public places to attract Rs 1000 fine in Madhya Pradesh. Available from: https://www.newindianexpress.com/nation/2020/apr/27/spitting-in-public-places-to-attract-rs-1000-fine-in-madhya-pradesh-2136113.html, accessed 27 August 2022.
33. Government of Punjab, Office of the District Magistrate, Rupnagar. COVID-19 DM Orders. Available from: https://rupnagar.nic.in/covid-19-dm-orders/, accessed 27 August 2022.
34. BMJ Blogs. Tobacco Control: The two faces of the tobacco industry during the COVID-19 pandemic. Available from: https://blogs.bmj.com/tc/2020/05/10/the-two-faces-of-the-tobacco-industry-during-the-covid-19-pandemic/, accessed 27 August 2022.
35. Global Centre for Good Governance in Tobacco Control. Tobacco Industry's COVID Donations vs Economic Cost of Tobacco. Available from: https://landing.ggtc.world/2020/04/23/tobacco-industrys-covid-donations-vs-economic-cost-of-tobacco/, accessed 27 August 2022.



## 10.5: Tobacco vendor licensing

### What is vendor licensing?

Vendor licensing is an exclusive permission granted by a competent authority to tobacco retailers to sell and store tobacco products in a manner and as per the conditions specified in the vendor licensing policy adopted by the concerned city municipal corporation or the state government. The granting of a licence can be evidenced through a document, plate or tag.

### Goals of tobacco vendor licensing

Tobacco vendor licensing (TVL) aims to achieve multiple goals<sup>1</sup>, i.e. effective implementation of tobacco control laws, reduction in availability of tobacco products, reduction in illicit trade, and revenue generation for the government. While all the three goals resonate with policy-makers, the revenue generation for public health is something that can be achieved in the long term. In the immediate term, TVL can accomplish the other two goals through specific legal actions as indicated in Table 10.7.

**Table 10.7: Goals of TVL and respective legal provisions**

Goal	Specific legal provisions that could be enforced
Compliance of tobacco control laws, especially COTPA, at the retail level	<ol style="list-style-type: none"><li>1. Ban on sale to and by minors</li><li>2. Ban on sale of single sticks</li><li>3. Restrict PoS advertising and promotion</li><li>4. Display PoS health warning boards for minors</li><li>5. Ban sale of food-flavoured tobacco products</li></ol>
Reduce availability of tobacco products	<ol style="list-style-type: none"><li>1. Reduce total number of vendors and retail density</li><li>2. Ban sale at venues such as grocery stores, paan shops or bars</li><li>3. Restrict sales near educational institutions and other such restricted areas</li></ol>

### International law and vendor licensing

Within the international legal framework, the rationale of TVL is embedded in Article 15 of the WHO FCTC on illicit trade of tobacco products. This Article states that “Each Party shall endeavour to adopt and implement further measures including licensing where appropriate to control or regulate the production and distribution of tobacco products in order to prevent illicit trade.” According to WHO, by 2022, 37 Parties from all six WHO regions have signed the Protocol to Eliminate Illicit Trade in Tobacco Products. The Protocol aims at eliminating all forms of illicit trade,<sup>2</sup> such as illegal production or smuggling of tobacco products.

In addition, Article 6 of the WHO Protocol on Illicit Trade requires:

1. Competent authority to issue, renew, suspend, revoke and/or cancel licences
2. Requisite information about the applicant
3. Licence fees for administration and enforcement of the licensing system or for public health
4. Prevent, detect and investigate any irregular or fraudulent practices
5. Periodic review, renewal, inspection or audit of licences
6. Time frame for expiration of licences.

## India legislation supporting tobacco vendors licensing

The obligation of effective implementation of three Central laws, i.e. COTPA 2003; Juvenile Justice (Care and Protection of Children) Act, 2015; and Food Safety and Standards Act, 2006 requires that the sale of tobacco products are duly regulated and restricted. In doing so, the municipal acts of many states offer enabling provisions giving required powers to local elected bodies to adopt a vendor licensing policy.

On 21 September 2017, the MoHFW, GoI, wide letter D.O. No. P-16012/14/2017-TC issued an advisory<sup>3</sup> to all state governments to develop a mechanism for providing permission/authorization through municipal/local authority for sale of tobacco products. The Centre also stipulated that the principal condition for authorization of shops selling tobacco products is that they cannot sell any non-tobacco items such as candies, chips, biscuits, etc., which lure children.

In accordance with the national advisory issued by the MoHFW, the local governments are developing policies and mechanisms to strengthen enforcement of tobacco control laws and regulate tobacco sale through TVL. Under this mechanism, all vendors will be required to comply with the provisions outlined in the three Acts and other similar Acts mentioned above.

## Towards a model licensing law

Taking cue from various TVL advisories, policy documents available internationally and within India, followed by a wide range of consultations with key stakeholders including public health actors, enforcers of law, policy experts, and community at large, a model TVL law has been drafted by the Campaign for Tobacco-Free Kids (CTFK) team. This law, extensively discussed with municipal corporations in Lucknow, Jaipur and other cities, could serve as a guide to jurisdictions intending to adopt and implement a TVL policy.

## The Model TVL law

Provides that:

Compliance with all the laws concerning tobacco control – local, state, national – as a condition of the license; and violation of the laws is a violation of the license.

Requires that:

All tobacco vendors must obtain a non-transferable licence; violating any tobacco control law is a violation of the licence; the licensing fee is high enough to cover administration and enforcement costs and public education to further support sustainability of tobacco control efforts; meaningful (gradual) penalties: fines + suspension + revocation.

Results in:

Stores that exclusively sell tobacco products – permanent or semi-permanent shops with door and/or window/shutter entrance, implying that mobile carts and ad hoc sales on the street are completely prohibited, and prohibition of sales of tobacco products in bars, restaurants, and other dining venues; and use of PoS by tobacco companies offering entertainment, promotion or sponsorship as a means to attract customers to sales points.

## Progress in implementing tobacco vendor licensing at the national and state level

In view of the Central Government's advisory to immediately regulate the trade of tobacco products by mandatory vendor licensing for exclusive sale of tobacco, the city of Lucknow<sup>4</sup> (Uttar Pradesh) took a lead and notified a TVL Policy on 3 February 2018, followed by Ranchi (Jharkhand) on 25 April 2018. Subsequently, the state governments of Uttarakhand, Uttar Pradesh, Rajasthan, Madhya Pradesh, West Bengal and Assam explored their local Municipal Acts and culled out provisions that made compulsory licensing

for tobacco (including snuff, cigar, cigarette and *bidi*) storing, packing, pressing, cleansing, preparing for manufacturing and sale by any process whatsoever and issued relevant orders for compliance of the said law<sup>5</sup> (Box 10.7, 10.8 and 10.9).

Prior to the Central advisory, the state of Himachal Pradesh had enacted a legislation in

2016 that entailed strict provisions for banning sale of loose tobacco and single sticks of cigarettes and regulating the retailers.

Table 10.8 shows that 36 jurisdictions including the state and local governments have passed relevant orders mandating TVL, but their implementation and enforcement remains variable across jurisdictions.

### **BOX 10.7: Case study – tobacco vendors licensing in Kalimpong, West Bengal**

#### **Background**

The West Bengal State Municipal Act under Section 201 read with item no. 139 of schedule II prescribed compulsory licensing for storing, packing, pressing, cleansing tobacco (including snuff, cigarette, and *bidi*) or manufacturing from tobacco within the municipal area.

The Department of Urban Development and Municipal Affairs, Government of West Bengal issued an order on 20 November 2017 for compliance of Section 201 with item no. 139 of schedule II in urban areas. The District Magistrate, Kalimpong issued an order vide memo 345/COTPA dated 4 May 2018 to advise Kalimpong Municipality to introduce trade licences for shops selling tobacco products. Subsequently, the 19th Ordinary meeting of the Board of Councilors of Kalimpong Municipality, on 28 February 2019 decided that tobacco vendor licensing (TVL) be introduced.

Since no data were available on the number of shops selling tobacco, and on the status of compliance of laws related to section 5 and 6 of COTPA 2003 as well as Section 77 of the Juvenile Justice Act, 2015, an NGO, MANT, was entrusted to conduct an enumeration survey, in collaboration with Kalimpong Municipality. The survey, completed in November 2019, revealed non-compliance of various provisions of the laws and highlighted the importance of TVL to address them. The findings were presented before the district and the municipal officials on 16 December 2019. The municipality decided to organize a rally on 6 December 2019 in collaboration with MANT to facilitate implementation of smoke-free provisions of COTPA 2003 and setting up of a TVL system.

#### **Outcome**

On 14 January 2020, Kalimpong Municipality issued an order vide memo 1817/KM to introduce a TVL system in its area. On 15 January 2020, a public notification was published in an English (*Himalaya Darpan*) and a Hindi daily (*Janpath Samachar*) to inform all concerned about the requirement of a licence to sell tobacco. The formats for application, self-declaration and licence were finalized to comply with the laws. The municipality and the district administration organized awareness campaigns in January and February 2020.

The introduction of this licensing system in Kalimpong became a model. A rapid survey, conducted in March 2021, to know the changes vis-a-vis compliance with provisions of COTPA 2003 showed that there was 70% more compliance of Section 6 of COTPA 2003.

## Challenges

The introduction of the TVL system would uphold the tobacco control initiatives of the government by addressing the supply-side issues. However, several challenges such as protest by vendors are to be faced.

### BOX 10.8: Case study – Tobacco vendors licensing In Lucknow, Uttar Pradesh

#### Background

Tobacco control in Uttar Pradesh has always been a challenge, because of its large area and population density as well as the social and cultural acceptance of tobacco consumption. Uttar Pradesh has the highest prevalence of chewing tobacco or tobacco consumption in terms of number of users. However, there was no regulation for tobacco vendors in the state, which meant that tobacco vendors sold products in every nook and corner of cities and towns without any check.

A campaign on “Tobacco-Free Lucknow” was launched in July 2017, in which the core policy goal was to issue licences to tobacco vendors in the city of Lucknow. Steered and coordinated by a local NGO, Vinoba Seva Ashram, with active support of the State Tobacco Control Cell and other NGOs, the campaign was launched by the Governor of Uttar Pradesh in the presence of Chairman of the State Legislative Assembly. The first notification invoking the need for TVL was issued in February 2018, and after a series of consultations with various groups of stakeholders and several administrative processes, the implementation guidelines were issued in December 2019 paving the way for issuance of licenses to vendors.

The TVL policy of Lucknow city, combining the first notification and implementation guidelines as per the Gazette, is one of the most comprehensive among all the TVL issued in the country so far. The main conditions of the licensing policy stipulate that the vendor must be a citizen of India, above 18 years of age with mandatory Aadhaar Card. Licences of tobacco vendors are valid for one year only and non-transferable, to be renewed every year with a specified fee for the year. The licensed vendor must comply with all the provisions of COTPA and subsequent rules. It is mandatory to display the certificate issued at the shop.

#### Outcome

As a result of rigorous efforts of nearly three years, the issuance of licences was launched by the Mayor and Municipal Commissioner on 17 December 2019 in the city of Lucknow, and before the pandemic-induced lockdown in March 2020, more than 300 registrations were received, and licences issued.

#### Challenges

During the process of adoption and implementation of the vendor licensing policy, several challenges were faced. These included resistance by vendor associations and the tobacco lobby, insufficient vending zones, apprehension by the political class as tobacco selling was linked to livelihood, and several elections and change of ministers and other stakeholders.

## BOX 10.9: Case study – Tobacco vendors licensing in Ranchi, Jharkhand

### Background

Based on the directives of the MoHFW in September 2017 regarding TVL by local bodies, efforts were initiated in Jharkhand in early 2018. A sensitization workshop for officials of the Ranchi Municipal Corporation was held, which emphasized the necessity and benefits of TVL and explained the legal provisions that could be used under the Jharkhand Municipal Act, 2011 to introduce vendor licensing in the state. To support and strengthen this process, an institutional structure, a tobacco control programme at the corporation level was set up and necessary orders were issued including the appointment of a nodal officer of the tobacco control programme, formation of an anti-tobacco squad by the Municipal Commissioner for enforcement and implementation of Sections 4, 5 and 6 of COTPA.

A letter was written by the Principal Secretary – Health of the state to his counterpart in the Ministry of Urban Development on 31 March 2018 reiterating the need of TVL in Jharkhand. Once the preparatory work to introduce TVL was complete, the Municipal Commissioner, Ranchi Municipal Corporation issued an order on 25 April 2018 stating that shops selling tobacco or tobacco products in Ranchi will have to seek a vendor licence from the corporation. The terms and conditions of licence required that non-tobacco products will not be sold and the vendor will comply with all provisions of COTPA, besides section 77 of Juvenile Justice (Care and Protection of Children) Act, 2015 and Food Safety and Standards Act, 2006. It also required clear display of the licence certificate and that any non-compliance of the above terms and conditions will entail cancellation of the licence.

### Outcome

The outcome of this TVL policy has been very encouraging as shopkeepers in Ranchi have been applying for a vendor licence to be able to sell tobacco products. More than 200 vendor licences have been approved and more than a thousand applications are being processed. The initiative by the Ranchi Municipal Corporation is now being followed by other districts in Jharkhand.

### Challenges

Protests in support of *paan* and tobacco sellers were organized by the tobacco industry and its front groups. Their arguments to derail this initiative included loss of employment and treatment of tobacco sellers as criminals. However, support from all stakeholders and an effective media campaign played an important role in clearing all doubts related to the initiative and helped in its implementation.

**Table 10.8: Tobacco vendor licensure notification/orders in India**

<b>State legislation</b>	Himachal Pradesh
<b>State level orders</b>	Assam, Madhya Pradesh, Rajasthan, Uttarakhand, Uttar Pradesh, West Bengal
<b>City level orders</b>	Bihar: Patna
	Madhya Pradesh: Bhopal, Jabalpur, Indore
	Jharkhand: Khunti, Bokaro, Ranchi, Lohardaga, Gumla, Latihar, Maango, Jamshedpur notified area, Dhanbad, Saraikela, Jugsalai, Adityapur
	Punjab: Mohali
	Uttar Pradesh: Bareilly, Ayodhya, Lucknow, Orai
	West Bengal: Kalimpong, Mal, Mathabhanga, Garulia, Purulia, Hooghly, Chinsurah, Gayeshpur

## Implementing tobacco vendor licensing: Processes and challenges

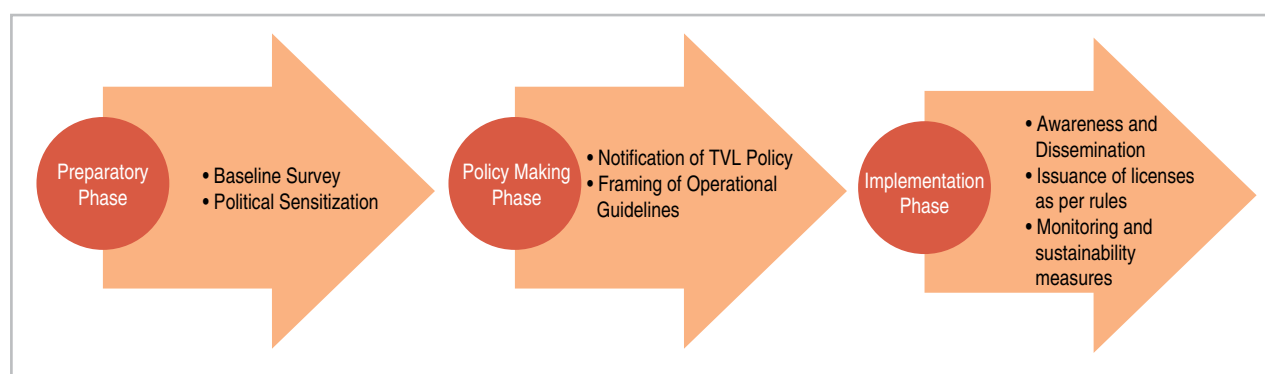
### Process of implementation

Broadly, the process of TVL in any jurisdiction involves three stages as depicted in Figure 10.1. However, the process does not always follow a linear path. Depending on the political readiness and tobacco industry resistance through different means, the steps involved in the process can go back and forth.

### Challenges

The TVL policy across states and municipalities has faced major challenges which have slowed down the process of adoption and implementation of the policy. These include industry pushback manifesting in different ways: aligning with small traders and vendor associations to get them visibly engaged in creating a counter-narrative, reactive arguments such as loss of livelihood<sup>6</sup> pushed in the media and building support among the public and policy-makers using the argument of livelihood.

**Figure 10.1: The process of implementing TVL**



### Key messages

- Tobacco vendor licensing (TVL) as an effective tool to ensure tobacco retailers comply with all tobacco control laws.
- All states and local governments should consider adopting and implementing TVL system under their own regulatory authority.
- There is a need to sensitise decision makers and check tobacco industry interference to adopt and implement TVL across India.

## REFERENCES

1. The Union. Tobacco Vendor Licensing. 2022 Available from <https://theunion.org/technical-publications/tobacco-vendor-licensing>, accessed 14 September 2022.
2. WHO Framework Convention on Tobacco Control. Protocol to Eliminate Illicit Trade in Tobacco Products. 2022 Available from <https://fctc.who.int/protocol/overview>, accessed 16 August 2022.
3. Minhas G. Only licenced shops to sell tobacco products: no sale of candies, biscuits, colas along with tobacco. Governance Now; 2017. Available from: <http://www.governancenow.com/news/regular-story/only-licenced-shops-to-sell-tobacco-products>, accessed 29 October 2022.
4. Lucknow Nagar Nigam. Creating the healthy city. 2018 Available from <https://lmc.up.nic.in/default3.aspx>, accessed 14 September 2022.



5. Ashok R. Tobacco Vendor Licensing in India: Reinforcing that Selling Tobacco is not an Unfettered Right. Dehradun Lawreview. 2021, Pg, No.39-57 Available from <https://www.dehradunlawreview.com/wp-content/uploads/2022/08/Paper-4-TOBACCO-VENDOR-LICENSING-IN-INDIA-REINFORCING-THAT-SELLING-TOBACCO-IS-NOT-AN-UNFETTERED-RIGHT.pdf> , accessed 14 September 2022.
6. Chauhan, G. Licensing tobacco vendors in the state of Himachal Pradesh in India-challenges, opportunities and the way forward to implement the new legislation. Tobacco Induced Diseases. 2018. Tobacco Induced Diseases. 2018;16(1):599. doi:10.18332/tid/84278. Available from <http://www.tobaccoinduceddiseases.org/Licensing-tobacco-vendors-in-the-state-of-Himachal-Pradesh-India-Challenges-opportunities,141068,0,2.html>, accessed 14 September 2022.

## 10.6: Tobacco-Free Future Generation

### Tobacco-Free Future Generation: The concept

*No one born on or after a certain date, can ever be sold any type of tobacco products. The tobacco-free generation proposal advocates legislation precluding the sale and supply of tobacco products to individuals born after a certain date/year.<sup>1</sup>*

While highlighting the components of a comprehensive National Tobacco Control Policy, Chapter 10.1 emphasized the importance of 'Tobacco-Free Future Generation' as a key policy principle. An evidence-based, pan-India 'Tobacco-Free Future Generation' intervention is one of the most salient features to realize the goal of a 'Tobacco-Free India' by 2040. Though the operationalization of this policy measure warrants multisectoral and multi-stakeholder action, meaningful engagement of adolescents and young people as the leaders of the 'Tobacco-Free Future Generation' movement is essential for it to yield the desired results.

### Tobacco control: For the young, by the young

Young people are not mere beneficiaries of tobacco control interventions but are key partners in advancing tobacco control at the national and sub-national levels. They represent a diverse segment of the population, with unique social, economic, cultural and demographic contexts. On the one hand, they have been gullible targets of the tobacco industry's misleading campaigns to lure 'replacement customers' for the lakhs of tobacco users who die every year due to this deadly addiction. On the other hand, young people have established themselves as key

stakeholders who wield strength in advancing tobacco control policy and programming. The rationale for important tobacco control legislative and programmatic measures in India, including enforcement and strengthening of various provisions of The Cigarettes and Other Tobacco Products Act (COTPA), bans on *gutkha* and/or smokeless tobacco (SLT), electronic nicotine delivery systems (ENDS) and electronic non-nicotine delivery systems (ENNDS), and the school health component of the National Tobacco Control Programme (NTCP), have been designed to protect the health and well-being of the young from the perils of tobacco use.

Over the past few decades, the voices and power of the youth collective have amplified the call for strong tobacco control strategies to be introduced and effectively enforced across the country. Youth movements have garnered the attention of policy-makers and decision-makers on important tobacco control issues. Emanating from educational institutions and communities, the outreach and effectiveness of youth-led and youth-centric tobacco control initiatives is one of the best practices in Indian tobacco control.<sup>2,3</sup> In spite of several examples, many of these campaigns and interventions have been ad hoc and need-based. Experience from tobacco control in India has underscored the need to engage adolescents and youth meaningfully as behaviour change towards 'no tobacco use' brought about at a young age will be sustainable if adolescents have ownership for tobacco control programmes and identify themselves with tobacco control campaigns. There is a need for streamlining a call to action for 'Tobacco-Free Future Generation' towards the vision of a 'Tobacco-Free India' by 2040.

## Indian experience on Tobacco-Free Future Generation

Through a gamut of multi-stakeholder initiatives, meaningful youth engagement for tobacco control has been prioritized to yield successful outcomes in the country, both at the upstream or macro level (e.g. advancing robust tobacco control policies), as well as at the downstream or micro level (e.g. establishing norms for tobacco-free homes, educational institutions, and communities). Even before the introduction of the COTPA Bill in Parliament in 2001, Indian youth had collectively started calling for a complete ban on all forms of tobacco advertising. In 1999, a group of youth health champions from HRIDAY, presented the then Prime Minister with a signature campaign demanding that youth be protected from the aggressive marketing tactics of the tobacco industry. Such efforts were instrumental in tabling of the COTPA Bill in Parliament in 2001 and its finally becoming an Act in 2004.<sup>4</sup> In recent times, multi-pronged youth-led campaigns have garnered success in the implementation of 85% pictorial health warnings (PHWs) for tobacco product packages and the promulgation of a pan-India ban on ENDS and ENNDS.<sup>5</sup>

In addition to these upstream efforts, young people across the country have also actively engaged in mobilizing their peers and the community to support the establishment of tobacco-free educational institutions, homes and communities. Several civil society organizations (CSOs) such as the Indian Cancer Society,<sup>6</sup> Salaam Bombay Foundation,<sup>7</sup> Generation Saviour Association,<sup>8</sup> Cancer Patients Aid Association,<sup>9</sup> HRIDAY,<sup>5</sup> the Alliance For Tobacco Control (AFTC)<sup>10</sup> and others, have been instrumental in building capacity of young people to develop self-efficacy and advocacy skills as impactful 'Tobacco-Free Health Ambassadors' (Box 10.10, 10.11, 10.12 and 10.13).

## Research-informed policies and programming for youth-centric tobacco control measures

The inclusion of school health programmes as a major component of the NTCP was informed by robust India-based research. Under a grant from the National Institutes of Health (NIH), USA, HRIDAY implemented India's first successful, cost-effective, multi-component, school-based tobacco use prevention intervention, as a randomized control trial, with nearly 15,000 school students of Delhi and Chennai. This efficacy trial – Project MYTRI (Mobilizing Youth for Tobacco Related Initiatives in India) – tested a two-year peer-led intervention that yielded a 17% decrease in tobacco use among students in intervention schools. Conversely, tobacco use increased by 68% among students in control schools. HRIDAY presented these results to the MoHFW and urged it to include a school health component in the NTCP, which at that time was under planning stage.

Yet another milestone was Project STEPS (Strengthening of Tobacco control Efforts through innovative Partnerships and Strategies). Implemented in the states of Gujarat and Andhra Pradesh by the Public Health Foundation of India (PHFI) with support from the Bill & Melinda Gates Foundation, STEPS adopted a multi-intervention approach targeting multiple settings, to create an evidence-base for future initiatives in the area of tobacco control in India and evaluate strategies that can be used in the developing country context to inform guidelines and processes of working with state governments under the NTCP, which was announced in 2007–2008. The major intervention components of STEPS included: Youth Empowerment (school-based); Health Systems Interventions; Community Mobilization Interventions; Policy Research; and Economic Research. The Youth Empowerment component of Project STEPS was an adapted and scaled-up – efficacy to effectiveness model of Project MYTRI. Generation of robust

evidence from such a comprehensive and multi-component intervention, which integrated school-based tobacco control under a larger umbrella of interventions, was successful in guiding robust tobacco control policy and programmatic interventions across the country. STEPS provided models for scaling-up school-based tobacco control programmes and produced several training resources. It adopted a comprehensive tobacco control approach, through interventions and policy recommendations on increasing tobacco taxes, establishment of community and health systems-based cessation models,<sup>11</sup> implementation of school health programmes and training of law enforcers for COTPA enforcement. Strategic partnership with CSOs, schools and state governments formed the basis for implementing the NTCP and protecting youth from the tobacco menace.

HRIDAY also evaluated youth-centric interventions through a community-based, cluster randomized trial to test the efficacy of a comprehensive community-based intervention to prevent the onset of tobacco use and promote tobacco cessation among adolescents and young adults (10–19 years) residing in low socioeconomic status (SES) communities in Delhi. Project ACTIVITY (Advancing Cessation of Tobacco In Vulnerable Indian Tobacco-consuming Youth) was successful in significantly increasing youth's knowledge about the harmful effects of tobacco use and tobacco control policies. Knowledge about the harmful effects of tobacco significantly increased in the intervention communities than in the control group. As a result of this intervention, the overall current tobacco use decreased more in the intervention than the control group communities. These outcomes provided evidence to prioritize community-based youth-centric programming to support tobacco use prevention and cessation interventions.<sup>12</sup>

## Government of India's vision for synergizing strategies for 'Tobacco-Free India' and 'Tobacco-Free Future Generation'

In 2013, the MoHFW, GoI along with partners hosted the International Conference on Public Health Priorities in the 21st Century – The Endgame for Tobacco. This was the first global convening of the tobacco control community to strategize collective action towards the Tobacco Endgame. It promoted the vision of a 'Tobacco-Free Future Generation' through the launch of the "No More Tobacco in the 21st Century" (NMT 21C) movement.<sup>13,14</sup> Global and Indian youth mooted the idea of a 'Tobacco-Free Future Generation' and called for urgent and evidence-based multisectoral and multi-stakeholder action to curb tobacco use. This vision ensured that youth, with support from CSOs, developed strategies and leveraged opportunities to ensure that key tobacco control policy measures were adopted in their respective countries, including India.

'Tobacco-Free Future Generation' is a critical demand-side measure towards the Tobacco Endgame. Embedding such measures within the National Tobacco Control Policy is elaborated in Table 10.1 (Chapter 10.1). The policy proposes that *"All children born after 2022, not to be exposed to tobacco advertising, promotion or visual use in any form in order to eliminate youth initiation, addiction, disease, and premature deaths and economic loss caused by the tobacco products."*

Key governmental interventions towards 'Tobacco-Free Future Generation' that warrant priority include:

- Robust implementation and monitoring of MoHFW's Revised Guidelines for Tobacco-Free Educational Institution (ToFEI).

- Strengthening enforcement of the pan-India ban on ENDS and ENNDS.
- Accelerating the process of advancing the COTPA Amendment Bill 2020.
- Capacity building and developing a pan-India youth campaign under ToFEI.

## Recommendations for aligning tobacco control interventions to achieve Tobacco-Free Future Generation in India

The recommendations and the way forward provided in Chapter 11 of this report are pivoted towards ‘Tobacco-Free Future Generation’ and the vision of a ‘Tobacco-Free India’ by 2040. This section presents a more granular focus on actions that will accelerate India’s journey towards achieving ‘Tobacco-Free Future Generation’ by 2040.

- Embedding a robust and evidence-based national strategy and implementation framework, with measurable targets, for ‘Tobacco-Free Future Generation’ under the vision for a ‘Tobacco-Free India’ by 2040, as envisaged under the National Tobacco Control Policy (Chapter 10.1).
- Ensuring meaningful involvement of adolescents and young people in achieving ‘Tobacco-Free Future Generation’ through:
  - Building capacity to be effective ‘Tobacco-Free Health Ambassadors’, providing mentorship opportunities for contributing to policy formulation, monitoring and community mobilization.
  - Developing skills to identify and expose tobacco industry tactics to derail policies as well as deploy misleading advertising and promotional campaigns.
  - Prioritizing involvement of socially and economically disadvantaged adolescents and youth in tobacco control campaigning.
  - Incentivizing youth engagement through the institution of national and sub-national awards/certification for laudable contributions to tobacco control.
  - Earmarking monetary resources under the NTCP to support youth leadership for tobacco control.
- Scaling-up youth-centric research to inform Tobacco Endgame policies and programming.
- Consolidate all youth-led and youth-centric tobacco control action at the national and sub-national levels under a nation-wide call to action for ‘Tobacco-Free Future Generation’.
- Sensitizing multisectoral and interdepartmental (education; youth affairs and sports, etc.) stakeholders including policy-makers, decision-makers, programme planners and the general public, about the concept of ‘Tobacco-Free Future Generation’ and its implementation.
- Checking the emergence, promotion and access of new/next generation novel tobacco and allied/surrogate products, including flavoured tobacco products.
- Stopping the industry from targeting youth by ensuring that no educational institution supports sponsorships or programmes by the tobacco industry or their affiliates and front groups.
- Addressing legal challenges and tobacco industry interference.
- Curbing engagement of children, adolescents and young adults in tobacco processing and trade (e.g. *bidi* rollers, leaf pluckers, tobacco vendors).



## Conclusion

Over the past few decades, India has made significant advances in tobacco control. To accelerate progress towards the next milestone of Tobacco Endgame and meet the goal of a 'Tobacco-Free India' by 2040, the country must consider adopting a pan-India 'Tobacco-Free Future Generation' call to action. Stringent policy measures need to be amplified to completely prevent access and advertising of

new/next generation novel tobacco and allied/surrogate products, including flavoured tobacco products, particularly to children born after 2022. This will be a landmark step towards the vision of a 'Tobacco-Free India' by 2040 and it warrants meaningful involvement of adolescents and young people, through synchronized multisectoral and multi-stakeholder action.

### BOX 10.10: Case study – When will we get 85% pictorial health warnings on both sides of tobacco packs?

For over two decades, HRIDAY (an NGO based in Delhi, India) has been actively working towards multi-disciplinary research, multi-stakeholder engagement, capacity building and programmes to prioritize 360-degree involvement of adolescents and youth, as key stakeholders for advancing tobacco control in India. Through evidence-based and youth-led approaches, HRIDAY's focus has been on building capacity of young citizens and empowering them to be at the front and centre of the tobacco control discourse. HRIDAY's core philosophy is that, in order to be meaningfully involved, adolescents and youth must be provided agency on issues related to their present and future health. HRIDAY has strived to garner their active participation and leadership to advance tobacco control policies at the national and sub-national levels.

HRIDAY has successfully supported numerous youth-led initiatives to accelerate the introduction and implementation of policy measures under COTPA 2003. One such vital area has been the introduction of 85% PHWs on all tobacco packs. As per the MoHFW's notification of 15 October 2014, the effective date for implementation of 85% PHWs was originally 1 April 2015. However, there was an indefinite delay in the introduction of these large and effective warnings. HRIDAY and several partners supported a youth-led campaign 'Pictures Save Lives', to call out this unfortunate delay in the implementation of a robust tobacco control measure. Under this



Source: HRIDAY



Source: HRIDAY



campaign, over 4000 letters were mobilized, urging implementation of the 85% warnings with immediate effect. Youth also garnered nearly 21,000 endorsements in a signature campaign to support the timely enforcement of the warnings. Mr Rahul Dravid, Ambassador of the NMT 21C campaign, supported this call to action by the youth of India. Through this campaign, the strong voice of youth amplified the ongoing efforts of civil society, researchers and public health groups.

The powerful youth-led 'Pictures Save Lives' campaign, along with other cohesive actions by multiple stakeholders, contributed in creating an unprecedented all-India public narrative to accelerate the implementation of large and effective PHWs. Eventually, through concerted action by all stakeholders, 85% PHWs were implemented in India from 1 April 2016.



Source: MoHFW, GoI

### BOX 10.11: Case study – Using the World No Tobacco Day for creating tobacco-free youth

The Cancer Patients Aid Association (CPAA) is a non-governmental organization (NGO) working on total management of cancer, from prevention to rehabilitation, across India, for the last five decades. CPAA's cancer prevention work revolves around tobacco control, which peaks during the World No Tobacco Day (WNTD).

Every year, for WNTD, the CPAA involves celebrities from the entertainment industry, who are strategically used as efficient messengers to reach out to youth audiences in didactic formats. The CPAA often used WNTD to turn groups traditionally viewed as “pro-tobacco” to tobacco control allies. The Indian cricket team, sponsored by a tobacco company for decades is a case in point. The MoHFW, GoI, introduced a Bill in the Parliament to disallow tobacco sponsorship of sports. The CPAA then approached the national cricket team to register its support for the cause of tobacco control. The entire team signed a cricket bat and a canvas stating their support. The best-known sportsmen from the field of badminton, tennis, billiards and hockey have also lend their support for tobacco control campaigns.

The CPAA reaches out to especially vulnerable youth by organizing drawing competitions for street youth with celebrity judges. Besides raising awareness among this group at high risk of tobacco use, the presence of celebrity judges encourages the participants. Youth targeted competitions on tobacco control-related themes have been widely held on radio and the print media, further raising awareness about the issue. The CPAA decided to engage the support of a leading band, Euphoria to reach out to 1000 youth with special songs dedicated to 'No Smoking'. An audience of over a thousand college students was on their feet dancing and singing while imbibing the message that 'Tobacco Kills!'

An enchanting concert 'Music Industry Supports Tobacco Control' involving the industry's big names such as Mr. A.R. Rahman, Shankar-Ehsaan-Loy, Mr. Adnan Sami, Mr. Kunal Ganjawala, Mr. Abhijeet Sawant, Ms. Shreya Ghosal, Ms. Ila Arun, Mr. Zubin, Ms. Shweta Pandit and others, rocked 2000-odd Mumbai youth. During their performances, the artists kept propagating messages about smoking being "un-cool". Live coverage of the event took the messages to lakhs of youth across the country. Through these innovative initiatives, the CPAA has been successful in leveraging the influence of celebrities as positive role models to promote tobacco-free norms.



Source: CPAA

### **BOX 10.12: Case study – Multi-pronged approaches for educating the youth about the ill-effects of tobacco: Voice multipliers**

Acting on their vision – “*Conquest of Cancer by Choice; not Chance*”, the Indian Cancer Society (ICS) has taken a series of initiatives involving youth to disseminate information on tobacco and its ill-effects, through events, training programmes, projects and content design.

*World No Tobacco Day (WNTD)*: For the past 17 years, the ICS has been observing WNTD, engaging several schools. This has become a city school calendar event in which students have participated actively, even during the COVID times. On WNTD 2022, the ICS engaged over 25 schools in a virtual event on the theme 'Tobacco: Threat to our environment'. This included a street play competition on the WNTD theme (5 minutes, 5 props, 5 actors).

*Student internships:* The ICS organizes summer and winter internships for colleges students. In 2022, students from Symbiosis Institute of Media and Communication underwent a 10-hour training programme on cancer awareness and tobacco control. Students developed communication material on tobacco control, which is being used by the ICS in its campaigns. Another group of students from the Psychology Department of Amity University Noida, undertook a 60-hour activity on cancer control and worked on podcasts on the theme of 'Youth and Tobacco', with a focus on mental health issues. These students will use the community radio of their college as voice multipliers for spreading awareness about the hazards of tobacco use.

*Faculty development programme:* Based on the National Education Policy 2020, the ICS is undertaking a pan-India faculty development programme for university teachers on being aware about various aspects of cancer, control measures and the fact that cancer is a lifestyle disease and that tobacco control is an important component of cancer prevention. In a short span, 110 teachers have been enrolled and each teacher has enrolled 10 students for training in cancer control and tobacco control.

*E-learning on Swayam platform:* Cancer Fundamentals, a free e-learning programme on cancer control has enrolled 10,643 students. This programme includes a module on tobacco control.

Through these innovative initiatives, the ICS is committed to leveraging the potential of young people as Voice Multipliers in the quest for cancer control and tobacco control.



Source: ICS



Source: ICS

### **BOX 10.13: Case study – Empowering youth to “Be the Change”**

The Generation Saviour Association (GSA) firmly believes that youth play a critical role in preventing tobacco initiation, reducing second-hand smoke exposure and scaling tobacco control. Therefore, the GSA has strengthened the youth wing of the organization by sensitizing them about the ill-effects of tobacco products from a very young age and by providing them learning opportunities. Members of the youth wing have represented the organization at national and international platforms.

To prevent the present and future generations from exposure to tobacco products and smoke, the GSA diligently carries out youth intervention programmes in Punjab, Haryana and Chandigarh partnering with the state governments as well as WHO, The Union, HRIDAY, MACT, Vital Strategies, CTFK and Global Health Advocacy Incubator.

The GSA conducts community activities such as street plays, poetry competitions, cultural events and awareness camps, where youth get an opportunity to come together and share their views with each other.

For the past 27 years, on World No Tobacco Day (WNTD), the GSA has been conducting poster-making competitions to raise awareness about the ill-effects of tobacco use and exposure to tobacco smoke. These annual competitions attract participation from nearly 500 youth.

The GSA also conducts sessions in educational institutes where students are sensitized on how they can contribute to tobacco control and are made part of a self-regulatory group – CAT (Children Against Tobacco). To understand the voices of youth, the GSA conducted a series of webinars on Health, Safety and Wellbeing of Children and Youth, where 1200 students from schools and colleges across India participated and shared their views on ‘Tobacco-Free Future Generation’. During these sessions, youth discussed their expectations from policy-makers for tobacco control.

GSA believes that, youth are the centre of progress. They are nation builders who can not only bring the change but also “Be the Change”.



Source: GSA



Source: GSA

## Key messages

- A comprehensive youth-led national call to action and implementation framework to achieve ‘Tobacco-Free Future Generation’ is essential to achieve the vision of Tobacco Endgame and ‘Tobacco-Free India’ by 2040.
- The proposal for a National Tobacco Control Policy proposes that *“All children born after 2022, not to be exposed to tobacco advertising, promotion or visual use in any form in order to eliminate youth initiation, addiction, disease, and premature deaths and economic loss caused by the tobacco products.”*
- Realization of this goal warrants meaningful involvement of adolescents and youth as central stakeholders.
- Synergized multisectoral and multi-stakeholder action towards ‘Tobacco-Free Future Generation’ is recommended.



## REFERENCES

1. Berrick AJ. The tobacco-free generation proposal. Tobacco control. 2013 May 1;22(suppl 1):i22- 6. Available from: <http://tobaccocontrol.bmj.com/>
2. Perry CL, Stigler MH, Arora M, Reddy KS. Preventing tobacco use among young people in India: Project MYTRI. Am J Public Health [Internet]. 2009;99(5):899–906. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2667859/>
3. Reddy KS, Arora M, Perry CL, Nair B, Kohli A, Lytle LA, et al. Tobacco and alcohol use outcomes of a school-based intervention in New Delhi. Am J Health Behav [Internet]. 2002 [cited 2022 Nov 21];26(3):173–81. Available from: <https://www.ingentaconnect.com/content/png/ajhb/2002/00000026/00000003/art00002>
4. Best-Practices-of-tobacco-control-in-india.pdf [Internet]. Available from: <https://www.rctcpqi.org/pdf/Best-Practices-of-tabacco-control-in-india.pdf>
5. HRIDAY [Internet]. [cited 2022 Nov 21]. Available from: <https://hriday.org.in/about-us/>
6. Indian Cancer Society [Internet]. [cited 2022 Nov 21]. Available from: <https://www.indiancancersociety.org/>
7. Salaam Bombay Foundation [Internet]. [cited 2022 Nov 21]. Available from: <https://www.salaambombay.org/>
8. Generation Saviour Association [Internet]. [cited 2022 Nov 21]. Available from: <http://www.gsa.org.in/>
9. Cancer Patients Aid Association: | Cancer Patients Care India, Largest Cancer NGO in India, National Cancer Rose Day, Colours of Life [Internet]. [cited 2022 Nov 21]. Available from: <https://cancer.org.in/>
10. Alliance for Tobacco Control [Internet]. [cited 2022 Nov 21]. Available from: <http://www.aftcindia.org/>
11. Persai D, Mathur M, Modi B, Dave P, Arora M, Panda R, et al. Preparedness of frontline health workers for tobacco cessation: An exploratory study from two states of India. J Fam Med Prim Care. 2015;4(3):298.
12. Harrell MB, Arora M, Bassi S, Gupta VK, Perry CL, Srinath Reddy K. Reducing tobacco use among low socio-economic status youth in Delhi, India: Outcomes from project ACTIVITY, a cluster randomized trial. Health Educ Res. 2016;31(5):624–38.
13. Arora M, Yadav A, Chatterjee M, Bassi A, Singh A, Shrivastav R, et al. Meeting the Targets of a Healthier Future: Vision for Tobacco Endgame. Respir Med [Internet]. 2013 [cited 2022 Nov 21];107:S1. Available from: [https://www.academia.edu/81369013/Meeting\\_the\\_Targets\\_of\\_a\\_Healthier\\_Future\\_Vision\\_for\\_Tobacco\\_Endgame](https://www.academia.edu/81369013/Meeting_the_Targets_of_a_Healthier_Future_Vision_for_Tobacco_Endgame)
14. No More Tobacco 21C - HRIDAY [Internet]. [cited 2022 Nov 21]. Available from: <https://hriday.org.in/no-more-tobacco-21c/>, accessed 1 November 2022.







# Recommendations and the way forward

---

**Monika Arora, L. Swasticharan, Prakash C. Gupta, Pankaj Chaturvedi,  
Praveen Sinha, K. Srinath Reddy**



India has achieved extensive progress in tobacco control. This report captures key lessons learnt and successes in scaling up robust tobacco control measures. It also identifies gaps in strengthening the mechanism for monitoring, enforcement of legislation and implementation of policy. Tobacco control being a multisectoral and multi-stakeholder issue, the way forward proposed in this chapter offers opportunities for convergence and integration within the health system and beyond. To achieve the vision of 'Tobacco-Free India' and 'Tobacco-Free Future Generation' by 2040, all stakeholders need to make concerted efforts and adopt the following evidence-based tobacco control policy measures.

## 1. Surveillance

- 1.1. Strengthen mechanisms for tobacco control surveillance by conducting the Global Adult Tobacco Survey (GATS) and Global Youth Tobacco Survey (GYTS) every five years, with the prime objective to track the tobacco epidemic.
- 1.2. Integrate the questions for tobacco control surveillance in other national surveys such as the National Family Health Survey (NFHS), National Non-communicable Disease Monitoring Survey (NNMS) and National Sample Survey (NSS).
- 1.3. Focus on generating data on tobacco prevalence and burden at the state and district levels, and map the sub-national status of policy enforcement.

## 2. Policy formulation and implementation

- 2.1. Develop and operationalize a National Tobacco Control Policy, focused on a 'Health in All Policies' aimed at the 'Tobacco Endgame' and 'Tobacco-Free Future Generation' by 2040.
- 2.2. Accelerate the passage of the evidence-based Cigarettes and Other Tobacco Products Act (COTPA) Amendment Bill

2020 to strengthen the COTPA 2003 and make it fully compliant with the WHO Framework Convention on Tobacco Control (FCTC), MPOWER and global best practices, especially the provisions of 100% smoke-free public places and plain packaging of all tobacco product packages.

- 2.3. Strengthen the enforcement of pictorial health warnings (PHWs) in view of the non-compliance by the tobacco industry. The Ministry of Health and Family Welfare (MoHFW) should develop a pan-India enforcement mechanism in collaboration with other ministries notified under the Rules to ensure that the warning size and print area in the line with the notification. The logical next step will be to adopt standardized/plain packaging of all tobacco products.
- 2.4. Establish a comprehensive enforcement mechanism to sustain implementation of tobacco control policies, which includes constitution of enforcement squads/teams at all levels with proper IDs, availability of enforcement tools (*challan* book, receipt book), violation reporting system, mobility support, a daily/weekly schedule and reporting.
- 2.5. Enforce tobacco vendor licensing (TVL) as an effective measure to check illegal tobacco sales and marketing, crucial for reducing vendor density, minimizing display and sale of other consumer goods with tobacco products and, checking sale near educational institutions and compliance with point of sale (PoS) laws.
- 2.6. Enforce comprehensive restrictions on tobacco-related advertising across all mediums and platforms of communication.
- 2.7. Reactivate and strengthen national, state and district level steering committees to monitor and take *suo moto* cognizance

and specific action against violations under Section 5 of COTPA, to plug tobacco advertisement promotion and sponsorship (TAPS), throughout the country. Focus on prohibiting TAPS via social media platforms, digital marketing and through on-demand over-the-top (OTT) streaming platforms

- 2.8. Comprehensively curb surrogate advertising by not allowing patent tobacco product brand names to be extended to non-tobacco products. This should be ensured through policy coherence across different legislation under different ministries to ensure that tobacco brand names are not used as brand extension and for surrogate advertising.
- 2.9. Curtail the emergence and access of new/next generation novel tobacco and allied/surrogate products, including flavoured tobacco products.

### 3. Tobacco industry interference

- 3.1. Shield tobacco control and public health policies from tobacco industry interference (TII) through provisions under Article 5.3 of the WHO FCTC.
- 3.2. Develop robust guidelines and an operationalization plan for MoHFW's Code of Conduct for Public Officials in Compliance with Article 5.3 of the WHO FCTC and expand its scope to all the states and Union Territories as well as across all the ministries/departments at the national and sub-national levels.
- 3.3. Establish national and sub-national observatories to monitor TII in line with MoHFW's Code of Conduct.
- 3.4. Formalize mechanisms to prohibit tobacco industry's participation in corporate social responsibility (CSR) initiatives, aimed at promoting a socially acceptable reputation, in general and particularly

during emergencies such as the COVID-19 pandemic, natural and human-caused disasters.

- 3.5. Sensitize and engage with health professionals, medical associations/bodies, and professional associations from other sectors to minimize TII.

### 4. Monitoring and evaluation

- 4.1. Strengthen compliance by impact evaluation of policy enforcement under the COTPA, Food Safety and Standards Act (FSSA), electronic nicotine delivery system (ENDS) ban (PECA), Juvenile Justice Act and other allied legislation.
- 4.2. Regularize monitoring and impact evaluation of the National Tobacco Control Programme (NTCP) and mandate special monitoring visits under the National Health Mission's (NHM) common review missions to identify good practices and challenges for mid-course corrections.
- 4.3. Monitor and assess compliance of the ban on ENDS and ENNDS (electronic non-nicotine delivery systems) including the establishment of mechanisms to check online marketing and promotion, and cross-border illegal trade, by strengthening Customs regulations.
- 4.4. Monitor annually the TII index at the national and sub-national levels. A global comparison of the TII index helps in tracking India's progress on Article 5.3 of the WHO FCTC.
- 4.5. Create a central repository to report violations and track India's progress on the implementation of Article 5.3 of the WHO FCTC.

### 5. Tobacco taxation

- 5.1. Develop a comprehensive national tobacco taxation policy/strategy to translate tax

increases into actual price increases, across products and make all tobacco products sufficiently unaffordable to discourage product substitution by users.

- 5.2. Create mechanisms to earmark the revenue generated from tobacco taxes to fund health and developmental projects.

## **6. Capacity building of key stakeholders**

- 6.1. Formulate and operationalize a national capacity building strategy for tobacco control, with dedicated fund allocation, customized training modules for relevant stakeholders, including inter-ministerial representatives.
- 6.2. Build capacity of adolescents and youth to be effective 'Tobacco-Free Health Ambassadors', through mentorship opportunities.
- 6.3. Develop a periodic/annual training calendar/schedule for multiple stakeholders, at the national, state and district levels, including capacity building of law enforcement officers, healthcare workers, health system officials, civil society organizations (CSOs) in health and non-health sectors, teachers and school authorities, all notified officials under the COTPA, NTCP, PECA and Code of Conduct, people living with tobacco-related non-communicable diseases (NCDs), quitters and users, government agencies (other than health departments).
- 6.4. Develop digital modules for virtual (and onsite) sessions to train key stakeholders to ensure maximum outreach and the ability for strong connectivity, when face-to-face interactions are limited (e.g. during COVID-19).

- 6.5. Update resources to integrate the latest science and developments such as 'tobacco control during the pandemic' and 'Tobacco-Free Future Generation'.

- 6.6. Map technical and human resources for tobacco control in India (government, non-government, other stakeholders).

## **7. Multisectoral and multi-stakeholder engagement**

- 7.1. Prioritize opportunistic scale-up of tobacco control through partnerships and collaborations, as a key health and development-related driver for prevention and control of NCDs, attainment of National NCD targets, Sustainable Development Goals (SDGs) and universal health coverage (UHC).
- 7.2. Set a multisectoral and cross-sectoral agenda to ensure that tobacco control is accorded due importance while addressing linked health and developmental challenges.
- 7.3. Position tobacco control strategies as part of national and international public health and development discourse, including the National Multisectoral Action Plan for the Prevention and Control of Common NCDs, SDGs, Ayushman Bharat and UHC initiatives.
- 7.4. Convene a multi-stakeholder tobacco control communications committee tasked to periodically and strategically position tobacco control information via print media as opinion editorials, commentaries, articles, etc.
- 7.5. Set up a high-level intersectoral committee to monitor the implementation of ENDS ban (PECA 2019).
- 7.6. Amend the COTPA 2003 and introduce legislation under other ministries (e.g. Information and Broadcasting), which are in compliance with the Tobacco-

Free Film and Television Rules, 2012 so that streaming, OTT and social media platforms cannot glamourize tobacco usage.

- 7.7. Set up intersectoral task forces to scale-up successfully tested models of alternative livelihoods for people involved in tobacco manufacturing and sale and alternative cropping for tobacco farmers and alternative employment for *bidi* rollers and *tendu* leaf plucker.

## 8. Mainstreaming tobacco cessation

- 8.1. Scale-up outreach and acceptance of tobacco cessation services throughout the country, through mass sensitization campaigns. Leveraging digital and online tools (e.g. individual cessation apps) available for tobacco cessation (mCessation, quitline, etc.) to promote quitting during the COVID-19 pandemic and beyond.
- 8.2. Focus on special populations such as pregnant women, adolescents and the elderly with co-occurring conditions including other substance use disorders.
- 8.3. Develop evidence-based, product-specific guidelines for tobacco cessation, customized for smokeless tobacco (SLT) products, *bidis*, cigarettes and other indigenous products.
- 8.4. Encourage active involvement of solo practitioners and counsellors in educational institutions and workplaces to provide tobacco cessation support and services, in addition to primary, secondary and tertiary healthcare settings.
- 8.5. Establish a robust referral system, facilitating referral of patients/tobacco users from the periphery to the district hospitals.
- 8.6. Encourage innovative low-cost cessation strategies for tobacco users from hard-

to-reach marginalized populations and rural areas. Test and scale-up models for engagement of self-help groups and the community.

## 9. Developing a robust multi-disciplinary research agenda

- 9.1. Identify key research priorities to generate evidence on what works and what does not, for informing policies and programmes relevant to tobacco control.
- 9.2. Scaling-up youth-centric research to inform policies and programmes towards 'Tobacco Endgame' and 'Tobacco-Free Future Generation' by 2040.
- 9.3. Develop a repository of research evidence generated from India, the South-East Asia Region and globally, to support ongoing policy and programmatic interventions.
- 9.4. Build tobacco control research capacity by encouraging early career researchers to embrace tobacco control research.
- 9.5. Ensure that school health programmes, mass media and social media campaigns on tobacco control are evidence-based, context-specific and in the language of the area.
- 9.6. Set up a research hub for tobacco control to prioritize research questions relevant to India and forge connections with academic and research institutions within India and abroad, to promote multi-disciplinary collaborative research in tobacco control.
- 9.7. Generate research evidence on tobacco cessation customised for the use of SLT products, *bidis*, cigarettes and other indigenous products.

## 10. Resource mobilization

- 10.1. Identify opportunities for resource mobilization to support programmatic interventions, capacity building and research to increase the scope and



outreach of policies and programmes at the national and sub-national levels.

- 10.2. Facilitate investment in tobacco control research, programming, practice, capacity building and evaluation through a dedicated resource pool of funds from the government, international funding agencies and private sector donors, with no conflict of interest.

## **11. Miscellaneous**

- 11.1. Strengthen tobacco control messaging through electronic media, social media, caller tunes and interactive voice response

systems (IVRS) to provide information on health effects of SLT use in addition to remote cessation guidance and other resources.

- 11.2. Promote mixed cropping as an alternative livelihood option in tobacco-growing regions on a large scale as it is more profitable than mono tobacco crops.
- 11.3. Initiate strategic multisectoral and multi-stakeholder partnerships to underscore the importance of tobacco control as an environmental and developmental issue.







Designed by VOYCE

