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5th NATIONAL CONFERENCE ON TOBACCO OR HEALTH

25th-27th of September, 2021

Theme

MULTI-SECTORAL CONVERGENCE FOR TOBACCO-FREE INDIA BY 2030:

LEADING THE WAY TOWARDS SDGS

Organised by

Department of Community Medicine & School of Public Health, PGIMER Chandigarh

CONTEXT

The National Conference on Tobacco or Health (NCTOH) is the premier and largest gathering for India's tobacco control professionals, health programme managers, public health experts, civil society advocates, academicians and researchers from various clinical and non-clinical disciplines.

This year the 5th NCTOH-virtual was hosted by the Department of Community Medicine and School of Public Health at Post Graduate Institute of Medical Education and Research (PGIMER) from 25th-27th September 2021. This national conference at an eminent Institute of National Excellence of the country boosted the tobacco control efforts by the amalgamation of various tobacco control enthusiasts from clinical and non-clinical disciplines of different states across the country on one platform for sharing contextual experiences and best practices in tobacco control.

The event covered many aspects of tobacco control including but not limited to good governance in tobacco control, regional issues having national relevance in tobacco control, electronic cigarettes, new emerging and remerging tobacco & nicotine products, tobacco control policies, programmes and legislations, tobacco advertising promotion and sponsorship, cessation, tobacco taxation, monitoring and surveillance, policy and implementation research, advocacy for tobacco control, burning issues in implementation of smokeless tobacco control in South Asia, strategic communication for tobacco control program, engaging stakeholders for commitment towards tobacco free India, role of dental and other associations in tobacco control, tackling tobacco industry interference, tobacco vendor licensing and tobacco free generation.

The conference offered an opportunity for disseminating the research findings and best practices in tobacco control related issues especially pertaining to policy implementation, advocacy efforts and for overall strengthening national tobacco control program; networking and developing new relationships with likeminded people and experts for exchanging best practices and ideas; learning practical solutions to upscale tobacco control initiatives at national and sub-national level and renewing motivation and commitment towards tobacco control efforts.

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MESSAGE FROM ORGANIZING SECRETARY

It was our greatest pleasure and privilege to host the 5th National Conference on Tobacco or Health (NCTOH) at PGIMER, Chandigarh from 25th-27th September 2021-Virtual. The theme of the conference was ***"Multisectoral convergence for Tobacco-Free India by 2030: Leading the way towards SDGs".***

The three-day scientific program focused on diverse emerging and re-emerging public health issues and challenges in tobacco control at the national and sub-national level along with context-specific solutions for their replication towards achieving tobacco free environment in the country. The conference format included plenary sessions (5), panel discussions (2), scientific and corporate symposia (16), oral (20), rapid fire oral (68) and e-poster presentations (70), and preconference workshops (9) on many aspects of tobacco control which will pave the way towards building effective policy and program.

A varied strata of tobacco control professionals, health programme managers, public health experts, civil society advocates, academicians and researchers of various clinical and non-clinical disciplines from different states of the country joined virtually on a single platform. There were more than 100 technical sessions with 150+ experts and 1000+ delegates across the country who had registered for the event.

The conference was accredited with 15 CDE points by the Chandigarh Dental Council which is applicable throughout India. Besides, all scientific abstracts were published in the prestigious Indian Journal of Cancer (IJC), which is another matter of pride for the conference. The main outcome of this conference was coming up with 'Chandigarh Declaration' based upon the deliberations of experts, which were shared with MoHFW-GOI and other stakeholders.

I would extend my sincere thanks to Ministry of Health and Family Welfare, Government of India, International Union Against Tuberculosis and Lung Disease, South East Asia (The Union), and other supporting organizations and institutions for their support to this initiative. My heartfelt gratitude to all the chairs, co-chairs, keynote speakers, moderators, reviewers, esteemed members of all committees and organization team as well. I take pride in documenting the fact that Indian Journal of Cancer has agreed to publish the scientific proceedings and abstracts (oral, rapid fire oral, & e-poster) presentations during the conference. The agglomerate of educational and cultural activities on tobacco control in the conference brought lifelong learning to the participants working towards the same direction.

Dr Sonu Goel

Organizing Secretary, 5th NCTOH

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PRE-CONFERENCE WORKSHOPS

Scaling up policy and implementation research in tobacco control

Chairs

Pankaj Bhardwaj, Vikrant Mohanty[1]

Vice Dean Research, Additional Professor, Community Medicine & Family Medcine, Cordinator, School of Public Health, AIIMS, Jodhpur, Rajasthan, [1]Proffesor & Project Head, Pronipal Cordinator-NRC-OH_TC Department of Public Health Dentistry, Maulana Azad Institute of Dental Sciences, Delhi, India

Speakers

Upendra Bhojani, Prashant Singh[1], Amit Yadav[2], Deepak Mishra[3], Vikrant Mohanty[4], Shivam Kapoor[5], Pranay Lal[6]

Director, Institute of Public Health, Bengaluru, Karnataka, [1]Division of Preventive Oncology and Population Health Nodal Officer, WHO FCTC Global Knowledge Hub on Smokeless Tobacco ICMR-National Institute of Cancer Prevention and Research, Noida, Uttar Pradesh, [2]The Iternational Union Against Tuberculosis and Lung Disease (The UNION), [3]Executive Director, Socio Economic and Educational Development Society, New Delhi, [4]Maulana Azad Institute of Dental Sciences, Delhi, India, [5]Technical Advisor, The Union, [6]Senior Technical Advisor, The Union

Objectives: This workshop was intended to help participant's gain broader understanding of policy design to advance tobacco control at national and sub-national level.

Description: The workshop focussed on how important is to generate a broad and common understanding of the key issues and challenges of designing policies that support tobacco control efforts. It helped to improve the capacities of public policy analysts in the design, planning and implementation of policies to support tobacco control. Further to identify source of information and strategies for literature review. Disseminate knowledge, share best practices and experiences gained.

Outcomes: The workshop helped the participants in better understanding of the policy design for the advancement of tobacco control in the country.

Burning issues in implementation of smokeless tobacco control in South Asia CHIP Foundation

Chairs

Ravi Mehrotra, Jagdish Kaur[1]

Honorary Consultant, Centre for Health Innovation and Policy Foundation, Noida, [1]Regional Advisor, Tobacco Free Initiative World Health Organization

Speakers

Zohaib Khan, Ruman Huque[1], Sonu Goel[2], Samadhi W Rajapaksa[3]

Director Research Innovation and Commercialization Khyber Medical University, Peshawar, Pakistan, [1]Professor, Deaprtment of Economics, University of Dhaka, Dhaka, Bangladesh, [2]Professor, Department of Community Medicine and School of Public Health, PGIMER Chandigarh, India, [3]Chairman, National Authority on Tobacco and Alcohol Founder Cancer Care Association of Sri Lanka Chairman Palliative Care Trust

Objective: The objective of the workshop was to give global evidence on knowledge of harms caused by the use of new SLT products.

Discussion: Southeast Asia accounts for nearly 86 per cent of the smokeless tobacco (SLT) consumers in the world. A wide variety of products, many of them country or state specific, are manufactured by hundreds of entities, mostly cottage industries and a range of industrial scale entities. The workshop focussed on new approach to tackle the menace and addressed the gaps and challenges in research and implementation needed for smokeless tobacco control.

Outcomes: Preparing the next generation of anti-tobacco activists and experts to overcome the challenges by tobacco industry in the years to come. Need for an awareness about gaps in comprehensive implementation of the FCTC guidelines, with evidence-based decisions to confront challenges related to tobacco industry interference.

Role of nurses in prevention and management of tobacco use NINE, PGIMER

Speakers

Karobi Das, Sukhpal Kaur[1], Sunita Sharma[3], Nitasha Sharma[2], Sushma Kumari Saini[3]

Officiating Principal, NINE, PGIMER, Chandigarh, India, [1]Lecturer, NINE, PGIMER, Chandigarh, India, [2]Tutor, NINE, PGIMER, Chandigarh, India, [3]Lecturer, NINE, PGIMER, Chandigarh, India

Objectives: To describe the role of nurses in prevention and management of tobacco use

Discussion: The damage from tobacco not only effects individual body system such as respiratory, cardiovascular, immune system, musculoskeletal but also impacts the pregnancy, newborn health, and breastfeeding. Thus to reduce the tobacco burden and its ill effects besides the pharmacological approaches non pharmacological management helps in quitting. To help the tobacco users workshop highlighted the use of 5A's and 5R's where 5As (Ask, Advise, Assess, Assist, Arrange) summarize all the activities that a health care provider can do to help a tobacco user who are ready to quit and the 5 R's: Relevance, Risks, Rewards, Roadblocks, and Repetition that can be used to motivate tobacco users who are unwilling to quit due to misinformation, concern about the effects of quitting or demoralization because of previous unsuccessful

quit attempts. While to provide such an tobacco control intervention health professionals such as nurses plays an important role as they are in direct contact with the patients at any health care settings.

Outcomes: The workshop helped the participants to understand health effects with tobacco use and its management, strategies and highlighted the important role nurses plays for its control.

Tobacco-free movie rules in India: Evidence and impact

Chairs

L Swasthicahran, Prakash C Gupta[1], Mira B Aghi[2]

Deputy Director General (DDG), Ministry of Health and Family Welfare, Government of India, [1]Director of Healis-Sekhsaria Institute for Public Health, Navi Mumbai, Maharashtra, [2]Behavioural Scientist, Communication Expert, New Delhi, India

Speakers

Astha Chugh, Mansi Chopra[1], Veena G Kamath[2], Muralidhar M Kulkarni[3]

Research Scientist, HRIDAY, New Delhi, [1]Research Scientist HRIDAY, New Delhi, [2]Head of Department of Community Medicine, Kasturba Medical College, Manipal Academy of Higher Education, Manipal, Karnataka, India, [3]Associate Professor, Department of Community Medicine Medical, College, Manipal Academy of Higher Education, Manipal, Karnataka

Objective: To provide an overview on tobacco-free movie rules in India. To deep-dive into the research evidence on exposure to tobacco imagery in movies and on-demand streaming content. To provide an update on the compliance of tobacco-free movie regulations.

Discussion: Prevalence of tobacco imagery in movies/films and on-demand streaming content is high despite strong tobacco-free movie regulations in the country. As a result the uptake of smoking/ use of tobacco among children and youth after viewing all these content has raised a concern. To overcome all the challenges it was discussed to focus on stricter monitoring mechanisms and inter-sectoral collaborations for tobacco control.

Outcome: Participants learned about tobacco-free movie regulations in India and the gaps in complying with the regulations.

Advocacy for tobacco control

Chair

Vandana Shah, Gaurav Gupta[1]

Regional Director South Asia Programs, Campaign for Tobacco Free Kids and Global Health Advocacy Incubator, [1]Consultant, Campaign for Tobacco-Free Kids

Speakers

Anup Kumar, Ashim Sanyal[1], Radhika Khajuria, B Nalan[2], Jaspreet Kaur Pal, Binoy Mathew[3], Narender Kumar, J P Sharma[3]

Senior National Policy Consultant, Campaign for Tobacco-Free Kids, [1]Chief Operating Officer at Vouluntary Organization in Interest of Consumer Education, [2]Senior Policy Advisor Campaign for Tobacco-Free Kids, ,[3]Director, Nav Jeevan Trust, [4]Principal Consultant, Campaign for Tobacco-Free Kids, [5]Programme Manager Communications, Voluntary Health Association of India, Uttar Pradesh, India, [6]Principal Consultant Policy, Campaign for Tobacco-Free Kids, [7]State Programme Coordinator, Voluntary Health Association of India, Uttar Pradesh, India

Objective: This session is designed to help civil society organizations plan and conduct effective advocacy campaigns that will result in the adoption and implementation of strong effective public health policies.

Discussion: Changing tobacco control policy is one of the most effective ways to reduce prevalence on a population-wide scale. Moving a public health issue like tobacco control onto the policy agenda and through the policy making process requires a well-planned strategic advocacy campaign. The components of an advocacy campaign are the same regardless of the advocacy goal. This session is designed to help civil society organizations plan and conduct effective advocacy campaigns that will result in the adoption and implementation of strong effective public health policies.

Outcomes: Participants were equipped to plan and conduct effective advocacy campaigns that will result in the adoption and implementation of strong effective public health policies.

Quitting toxin taxation

Speakers

Priya Somani, Surabhi Somani[1], Madhushree Chowdhary[2]

Program Manager, Toxin Taxation, [1]Master Trainer, Acharya-Toxin Taxation, [2]Master Trainer, Toxin Taxation

Objectives: Generate interest in tobacco cessation counselling. Knowledge of how counselling can impact Quit rates. Role of a professional in quitting.

Discussion: Tobacco is the single most preventable cause of death in the world. Smoking causes cancer thus making it an individual problem while second-hand smoke too causes health issues thus making it a family problem. Besides the smoke that lingers around also impacts people who come in contact with smoke which is called third-hand smoke. As there is no safe level of smoke/ tobacco exposure which makes it a public health issue and to curb this menace by helping people quit tobacco/ smoking and also learn the art to make them quit.

Outcomes: To reduce the burden of tobacco use it is important to learn techniques and simple tips which can change how to deal with tobacco users.

Augmenting tobacco taxation research in India Strengthening capacity building

Speakers

Rijo John, Aastha Chugh[1], Nitika Sharma[1], Radhika Nayak[2], Mark Goodchild[3], Asha Kamath[4]

Health Economist, Rajagiri College of Social Sciences, Kochi, Kerala, [1]Research Scientist,, HRIDAY, New Delhi, Research Scientist, HRIDAY, New Delhi, [2]Researh Fellow, TCCP Manipal, Manipal Academy of Higher Education, Manipal, Karnataka, India, [3]Economist, Fiscal Policies for Health, World Health Organization, Geneva, Switzerland, [4]Professor and Head, Data Science and Associate Director, PSPH, Manipal Academy of Higher Education, Manipal, Karnataka, India

Objective: To sensitize the participants on importance of augmenting tobacco research in India.

Discussion: Research on disease causation, epidemiology, and educational and policy interventions has contributed significantly to reduce tobacco use rates in developed countries. A similar contribution is needed, but severe challenges are involved in implementing a robust research program in our country. In an attempt to understand these challenges and begin to conceptualize an approach to overcoming them, the session discussed the need for and methods to achieve a meaningful research on tobacco and health, as well as health policy, in the country.

Outcome: The workshop highlighted the need for strengthening research on tobacco control in the country.

Strategic communication for tobacco control program-with focus on social/digital media campaigns

Speakers

Vaishakhi Malik, Tom Carrol[1], Enrico Aditjondro[2], Pahuni Jian[3], Ashish Kumar Gupta[4]

Associate Director, South Asia Policy, Advocacy and Communication, Vital, Strategies, [1]Senior Advisor, Policy and Communication, Vital Strategies, [2]Associate Director, South East Asia Policy, Advocacy and Communication, Vital Strategies, [3]Communication Officer, Policy, Advocacy and Communication, Vital Strategies, [4]Senior Research Manager, Policy, Advocacy and Communication, Vital Strategies

Objective:

- To increase participants understanding on strategic communication process for designing and implementing tobacco control mass media campaigns.
- To increase participants understanding on implementing social/digital media campaigns as an integrated approach, including the launch of a social media toolkit for the participants.

Discussion: The workshop provided an in-depth understanding of the various aspects of designing and implementing tobacco control campaigns, such as, defining the tobacco control problem to be addressed, identify target audience, setting communication objectives, media buying and placement, research and evaluation etc. The workshop focused on social and digital media campaigns.

Outcome: Increased and sustained use of strategic communication in tobacco control programs at national and state level.

Engaging stakeholders for commitment towards tobacco free India

Speakers

Ravindar Singh, R P Gupta[1], Suneela Garg[2], A M Kadri[3], Suneel Vatsyayan[4], Rishabh Agarwal[5], Hitesh Kumar Gulati[6], Susan Samson[7], Dilip Kumar Acharya[8], Sushma Saini[9], Vijay K Mathur[10], Ravi Mehrotra[11], Rakesh Gupta[12]

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Objective: The session aims to associate together as individuals or organizations to work for tobacco control as it is depicted as a shared responsibility and not an individual task. Also, it will allow the likeminded people to come together and join hands to curb this menace.

Discussion: The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing more than 8 million people a year around the world. Nearly 267 million adults (15 years and above) in India (29% of all adults) are users of tobacco, according to the Global Adult Tobacco Survey India, 2016-17. So, a collaborative work for tobacco control is much needed to achieve "Tobacco Endgame" in India.

Outcomes: (1) Generate a broad and common understanding of the key issues and challenges for tobacco control. (2) Strict Implementation of tobacco control policies and programmes by the government.

PLENARY SESSIONS

Multi-sectoral convergence for tobacco-free India by 2030: Leading the way towards SDGs

Chairs

Sanjay Zodpey[1,2], Dhirendra Sinha[3]

Professor and Vice-President Academics Public, Health Foundation of India, New Delhi, & Director, Indian Institute of Public Health, Delhi, India, 1Chair, School of Preventive Oncology, Patna, India

Speakers

P C Gupta[4], K Srinath Reddy[1], Vineet Munish Gill[5], Rana J Singh[6], Preeti Sudan[7]

Director, Healis Sekhsaria Institute of Public Health, [1]President, Public Health Foundation of India, New Delhi, [2]National Professor Officer WHO-India, [3]Deputy Regional Director, The Union, SEA, [4]IAS Ex-Health, Secretary, GOI

Objectives: (1) The Requirement of grass root level approach for tobacco control programs. (2) Need of involvement by environmental department in tobacco control programs.

Description: The issues arising from tobacco cultivation and processing tobacco products include water pollution, water wastage, and emission of carbon dioxide. It also leads to acidification, climate change and loss of biodiversity. The food and nutrition security is hampered due to tobacco cultivation. Thus requirement is the involvement of multiple departments in tobacco control programs like finance, industries, agriculture, commerce and environment. The WHO FCTC (*Framework Convention on Tobacco Control)* has a multi-sectoral approach for tobacco control with evidence based treaty. While main international organizations includes World Health Organization, United Nations, UN country team, World Bank, UNICEF, UN agencies and UNDP. Thus, besides government support, non-governmental organizations like national (companies, societies, trusts) and international organizations (Support agencies, support and implementing agencies) can play an important role in tobacco control. Need is the improvement in the partnership between NGOs and governments especially state governments and focus on political will and public health policies for tobacco control in India.

Good governance in tobacco control

Pankaj Chaturvedi, Vikas Bhatia[1]

Deputy Director, Centre for Cancer Epidemiology, Tata Memorial Centre, Professor & Surgeon, Department of Head and Neck Surgery, Tat Memorial Centre, Navi Mumbai, Maharashtra, [1]Executive Director, AIIMS, Bibinagar, Hyderabad, Telangana, India

Speakers

Pulkesh Kumar, Amit Yadav[1], Pranay Lal[1], Sonu Goel[2], L Swasticharan[3]

Deputy Secretary, (Tobacco Control), MOHFW, GOI, [1]Senior Technical Advisor,The UNION, [2]Senior Technical Advisor, The UNION, [3]Professor,Department of Community Medicine and School of Public Health, PGIMER, Chandigarh, [4]Addl DDG and Director EMR, Dte GHS, MOHFW, Government India, India

Objectives: (1) Advancing tobacco control in India-Government priorities and way ahead. (2) Implementation of Illicit Tobacco Trade Protocol (ITP).

Discussion: For advancing tobacco control Government discourages initiation and encourage quitting through price tax measures, denormalisation through sustained campaigns and cessation and adopt ITP in the full spirit. The need for implementation support to government (national, state, local) especially by reporting violations and follow up complaints. Ensure effective implementation of the key domestic legislation preventing illicit trade in tobacco products. Adopt and integrate the protocol provisions under domestic laws. Expedite amendment of the cigarettes and other tobacco products act, 2003 as stipulated.

Emerging issues in tobacco control: Contextualizing global interventions

Chairs

Ashok Bhardwaj, Sanjiv Kumar[1]

Professor Emeritus, MM College and Hospital, Kumarhati, Solan, Himachal Pradesh, [1]Chairperson, Indian Academy of Public Health, New Delhi

Speakers

Kamran Siddiqi, Nidhi Sejpal[1], Upendra Bhojani[2], Vaishakhi Malik[3], Praveen Sinha[4]

Professor of Global Health,University of York, York, United Kingdom (UK), [1]Senior Technical Advisor, The International Union Against Tuberculosis and Lung Disease (The UNION), [2]Director, Institute of Public Health, Bengaluru, Karnataka, [3]Associate Director, Vital Strategies, New Delhi, [4]National Professional Officer, World Health Organization (WHO), India

Objective: Contextualize global interventions for emerging issues in tobacco control.

Description: Session emphasised on the challenges faced in tobacco control including tobacco industry interference and stressed on the institutional, funding, advocacy as well as economic issues. Other than

that it was highlighted how advertisements made by the actors on social media as well as on print media on the sale of SLT encourages consumption among youth. Besides the unregulated point of sales i.e, near the educational institutions or the hospitals was the other concern highlighted. The salient features of tobacco vendor licensing were discussed and how states already implementing it. Increasing taxes to reduce the statistics of consumption and regulation on the production, marketing and sale of SLT were some of the suggestions given in the discussion.

Policies, programmes and legislation on tobacco control

Chairs

L Swasthicharan, Vineet Gill Munish[1], Mahesh Kumar[2]

Addl. DDG and Director EMR. Dte GHS, Ministry of Health and Family Welfare, Government of India, [1]National Professional Offier, World Health Organization-India, [2]Regional Officer, Central Board of Film Certification, Ministry of Information & Broadcasting, GOI

Speakers

Rijo M John, Mark Goodchild[1], Monika Arora[2], Aastha Chugh[2]

Health Economist, Rajagiri College of Social Sciences, [1]Economist, Fiscal Policies for Health, WHO Geneva, Switzerland, [2]Executive Director, HRIDAY, New Delhi, India, [3]Research Scientist, HRIDAY, New Delhi, India

Objectives: (1) Highlight the 'Economic Burden of tobacco related Diseases and Deaths in India and key recommendations for tobacco control in India. (2) Share the findings of the study on estimation of the volume of illicit trade of tobacco products in India. (3) Present the time trends in depictions of tobacco imagery and compliance with Tobacco-Free Film & TV Rules in Bollywood films in India from 2007 to 2017. (4) Provide an overview analysis of depiction of tobacco imagery in online series (OTT/ Streaming platform) popular among adolescents and young adults.

Description: The Framework Convention on Tobacco Control (FCTC) negotiated under the auspices of World Health Organization (WHO) is the first global public health treaty and the most rapidly embraced treaty in the history of the United Nations. WHO FCTC provides the framework to elicit multi-sectoral response to the tobacco epidemic. The Govt. of India has taken many systematic and bold policy steps, in response to the WHO FCTC which includes enactment of COTPA 2003, launch of NTCP, Tobacco Free Film Policy, accession to Illicit Trade Protocol and many others. This session is intended to share the findings of the various researches undertaken in India to trigger multi-sectoral response for implementation of the WHO FCTC. The session also highlighted the findings of the studies undertaken for monitoring the implementation of the tobacco free film & TV policy, a policy which has been pioneered by Govt of India & estimation of the Illicit Trade of tobacco in India.

Regional issues having global relevance

Chairs

P C Gupta, Dilip Kumar Acharya[1]

Director, Healis Sekhsaria Institute for Public Health, Navi Mumbai, Maharashtra, India, [1]National Chairman, IMA Cancer and Tobacco Control Committee, Hon. Secretary, Cancer Society of M.P.

Speakers

Jagdish Kaurin, Pratima Murthy[1], Nayantara Sabrao Nayak[2], Sanjay Seth[3], Mukesh Sinha[4]

Regional Advisor, WHO-SEARO, [1]Director, NIMHANS, Bengaluru, [2]Professor and Inharge Director, CMDR, Dharwad, Karnataka, [3]Trustee and Chief of Operations, Sambandh Health Foundation, Gurugram, Haryana, [4]Exeutive Director, MPVHA, Indore, Madhya Pradesh, India

Objective: To discuss the regional issues in tobacco control having global relevance

Description: The South East Asian Region (SEAR) accounts for 81 percent of smokeless tobacco users. It is also home to more than 22 percent of global adult smokers aged 15 years and above. In 2020, the highest prevalence of tobacco use in the world was reported in SEAR and it was around 27.9%. All countries in the region, except Bhutan and Maldives, cultivate tobacco and manufacture tobacco products. India, Indonesia, Bangladesh and Thailand are among the largest tobacco producers in the world. The survivors of tobacco induced diseases are severely disabled in terms of breathing, speech, swallowing, chewing, appearance, taste sensation etc and pushing them into extreme poverty. The COVID-19 pandemic opened up another opportunity for tobacco control and harnessing the opportune moment to bring in effective tobacco control policies. The session focused on regional issues having global relevance including various smokeless tobacco policy issues, lessons on cessation across different tobacco products in India, the way forward towards tobacco agriculture, involving tobacco victims in tobacco control and experiences on tobacco and COVID-19 from India.

PANEL DISCUSSION

ENDS in Indian context

Moderators

Ravi Mehrotra, Suneela Garg[1]

Honorary Consultant, Centre for Health Innovation and Policy Foundation, Noida, Uttar Pradesh,[1]Professor of Excellence (Director and Professor HAG) MAMC, New Delhi, India, National President, IAPSM

Speakers

L Swasticharan, Rakesh Gupta[1], Pankaj Chaturvedi[2], Monika Arora[3], Nirmalya Mukherjee[4]

Addl DDG and Director EMR, Dte GHS,MoHFW, Government of India, [1]President and Director of Public Health, SIPHER, Chandigarh, [2]Deputy Director, Center of Cancer Epidemiology, 2Tata Memorial Hospital, Mumbai, Maharashtra, [3]Director Health Promotion and Professor, Public Health Foundation of India, Bengaluru, Karnataka, India, [4]Director, 4MANT, Kolkata, West Bengal

Objectives: To enlighten participants on importance and implications of legislation on ban of Electronic Nicotine Delivery Systems (ENDS) in India.

Discussion: The epidemic of tobacco use is one of the greatest threats to global health today. Electronic Nicotine Delivery Systems ("ENDS") the newer product in tobacco introduced in India in the late 2000s and got popular, especially among school going youth and young adults as harm reduction products or safer alternatives to cigarette smoking. Over the time multinational tobacco giants soon gained complete control over the production and marketing of ENDS in an effort to expand the global tobacco industry. The aim of this session was to discuss ENDS prohibition in India the Government of India vision and efforts for protecting adolescents and youth from new emerging tobacco and nicotine products, including HTPs.

Outcomes: This session helped to understand the vision and mission of GOIs for legalisation on ban of ENDS in India and learn the state experience in its implementation in state of Punjab.

Role of dental associations in tobacco control

Moderators

Krishan Gauba, Vikrant Mohanty[1]

Professor and Head, Department of Oral Health Sciences, PGIMER, Chandigarh, [1]Professor and Project Head, Prinipal Cordinator-NRC-OH_TC Department of Public Health Dentistry, MAIDS, New Delhi, India

Speakers

Arpit Gupta, Sahana Hegde-Shetiya[1], Neha Jain[2], K Pushpanjali[3], Vamshi K Reddy[3], L Swasticharan[4]

Associate Professor, Oral Health Sciences Center, PGIMER, Chandigarh, [1]Professor and Head, Department of Public Health Dentistry, Dr. DY Patil Vidyapeeth, Pune, Maharashtra, India, [2]Researh Fellow, Public Health Foundation of India, Bengaluru, Karnataka, [3]Professor, Department of Public Health Dentistry, Indian Association of Public Health Dentistry, [4]Addl DDG and Director EMR, Dte GHS, MoHFW, Government of India, India

Objectives: To sensitize the participants on role of dental associations in tobacco control.

Discussion: For tobacco control involvement of stakeholders to assist in various areas like awareness activities, ensuring implementation of Act through monitoring, early identification of tobacco users and prompt management by cessation specialists, utilization of various digital platforms, proactive participation by various medical/dental colleges is the need of hour. To reduce the disease, suffering and premature death which directly results from tobacco use dental organizations has a significant role to play. For support major institutions in India like MAIDS Delhi, LHMC Delhi, PGIMER Chandigarh along with Dental Council of India (DCI), Indian Association of Public Health Dentistry, Paediatric Dentistry, also funding agencies (ICMR, DBT) all are playing a crucial role currently. Institutes are providing training to students, staff, making initiatives to treat inaccessible people like jail inmates and using various other approaches to reach out to population using radio, television, etc. However there is lot of untapped resources which need to be mobilized by involving all oral health professionals/dentists and sensitized people to quit tobacco.

Outcomes: This session helped in understanding the importance of dental associations and support of stakeholders required for tobacco control.

SYMPOSIUMS

Abstract-driven oral presentations

Chairs

Mangesh S Pednekar, A M Kadri[1], Mahesh Verma[2], Surekha Kishore[3]

Director, Healis Sekhsaria Institute of Public Health, Navi Mumbai, Maharashtra, [1]Professor & Head, PDU Government Medical College, Rajkot, Gujarat, [2]Director & Principal of Maulana Azad Institute of Dental Sciences, Vice Chancellor, GGSIU, New Delhi, [3]Executive Director, AIIMS, Gorakhpur, Uttar Pradesh, India

Objectives: (1) To sensitize the participants with the regional and emerging issues on tobacco control. (1) To understand the multi-sectoral involvement in tobacco control.

Description: In this session total of 15 oral presentations were delivered under the section of regional issues, emerging issues along with multi-sectoral convergence and the epidemiology section. The important role of sectors other than health has been realized for a long time, the tobacco control has largely been restricted to a public health initiative. Over the 20th century, tobacco production has seen tremendous systematic growth. As a result has led to a complex relationship and dependence between the tobacco growers, processors, product manufacturers, transporters, traders, advertising agencies, users and the regulatory authorities like agriculture experts, governments, etc.

Outcomes: This session highlighted the importance of multi-sectoral efforts that can fructify through integration of tobacco control into broader health and development agendas. All the presentations sensitized the participants on the integration of tobacco control into other health and development agendas that has the potential to contribute to the achievement of goals.

Monitoring and surveillance in tobacco control

Chairs

Ashish Kumar Pandey

Deputy Director, The Union

Speaker

Shivam Kapoor, Pooja Gupta[1], Sejal Saraf[2], Cyril Alexander[3], Vaishakhi Mallik[4]

Technical Advisor, The Union South East Asia Office, [1]Consultant-Policy & Research, NTCP, MoHFW, [2]Senior Research Program Coordinator, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, USA, [3]Executive Director, MACT, Chennai, Tamil Nadu, [4]Associate Director, Vital Strategies, New Delhi, India

Objectives: (1) To understand the basic principles of monitoring and surveillance at national and global level. (2) To learn the use of advanced technological tools in monitoring.

Description: This symposium helped the participant's to gain broader understanding of the need for Monitoring and Surveillance in Tobacco Control at global, national and sub-national level. Further, build capacity around the use of appropriate technological aids, eventually leading to Tobacco-Free India by 2030.

Outcomes: Generated a broad and common understanding of the key issues and challenges in tobacco control surveillance. Improved the applied knowledge by the use of available technological tools and contribute towards data surveillance.

Smokeless tobacco research

Chairs

Suneela Garg, Parvesh Mehra[1], Ravi Kaushik[2]

Professor of Excellence, (Director & Prof HAG MAMC), National President, IAPSM, Department of Community Medicine, [1]HOD & Director Professor, Oral and Maxillofacial Surgery Department, Lady Hardinge Medical College, [2]Faculty of Physiology, MAMC & Specialist Central Health Services, CHS, MoHFW, New Delhi, India

Speaker

Ravi Mehrotra

Honorary Advisor, Centre for Health Innovation and Policy Foundation and Co-Director ASTRA, Noida, Uttar Pradesh, India

Objectives: (1) To focus on research priorities in smokeless tobacco control. (2) Highlight the smokeless tobacco research in youth & point of sale. (3) Smokeless Tobacco and Oral cancer Association. (4) Investigating effects of smokeless tobacco usage on physiological parameters.

Discussion: India is the third largest producers of tobacco after China and Brazil, with oral cancer being the 3rd most common cancer in India. SLT use has increased steadily in India from 19% in 1998 to 25% in 2010, among individuals from aged 15-49 years. Tobacco affects all the systems and also affects the reproductive health and produce weak offspring. While the association to oral cancer has been observed in numerous meta-analysis study. Implementing and improving existing policies and measures, by conducting research, evaluation and adapting new control measures is the need of the hour for control of smokeless tobacco use.

Outcome: To control the smokeless tobacco use need is strengthening and strict enforcement of existing laws and integration of SLT cessation with all healthcare and development programs.

Tobacco and its impact on oral health

Chair
Vijay Mathur
AIIMS, New Delhi, India

Speakers
Arpit Gupta, V P Ramprasad[1], Keerthilatha M Pai[2], V Ranganath[3], Vinay Hazarey[4]

Associate Professor, Public Health Dentistry, Oral Health Sciences Centre, PGIMER, Chandigarh, [1]Professor & Head, Department of Public Health Dentistry, Manipal College of Dental Sciences, MAHE, [2]Dean, Manipal College of Dental Sciences, Manipal Academy of Higher Education, Manipal, [3]Karnataka State Dental Council, Principal, AECS Maruthi Dental College and Research Centre, Bengaluru, Karnataka, [4]Former Dean, Government Dental College, Nagpur, Maharashtra

Objective: To provide an inter-professional insight from various dental specialities on tobacco and oral health.

Discussion: The epidemic of tobacco use is one of the greatest threats to global health today. It is firmly established that tobacco use is a primary cause of many oral diseases and adverse oral conditions and tobacco-induced oral diseases contribute significantly to the global oral disease burden. The aim of this symposium was to provide an inter-professional insight from various dental specialties. This symposium provided the insights into inter professional collaboration on tobacco and oral health which can be beneficial in controlling tobacco-related oral diseases and adverse conditions through several evidence-based strategies for prevention, early detection, diagnosis, treatment and palliation and making the best use of available resources. Dental professionals should consider a multi-disciplinary approach for tobacco control which can be translated through existing oral health services or new community programmes targeted at different population groups.

Outcomes: In order to provide a uniquely effective setting for tobacco use recognition, prevention and cessation, dental professionals should work across disciplines to bring about value to multidisciplinary teams and fostering such an approach can improve overall oral health care.

Galvanizing youth for tobacco control

Chair
Rana J Singh
Deputy Regional Director, The UNION, SEAR

Speakers
Poonam Khattar, Sonu Goel[1], Amit Yadav[2], Swasticharan[3], Ashima Sarin[4], Rakesh Gupta[5]

Head, Department of Communication, The National Institute of Health and Family Welfare, New Delhi, [1]Professor, Department of Community Medicine and School of Public Health, PGIMER, Chandigarh, India, [2]Senior Technical Advisor, The Union, [3]Addl. DDG, MoHFW, GoI, [4]Director, Sambandh Health Foundation, Gurgaon, Haryana, [5]President, Rajasthan Cancer Foundation, Jaipur, Rajasthan, India

Objectives: (1) To prevent the use of tobacco among young people and adults. (2) To decrease the percentage of non-smoking adolescents. (3) To increase anti-tobacco policies and programmes in schools. (4) To reduce access to tobacco products to minors. (5) To promote meaningful youth engagement for effective tobacco control.

Description: Youth engagement and involvement is pertinent in tobacco control. However, young people in the country are exposed to harmful use of tobacco and as per latest Tobacco Atlas, more than 6 lakh children use tobacco (either in smoking or smokeless forms). Therefore, it is important to build capacities of young people to catalyse change and support effective tobacco control measures in the country. The symposium sensitized the tobacco control workforce on importance of reducing tobacco use among the youth.

Outcomes: (1) Generated a broad and common understanding of the key issues and challenges for tobacco control among youth. (2) Need for strict Implementation of tobacco control policies and programmes by the government.

Abstract driven oral presentations

Sanjay Rai, N K Goel[1], Salim Khan[2]

Chairs
Professor, Centre for Community Medicine, AIIMS, New Delhi Center for Community Medicine, AIIMS, New Delhi, [1]Professor & Head, Department of Community Medicine, GMCH-32, Chandigarh, [2]Professor and Head, Department of Community Medicine, Government Medical College, Srinagar, Jammu and Kashmir, India, [3]Additional Professor, Depaartment of Community Medicine and Family Medcine, AIIMS, Bathinda

Objective: To understand the policies, programmes and legislative actions that have helped and supported in tobacco control.

Description: In this session total of 17 oral presentations were delivered under the section of policies, programmes and legislations as well epidemiology section. Most potent demand reducing influences on tobacco use have been efforts to increase the financial cost of using tobacco products primarily through taxation, smoke-free policies, comprehensive advertising bans, and paid counter-advertising campaigns. The presentations in the

session highlighted the successful outcomes of legislative initiative that have helped the population for tobacco control.

Outcomes: The session sensitized the participants on the policies, programmes, and legislations for tobacco control.

Tobacco advertisements promotion and sponsorship

Chairs

Pulkesh Kumar, Pooja Gupta[1], Parveen Sinha[2], Purva Singh[3]

Deputy Secretary, Ministry of Health and Family Welfare, [1]Consultant Policy) NTCP, Ministry of Health and Family Welfare, [2]NPO, World Health Organization Country Office for India, [3]Legal Consultant World Health Organization Country Office for India

Speakers

Deepika Bahl, Aaditya Bansal[1], Sonal Bhatia[2], Radhika Shrivastav[3], Mr. Binoy Mathew[4]

Research Associate, PHFI, Gurugram, India, 1[A]mity University, Gurugram, Haryana, India (Yoth Ambassador, PHFI), [2]Mauklana Azad Institute for Dental Sciences, Delhi, India (Yoth Ambassador, PHFI), [3]Senior Director, HRIDAY, Delhi India, [4]Programme Manager, Voluntary Health Association of India

Objectives: (1) Highlight contemporary challenge in tobacco control- how social networking sites are used by the tobacco industry to entice youth despite self-regulatory guidelines. (2) Present violations related to Tobacco Advertising, Promotions and Sponsorship (TAPS) prohibition on social networking sites by youth from schools and colleges of India. (3) Share evidence regarding tobacco products being sold around educational institutions, to assess COTPA compliance near educational institutions and to document instances of tobacco industry advertising, selling, displaying or incentivizing the sale of tobacco products near educational institutions. (4) Provide an overview of qualitative research and monitoring undertaken to inform the ban on Electronic Nicotine Delivery Systems (ENDS) in India.

Description: Tobacco use is the leading cause of preventable disease, disability, and death. Young people continue to be targets of marketing, advertising, and promoting new emerging tobacco and nicotine products. Despite several youth-centered tobacco control efforts taken by the Government of India, it is challenging to combat the tobacco epidemic in the age of social media. With more people embracing social media sites, particularly youth (teenagers and young adults), tobacco companies stand to benefit significantly from the marketing potential of social media. Social media has created opportunities for companies to target and engage with youth in unprecedented ways. For example, cigarette promotion on Facebook, protobacco video clips on YouTube, and online tobacco sale stores are the established venues for tobacco promotion. Point of Sale (POS) is yet another site which is used by the industry to propomote their products. There are several instanceds of tobacco products and ENDS (prior to the nationwide ban) being prmoted at POS. An extensive mixed methods research was undertaken to monitor sale and promotion of ENDS. This was significant since ENDS were being promoted for recreational purposes among youth.

Outcomes: (1) The ubiquitous use of social media among youth creates opportunities for companies to target and engage with young consumers in unprecedented ways. Despite the ban on advertisements related to the sale and promotion of tobacco products, tobacco companies are leveraging the loopholes in the policy and are involved in smart marketing tactics on SNS (Facebook, Twitter, Instagram, etc.). Evidence collated by youth to be presented in this session will provide an insight into how pro-tobacco content and advertisements exist on various social networking sites and how influencers of social media post tobacco promoting content to attract youth. This underscores the need for amendment and strengthening of the existing law (COTPA) to tackle increasing TAPS on point of sale and social networking sites. (2) To strengthen COTPA to close the legislative gaps by banning all point of sale advertising, display, sale of single sticks of cigarettes and bidis and levy effective penalties and fines to safeguard the children and the youth of our country. (3) To support the ban on ENDS, with a focus on protecting youth from a gateway product.

Emerging new challenges in the form of tobacco, nicotine and non-nicotine products

Chairs

P C Gupta, Rana J Singh[1]

Director, Healis Sekhsaria Institute for Public health, Navi Mumbai, Maharashtra, India, [1]Deputy Regional Director, The Union (SEA)

Speakers

Shivam Kapoor, Rakesh Gupta[1], Arpit Gupta[2], Stuti S Bhargawa[3]

Technical Advisor, The International Union Against Tuberculosis and Lung Disease, [1]President & Director, SIPHER, [2]Associate Professor, OHSC, PGIMER, Chandigarh, [3]Scientist-D, Division of Non-communicable Diseases, ICMR, MoHFW, GOI, New Delhi, India

Objective: To sensitize participants with the new emerging challenges in the form of tobacco, nicotine & non-nicotine products.

Discussion: Despite knowing the harmful effect on health caused there is increased use of areca nut/ betel quid, hookah and other such products. Use of the products like tobacco, nicotine and non-nicotine has been reported from different parts of country. With good marketing strategies their use is easy and available even to the young adults. The presence of these products thus presents challenge for public health. To overcome the challenges faced while controlling the use of these emerging products the need is to focus on solutions like actions on its consumption and inclusion of all these products in tobacco control program.

Outcomes: Improved the knowledge on harms from these new emerging challenges and highlighted the need of actions for its control.

Abstract driven rapid fire oral presentations

Chairs

Binod Patro, Abhishek Ghosh[1], Pankaj Bhardwaj[2], Bhavesh Modi[3]

Professor, Department of Community Medicine and Family Medicine, AIIMS, Bhubaneshwar, Odisha, [1]Associate Professor, Department of Psychiatry, PGIMER, Chandigarh, [2]Additional Professor, Department of Community and Family Medicine, AIIMS, Jodhpur, Rajasthan, [3]Nodal Officer-health Policy, HTA and Family Welfare Department, Government of Gujarat, India

Objective: (1) To focus on the epidemiology, emerging and remerging issues in tobacco control. (2) To highlight on the importance of multi-sectoral convergence for tobacco control.

Description: In this session 17 oral presentations were delivered under the section of epidemiology, emerging and remerging issues and multi-sectoral convergence. The presentation in the session helped in depth understanding of the issues involved towards tobacco control and efforts required for their control, most common being multi-sectoral convergence.

Outcomes: The session sensitized the participants on the emerging and remerging issues and multi-sectoral convergence for tobacco control.

Harnessing media for advocacy in tobacco control

Chairs

Praveen Sinha, Vaishakhi Mallik[1]

National Professional Officer, World health Organization, India, [1]Associate Director, [1]South Asia, Policy, Advocacy and Communication, Vital Strategies

Speakers

Vaishakhi Mallik, Tshering D Bhutia[1], Rinki Sharma[2], Pahuni Jain[3], Deepak Mishra[4]

Associate Director, South Asia, Policy, Advocacy and Communication, Vital Strategies, [1]Vice President - Preventive Health Programme, Salaam Bombay Foundation, [2]Lead – Projects, Consumer VOICE, [3]Communication Officer, Policy, Advocacy and Communication, Vital Strategies, [4]Executive Director, Socio Economic and Educational Development Society (SEEDS)

Objectives: To understand different forms and approaches to utilizing media strategically to effectively advocate for tobacco control policies and their implementation.

Description: This symposium helped participants learn from various experts how they have designed and implemented strategic campaigns using media and communications with the aim to advocate for stronger tobacco control policies and their implementation. It also highlighted the use of media in different forms including public education campaigns, earned media and social media, and how they can be used through integrated approaches.

Outcome: Sensitized the participants regarding various media approaches and replication of best practices for advocacy in tobacco control.

Cigarette and other tobacco products act: second hand smoke, health warnings access to minors

Chairs

Rana J Singh, Pulkesh Kumar[1]

Deputy Regional Director, The Union South East Asia Office, [1]Registrar, NLUO, Cuttack

Speakers

Ranjit Singh, Arpita Singh[1], Aastha Bagga[2], Amit Yadav[3]

Advocate, Supreme Court of India, [1]Project Coordinator, WHO FCTC Global Knowledge HUB on SLT, ICMR-NICPR, Noida, [2]Program Manager, Generation Saviour Association, Mohali, [3]Senior Technical Officer, The Union

Objectives: (1) Understand the basic provisions of tobacco control laws relating the thematic areas. (2) Identify and examine (understand) the gaps and need for addressing them earnestly to meet WHO FCTC mandates. (3) Highlight the status of enforcement of the tobacco control laws and underscore the challenges therein.

Description: Under the theme Tobacco Control Laws this symposium helped participants to get acquainted with the tobacco control laws and identify and understand the gaps therein the three thematic areas. Further, it highlighted the provisions with respect to the mandates under the WHO FCTC and other global best practices while rooting their implementation through domestic laws e.g. JJA, FSSA besides COTPA Amendment that calls for strengthening tobacco control laws in India.

Outcomes: Underscore the need for addressing the gaps in laws & regulations and meet the compliance

requirements to achieve full implementation of COTPA, JJA, FSSA an FCTC provisions in India.

Implementation of WHO article 5.3 in low- and middle-income countries

Chairs

L Swasticharan, Monika Arora[1], Jeff Collin[2]

Addl DDG, Ministry of Health and Family Welfare- Government of India, [1]Executive Director, [1]HRIDAY, [2]Professor, Health Promotion Division, Public Health Foundation of India, [3]Professor of Global Health Policy, University of Edinburgh, Edinburgh, Scotland

Speakers

Selamawit Hirpa, Denis Male[1], S M Abdullah[2], Shalini Bassi[3], Praveen Kumar[4]

Instructor, Addis Ababa University, Addis Ababa, Ethiopia, [1]Lecturer, Center for Tobacco Control in Africa and Makerere University-Uganda, Kampala, Uganda, [2]Research Fellow, ARK Foundation, [3]Consultant, HRIDAY and Research Scientist-Public Health Foundation of India, [4]Assistant Professor, Manipal Academy of Higher Education, Manipal, Karnataka, India

Objectives: (1) Examine existing policy framework in various Low and Middle-Incomes countries (LMICs) to address tobacco industry interference. (2) Explore challenges, opportunities and best practices for implementation of WHO FCTC Article 5.3 in various LMICs

Description: Tobacco industry interference (TII) has been a key challenge in tobacco control. In order to counteract TII and for effective implementation of various tobacco control policies, Article 5.3 of the WHO FCTC specifies protection of public health policies from the commercial and other vested interests of the tobacco industry. The symposium focused on implementation of WHO FCTC Article 5.3 in diverse LMICs, like India, Ethopia, Uganda and Bangladesh. HRIDAY and Manipal Academy of Higher Education (MAHE) collaboratively organized this session highlighting the findings from the ongoing research under the Tobacco Control Capacity Programme (TCCP). TCCP is a consortium of 8 low-and middle-income countries, including India (HRIDAY and Manipal Academy of Higher Education), which is being led by the University of Edinburgh, UK. The speakers from four TCCP LMICs (India, Ethopia, Uganda and Bangladesh) presented their findings on challenges and opportunities for Implementation of Article 5.3 in their respective countries.

Outcomes: An overview of various aspects of TII, existing policy frameworks to address TII, efforts so far in stopping TII and challenges and opportunities for Implementation of Article 5.3 from speakers from different LMICs countries.

National Tobacco Control Program: Capacity building

Chairs

Nirmalaya Mukherjee, Pooja[1]

Director, MANT, Kolkatta, [1]Consultant Policy and Research, NTCP, MOHFW, New Delhi, India

Speakers

Gopal Chauhan, Mukesh Sinha[1], Gurman Deep Singh[2], Deepak Mishra[3], Prabhakara[4]

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Objectives: To sensitize the participants with NTCP and roles and responsibilities of key stakeholder departments in tobacco control.

Discussion: The National Tobacco control Program (NTCP) was launched in India in the year 2007-08 with the aim to create awareness about harms of tobacco use, to reduce the production and supply of tobacco, to implement COTPA 2003, to help people to quit tobacco and to facilitate the implementation of the FCTC provisions. India has demonstrated a substantial reduction (34.6-28.6%) in tobacco use as per GATS -2. This session highlighted the Challenges, opportunities and the way forward for NTCP capacity building in India

Key Stakeholders in Tobacco Control: Health Ministry is the nodal agency for tobacco control in India. Other key stakeholders are NGOs, Researchers, Media, Police, Judiciary, Trade and Commerce Ministry, Information and Broadcasting Ministry, Finance Ministry and Agriculture Ministry.

Role of Various Stakeholders in Tobacco Control: Health Ministry has a key role in Monitoring tobacco and Offering help to quit but limitations for law enforcement. NGOs and researchers have vital role in policy advocacy and evidence generation. Media has a key role in awareness generation. Police are the key law enforcement agency. Trade/Commerce and Information /Broadcasting Ministry have to regulate the trade, advertisement and promotion of tobacco. Tobacco taxes are domain of Finance Ministry and Agriculture Ministry has to protect the interest of farmers through alternate crops.

Outcomes: NTCP capacity building involves multiple stakeholders. It is recommended that the targeted approach shall be adopted for capacity building of the key stakeholders and to define their roles and responsibilities clearly.

Addiction treatment and management - Practical approaches

Chairs

Pushpanjali[1,2], Ravi Kaushik[3]

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Speaker

Vikrant Mohanty, D S Aruna[1], Sonali Jhanjee[2], Y B Aswini[3], Rakesh Gupta[4], Amit Kumar[5], Shinoy Ashley Samuel[5]

Prof. & Project Head, Principal Coordinator-NRC-OH-TC Dept, of Public Health Dentistry, Maulana Azad Institute of Dental Sciences, [1]Public health Dentist & NIMHANS Accredited Tobacco Cessation Specailist, [2]Associate Professor Dept. of Public health Dentistry, MAIDS, New Delhi, [3]President Rajasthan Cancer Foundation and Honorary Consultant, SDMH MRI, Jaipur, Rajasthan, India, [4]National Resource Centre for Oral Health and Tobacco Cessation, MAIDS, [5]Clinical Psychologist National Resource Centre for Oral Health and Tobacco Cessation, [6]Director, Medical Services, Cipla Health, [7]Senior Resident, Dept. of Psychiatry, National Drug Dependence Treatment Center, AIIMS, New Delhi

Objectives: (1) To understand mechanism and effects of Addiction. (2) To understand and demonstrate clinical strategies used in tobacco cessation. (3) To enlist the barriers, challenges in tobacco cessation and measures to overcome it.

Description: Offer Cessation Support is an integral part of the MPOWER, Tobacco Control strategies. The symposium focused to orient about the basics of tobacco addiction and practical approaches in the management of tobacco addiction. Approaches like newer techniques in behavioural intervention, evidence-based pharmacotherapy treatment guidelines laboratory investigations for monitoring compliance to tobacco cessation and its challenges in implementation. Active role-play demonstration of tobacco cessation counseling at the end of the session provided a practical application of tobacco cessation interventions in a clinical set-up. Barriers and challenges in tobacco cessation services were highlighted and measures to overcome them were suggested.

Outcomes: In depth understanding of nicotine addiction and how to adapt and apply tobacco cessation strategies into everyday clinical practice with adequate follow up.

Abstract driven rapid fire oral presentations

Chairs

Anmol Gupta, Sarit Sharma[1], Rajmohan Panda[2], Ashish Pandey[3]

Professor & Head Dept. of Community Medicine, Indhira Gandhi Medical College (IGMC), Shimla, [1]Prof. Dept. of Community Medicine, Dayanand Medical College and Hospital (DMCH), Ludhiana, [2]Additional Professor, Public Health Foundation of India, New Delhi, 3Deputy Director (TC) The Union,New York

Objectives: (1) To focus on the epidemiology, emerging and remerging issues in tobacco control. (2) To highlight on the importance of multi-sectoral convergence for tobacco control.

Description: In this session 36 rapid oral presentations were delivered under the section of policies, programmes and legislations. The presentation in the session highlighted the initiative through policies, programmes and legislative actions that supported the nation in tobacco control.

Outcome: The session provided highlighted the emerging and re-emerging issues in the tobacco control and importance of multi-sectoral convergence through various presentation.

CS: World Health Organization implementing stroke care excellence through angel initiative in India

Chair

L Swasthicharan, G B Singh[1]

Addl DDG, Ministry of Health and Family Welfare, Government of India, New Delhi, India, [1]Director Health Services (ESI), Punjab, India

Speakers

Shruti Dhar, Dheeraj Khurana[1]

Heads Angel Initiative, Boehringer Ingelheim India Pvt. Ltd., [1]Professor, Department of Neuroology, PGIMER, Chandigarh, India

Objectives: To sensitize the participants about the Angel Initiative on tobacco control

Description: Tobacco use, especially smoking, is a known risk factor of stroke (infact, second after high blood pressure) and many challenges are faced in management of it. A stroke patient who could have been saved, dies or is permanently disabled, because they were treated in the wrong hospital. For early diagnosis and treatment of stroke along with enhancing quality of care to hospitalized stroke patients Angels Initiative's has been working and has excellence in Europe for 5 years and 3 years in India. They are working to build a global community of stroke centres and stroke ready hospitals and working every day to improve the quality of treatment for every stroke patient.

Outcomes: Improvement in the treatment of stroke by providing doctors with the necessary tools, resources and support they need to optimize and set up acute stroke networks and develop stroke centers is of utmost important to reduce the burden of stroke.

PRESENTATIONS (SCIENTIFIC RESEARCH)
ORAL PRESENTATION

Life first: Impact of a school-based tobacco- and supari-cessation intervention among adolescents in Mumbai, India

Upendra Bhojani, Amiti Varma*, Pragati Hebbar, Gauri Mandal

*Research Officer, IPH

Background: In India, youth are among the most vulnerable populations in terms of tobacco uptake and tobacco-related harms. Schools are an excellent setting for health promotion, yet there is a dearth of school-based interventions supporting to youth to quit tobacco. Further, such interventions are rarely evaluated for their impact. Thus, we aimed to assess the impact of the LifeFirst program: an ongoing tobacco- and supari-cessation intervention delivered to students from corporation schools in Mumbai.

Methods: We used a prospective quasi-experimental design with an intervention and a control arm embedded within an ongoing LifeFirst program of six sessions. We used a difference-in-difference analysis with the baseline and endline surveys to assess the program's impact on prevalence of tobacco/supari use, students' knowledge about tobacco/supari harms, and students' refusal skills regarding tobacco/supari use.

Results: We analyzed data from 827 students, who volunteered to participate in the LifeFirst program and completed both the surveys. At the end of the intervention, both tobacco and supari use reduced among the intervention group while tobacco use increased among the control group. The difference-in-difference estimates show a statistically significant reduction of 17.9 and 38.1 percentage points in tobacco and supari use prevalence respectively, beyond the reduction in the control group.

Conclusion: The LifeFirst program was successful in reducing tobacco and supari use among participants and protected students in the intervention group against new uptake of tobacco. It helped improve knowledge score as well as refusal skills among students. We discuss how similar school-based programs should be considered as part of a multi-strategy approach to reducing tobacco use among young people in India.

Does MPOWER approach impact adult tobacco use prevalence in India: Findings from GATS

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*Senior Statistician, Healis Sekhsaria Institute for Public Health, Mumbai, Maharashtra, India

Background: The World Health Organization's (WHO) MPOWER is a technical package of tobacco control measures that assist countries in meeting their obligations of the WHO Framework Convention Tobacco Control (FCTC) and are proven to reduce tobacco use. Between GATS-1 and GATS-2 round prevalence of adult tobacco use has decreased from 34.6% in 2009-10 to 28.6% in 2016-17. Therefore, we explore the role of MPOWER strategy in changing prevalence of tobacco use between GATS-1 and GATS-2 in India.

Methods: We compared the common questions from GATS-1 (2009-2010) and GATS-2 (2016-2017) survey that were directly associated with the WHO MPOWER strategy. The descriptive characteristics were calculated. Multivariate analysis was done using dummy time variable (GATS1=0 and GATS1=1) as the dependent variable and independent variable were tobacco, age, gender, education and occupation.

Results: As compared to GATS-1 in GATS-2, smoking and mixed use decreased (ranges from 20% to 48%) among men and women, except for smokeless tobacco use among men. Noticing smoking decreased at inside of any government buildings or offices, enclosed restaurants or public eating places and any public transportations. Advised by doctor given to stop smokeless tobacco use was reported higher by male mixed users (AOR=2.44, 95% CI =1.50, 3.97) and female SLT users (AOR=1.63 95% CI (1.09, 2.45). Noticing any health warning on cigarette packages was reported more by male smokers (AOR=1.78, 95% CI =1.50, 2.10) and by SLT users. Noticing decreased in any cigarette promotions was reported by male smoker (AOR=0.70, 95% CI =0.55, 0.89)

Conclusion: India has strong policy measures in tobacco control, however it needs special attention on its enforcement of MPOWER on smokeless tobacco user men.

Areca nut: A silent risk factor for tobacco use among adolescents

Himanshu Gupte*, Gauri Mandal

*General Manager, Narotam Sekhsaria Foundation

Background: Globally, 600 million people consume areca-nut, the fourth most commonly abused addictive substance and a known Class I carcinogen. Sweetened and flavored areca-nut is popular among

children acts as a gateway product for tobacco. Therefore, it is important that tobacco control programs for adolescents also address areca-nut. The objective of the study was to assess 1) use of areca-nut among adolescents and 2) outcomes of areca-nut and tobacco cessation intervention.

Methods: LifeFirst, a school-based areca-nut and tobacco cessation program was implemented from 2013-2019 in 172 slum-based schools in Mumbai. Orientation sessions were conducted for all the students of 7th, 8th and 9th standards (age 12-15 years) to create awareness about ill-effects of areca-nut and tobacco and encourage current users to voluntarily register for cessation services. Theme-based group counseling sessions were conducted with the registered students. During the program, the students acquired refusal skills and coping mechanisms. Periodic follow-up sessions were conducted and at each session areca-nut /tobacco use status was monitored and recorded.

Results: 18,895 students were sensitized about ill-effects of areca-nut and tobacco. Of these, 4371 (23%) students registered for the cessation program. Among them, 3800 (87%) were only areca nut users, 452 (10%) students consumed areca nut along with some form of tobacco, 80 (2%) only smokeless users and 39 (1%) only smoking. At the end of the program, 2489 (66%) of the only areca nut users, 199 (44%) of areca nut and tobacco users, 38 (48%) smokeless users and 19 (49%) smokers' self -reported that they had quit their habit.

Conclusion: School based cessation programs are feasible and effective to help the students to quit their habit and also to prevent transition from areca nut to tobacco.

Comparison of two behavioural school based cessation programs implemented in slums of India

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Background: 14.6% of youth use some form of tobacco. Two thirds of the smokers want to quit their habit. With such a high prevalence and increasing burden among the adolescents, it becomes important to design and implement cessation interventions which reach to a larger population with limited available resources. The objective of the study was to assess outcomes of a three-month and a six-month school-based tobacco cessation program.

Methods: LifeFirst, a six-month school-based areca-nut and tobacco cessation program is implemented in schools from slum areas of Mumbai. The program consists of one orientation session for all the students of 7th, 8th and 9th standard and six theme-based group counseling sessions with the current areca-nut and tobacco users. To scale up the program with limited additional resources a less intensive SMART model was designed based on the original six-month intervention. The SMART model consisted of one orientation session and three theme-based group counseling sessions. A team of five counselors implemented both the interventions and helped the students to build refusal skills and coping mechanisms.

Results: In 2018-19, 1384 students were oriented in 18 schools through the six-month intervention program of which 579 (42%) students registered for counseling sessions whereas through SMART intervention, 3548 students were oriented in 60 schools and 1141 (32%) students registered. At the end of six-month program, 398 (69%) students and at end of three-month program 498(44%) self-reported that they had stopped using areca nut/tobacco.

Conclusion: A three-month intervention is also effective in helping adolescents quit their areca-nut/tobacco use and it should be implemented and promoted in low-resource (finances, human resources etc.) settings to reach out to a larger number of adolescents.

Are adolescence resilience, family and schools environmental factors associated with adolescent's intention to use tobacco in India?

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Background: Adolescence age between 12– 14 years is a crucial period of life. It is a time when people become independent individuals, forge new relationships, develop social skills and learn behaviors that will last the rest of their lives [1]. Prevalence of any form of tobacco use is 14% among school going adolescents in India [2]. We are assessing the intention to tobacco use among adolescents and its association with resilience score, family score, parental score, school score and teachers score.

Methods: A multi-stage sampling household survey (n=1982) of adolescents (12–14 years) and their parent/main-caregivers is underway in Kolkata (n=1038) and Mumbai (n=944) with data collection at baseline (2018-2019) and 3 follow-ups. Participants complete questionnaires about intention to tobacco use and resilience, family, parental, school and teacher's factor. Based on the questionnaire, scores were developed for adolescent resilience score (0-10),

family score (0-5), parental score (0-6), school score (0-4) and teacher's score(0-6). Descriptive statistics were calculated using SPSS20.0. Results were weighted to be population-based.

Results: Adolescent's intention to use tobacco was higher in Mumbai than in Kolkata (8.5% vs 7.7%; p<0.0001). Boys from both cities reported higher intention to use tobacco than girls. The prevalence of intention to use tobacco among adolescents was associated with adolescents resilience score (score 0:-Mumbai-3.9%, Kolkata-3.4%; score 1&above:-Mumbai-11.2%,Kolkata-10.0%), family score (score 0:-Mumbai & Kolkata-7.3%; score 1&above:-Mumbai-23.6%,Kolkata-9.4%), Parental score (score 0:-Mumbai-4.3%,Kolkata-7.6%; score 1&above:-Mumbai-16.3%,Kolkata-7.2%), School score (score 0:-Mumbai-7.4%,Kolkata-6.9%; score 1&above:-Mumbai-15.3%,Kolkata-8.1%) and teacher's score (score 0:-Mumbai-5.4%,Kolkata-9.0%; score 1&above:-Mumbai-19.7%,Kolkata-4.6%).

Conclusion: All five scores were strongly associated with intention to use of tobacco among adolescents in both cities. Therefore, policy makers should include this factor in tobacco control measures.

Factors influencing tobacco use and associated premalignant conditions among police personnel

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Background: Despite being the significant stakeholders in tobacco control, police officials in India are addicted to tobacco. The available evidence shows that prevalence of smokeless tobacco forms is significant among the Indian police officials. To understand various factors influencing tobacco use and tobacco induced pre-malignant conditions, Salaam Bombay Foundation conducted cross-sectional study among Navi Mumbai Police officials in January 2020.

Methods: Initially meetings were held with Navi Mumbai Police Commissionerate to receive blanket permission to organize survey and oral screening at police stations. After receiving permission, both survey and oral screening were conducted at each police station around morning parade time. Informed consents were obtained separately for participation in survey and oral screening. Self-administered survey questionnaire uploaded in tablets was used for survey. Oral screening was conducted in collaboration with a dental college in Navi Mumbai.

Results: 295 police participated in the survey and 307 officials underwent oral screening. 21% (n=62) police officials participated in the survey self-reported current tobacco use; but oral screening identified 25.4% (n=78) current tobacco users. All current tobacco users were males. The prevalence of current tobacco use was directly associated with years in police service. Peer influence (23%), work pressure (17%) and long duty hours (17%) were the most common self-reported reasons for tobacco use. 8.8% (n=27) police officials were diagnosed with pre-malignant conditions that included tobacco pouch keratosis (70.4%), leukoplakia (25.9%) and oral sub-mucous fibrosis (3.7%).

Conclusion: The study revealed that most of the factors predisposing the police officials to tobacco use are occupational. Tobacco use may predispose some of them into the pre-malignant conditions which further predisposes them to oral cancers if not intervened on time. Thus, making oral screening facilities available along with tobacco cessation counselling and treatment of tobacco users is important.

Estimation of relative risk of head and neck and oral cancer associated with tobacco consumption. In a cancer registry a retrospective approach.

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Background: Among various cancers, head and neck (HN) cancer in India is emerging as a major public health problem. Head and neck and Oral Cancer are strongly associated with certain environmental and lifestyle risk factors one among which is Tobacco. According to World Health Organization, cancer is growing at an alarming rate and all necessary steps should be taken to counter this modern day epidemic.

Methods: A retrospective study on the prevalence of various cancers in the HN and oral cavity regions was conducted in the Department of Oncology, S.M.S Hospital, Jaipur, which is a tertiary hospital where patients from all the districts of Rajasthan state are being referred, thus the hospital receives a fairly representative sample of cases across the State. A total of 4587 Total Body Malignancy cases were obtained from the out patient department (OPD) registered, among which HN and OC constituted 1705. Patient confirmed by histopathological evaluation were, 1476 included in the study.

Results: There were 1223 (83.75%) male and 253 (16.25%) female patients. There were 640 (43.36%) and 836 (56.64%) HN, and OC cases, respectively. The most common habit was the combination of all

three, that is, smoking, smokeless tobacco and alcohol, both in HN (26.09%) and OC (23.68%) cases, followed by smoking. Among the OC cases, 15.43% consumes smokeless tobacco, which is high as compared to HN cancer cases 10.16%. In multivariate analysis HN and OC cases showed highly significant association ($P < 0.0001$) with smoking, smokeless tobacco, alcohol consumption and the combination of all three forms ie smoking, smokeless tobacco, alcohol consumption.

Conclusion: This study attempts to quantify and analyze the spectrum of HN and OC in the region. A comprehensive effort is needed to identify the cause of such high prevalence, generate awareness, adopting preventive measures and treatment modalities suited to meet this challenge.

Adherence to the tobacco-free educational institution guidelines in rural schools of Raipur Rani block of Haryana

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Background: Despite the existence of comprehensive laws for tobacco control their acceptance and successful implementation is questionable. With 40% of India's population below 19 years, tobacco-free schools (TFS) can be a critical strategy for preventing tobacco-use among youth. This study aims to assess the compliance of schools for Tobacco-Free Educational Institution (TFEI) guidelines among the schools in RaipurRani educational block, Haryana.

Methods: This cross-sectional observational study was conducted using census sampling strategy to include all 84 schools (government and private). Investigators collected the data regarding the adherence of these schools for TFEI using a validated standard nine criteria checklist of TFEI guidelines by NTCP, Government of India. Sale of tobacco within 100 yards of the school premises was observed.

Results: None of the schools could achieve a Tobacco-Free Educational Institution status in the present study. Though the compliance score for private schools was better than the government schools. Violations related to ban on tobacco sale within 100 yards of schools was found among almost 58% of the Government schools.

Conclusion: There exists a substantial gap between the TFEI guidelines and their adherence in the study area. An implementation framework along with a monitoring mechanism for evaluation and compliance assessment is required.

How has the COVID-19 pandemic affected tobacco users in India: Lessons from an ongoing tobacco cessation program

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Background: Tobacco use is detrimental at any time. However, it is proving to be more dangerous during the COVID-19 pandemic. Tobacco use may increase the risk of being infected, increases the chances of complications, and also increases the probability of its spread. We assessed the awareness about this association and the impact of the lockdown on tobacco use among tobacco users registered before the lockdown for LifeFirst, a tobacco dependence treatment program.

Methods: 1016 tobacco users were under active follow-up in their course of the 6-month counselling program. From 14 to 28 May 2020, 650 (64%) of these registered users were contacted by counsellors for follow-up sessions over the telephone. Semi-structured questionnaires were filled in during the calls.

Results: Two-thirds (67%) of tobacco users were unaware of the association between tobacco and COVID-19. Only 30% of the users felt that the current situation had affected their tobacco use, the commonest impacts being unavailability and increased prices of tobacco products. While this was seen as an opportunity to quit by some users, some reported increased tobacco use due to increased stress. Of the 219 (34%) tobacco users who quit tobacco during the lockdown, 51% quit because of the lockdown and their concern over COVID-19. Abstinence among those who were aware of the association between the coronavirus and tobacco was twice that among those who were not aware.

Conclusion: Awareness activities about the harmful effects of tobacco during the coronavirus pandemic have to be strengthened. Measures to motivate and support tobacco users to quit have to be provided through cessation services.

Role of machine learning in tobacco cessation: A systematic review

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Background: More than 50% of tobacco users in India wanted to quit tobacco use. Conventional cessation methods, inaccessible cessation facilities, limitations of tele or phone consultation are few

important impediments in low quit rate of tobacco use. The recent advancements in machine learning and artificial intelligence have shown unprecedented impact in healthcare and various other fields. The aim of this study was to access the role of machine learning in cessation of tobacco and nicotine dependence.

Methods: To review the studies conducted to find out the role of machine learning in tobacco cessation. We conducted a PubMed search with keywords (tobacco cessation OR smoking cessation OR nicotine dependence) AND (machine learning). Original research articles in English language were selected. A total of 61 studies were retrieved through the search. Irrelevant studies were excluded from the study.

Results: Studies included in our analysis used different study designs such as analysis of the online user conversation, case-control study, cross-sectional and National Health Survey, clinical trial, and attendees of cessation program. These studies successfully demonstrated the role of machine learning in predicting the quit rate and lapses attempt. Machine learning were used to classify tobacco user for tailored tobacco cessation and behaviour change therapy.

Conclusion: Independent studies conducted with different objectives to analyse the role of machine learning in tobacco cessation were unanimously concluded that machine learning can play an augmenting role in conventional tobacco cessation. Urgent efforts should be made to equip the tobacco cessation centres or facilities with machine learning facility. A one-size-fits-all approach should be abandoned.

Areca nut addiction in India: A cross-sectional analysis of global adult tobacco survey

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Background: Globally, areca nut is the fourth most abused addictive substance after nicotine, ethanol and caffeine and highly prevalent in the Asia-Pacific region. Areca nut use is a well-known risk factor of oral and other cancers of the upper aero-digestive tract. This study aims to examine the disparity and determinants of areca nut addiction in India using nationally representative sample.

Methods: We used nationally representative Global Adult Tobacco Survey (GATS) conducted in 2016-17. Analytical sample size was 74,037 adults aged 15 years and above. We estimated self-reported current use of areca nut. We examined determinants of areca nut consumption using multinomial logistic regression, accounting for complex survey design.

Results: 23.9% adult population consume areca nut, which accounts for approximately 223.79 million users in India. Out of total areca nut users, 9.7% users consumed areca nut with tobacco. Four states namely Uttar Pradesh (49.9 million), Maharashtra (26.7 million), Karnataka (19.8 million) and Tamil Nadu (17.7 million) accounts for half of the areca nut users in the country. When compared to females, males were more prone to consume areca nut without tobacco (RR=1.13; 95%CI 1.07-1.20) and with tobacco (RR=2.02; 95%CI 1.85-2.21). Age, marital status, education, occupation, caste, religion and region were significantly associated with areca nut use. However, the direction of association differs with respect to the use of areca nut with tobacco and without tobacco.

Conclusions: Our study shows that areca nut use is widespread in India and many consume areca nut with tobacco. Furthermore, areca nut addiction follows the complex pattern by socioeconomic groups and regional trajectories. Our research highlights that tobacco control policy efforts would not yield the desired outcome until greater attention to areca nut use is reflected in the formulated health policies.

Association between nicotine dependence and biochemical marker verified smoking status among adults in Gurugram City- An observational study

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Background: The number of individuals continuing to smoke remains a major public health problem in India. Smoking assessments are done based on self-reported information or with biochemical verification. Self-reported measurements are most of the times unreliable as respondents may be unwilling to admit to social behaviour that many perceive to be undesirable. Reliable biochemical markers are an important adjunct to self-reports for the objective evaluation of newer approaches in determining tobacco use.

Methods: A descriptive cross-sectional study was conducted among a convenient sample of 492 patients visiting dental hospital in Gurugram city. Tobacco dependence was assessed using the modified fagerstrom test for nicotine dependence (FTND) scale. A Carbon monoxide (CO) breath analyzer was used to assess the amount of CO in

the breath in parts per million with a range from 0-100.

Results: The mean age of the participants was 37.03 ± 13.81 ranging from 18 to 80 years. The mean CO levels were 15.70±6.628ppm. The regular smokers showed maximum value of 16.71±6.545, followed by occasional and non-smokers.

Conclusions: The result of the present study showed that the exhaled CO level had a significant moderate correlation with self-reported nicotine dependence. It may serve as a more objective method to detect tobacco use and confirm the utility of biochemical verification across different diagnostic modalities.

Knowledge attitude and practice regarding Tobacco cessation services among adults (18-35 years) in India

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Background: Tobacco smoking is a known cause of high mortality across the globe. Quitting smoking early can reduce morbidity remarkably. Tobacco cessation services (TCSs) help to reduce smoking addiction which consequently lowers tobacco-related diseases and deaths. Very few studies estimated the knowledge attitude and practice about TCSs in India.

Methods: A cross-sectional study was conducted to estimate the prevalence of smoking along with knowledge attitude and practice about TCSs among adults (n=383) aged 18-35 years in India. A Pre-tested structured questionnaire on Open Data Kit (ODK) was used to capture information on demography, smoking and smoking cessation services. Descriptive analysis was performed to describe all the information.

Results: Mean age of respondents was 25.3 years (SD 4.0). Prevalence of smokers (current and past) was 24.8% with higher prevalence in males (37.1%) compared to females (9.8%). Knowledge about TCSs was relatively fair for Nicotine replacement therapy (NRT) (71.5%) and tobacco de-addiction counselling (63.7%) as compared to Tobacco cessation toll-free number (32.4%), de-addiction medicines (44.4%) and centres (41.8%). Attitude towards availability of TCSs was positive (77.7%). However, respondents consider TCSs to be insufficient (15.5%), ineffective (47.1%), expensive (23.8%) and hard to access (28.7%). Although 71% thought to quit smoking in past one year but due to lack of knowledge, practice towards TCSs were found to be low. Noteworthy factors to quit smoking were will/self-motivation, health concerns, social factors, expense on the cigarette. The potential barrier to quit smoking were smoking routine and emotional trigger.

Conclusions: Knowledge about TCSs was low except NRT. Majority contemplated TCSs as insufficient, expensive and unapproachable which is why the usage of TCSs remains low. Therefore, it is recommended to focus on promotional activities and create awareness of TCSs effectiveness to quit tobacco.

Knowledge, attitude, behaviour and prevalence of tobacco use among medical and dental students in Eastern part of Odisha

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Background: Tobacco use and attitude towards tobacco control among health professional students is of paramount importance considering their vital role in tobacco cessation. In this context this study was carried out to assess the knowledge, attitude, behavior and prevalence of tobacco use among medical and dental students in Bhubaneswar, Odisha.

Methods: A cross-sectional study was carried out in two medical and two dental colleges in Bhubaneswar, Odisha. About 400 students (female 223) of 3rd year medical and dental courses participated in the study. The Global Health Professional Students Survey (GHPSS) questionnaire was used to collect self-reported tobacco related data. The data was analyzed using R package.

Results: The participant health professional students were in the age group of 19 and 25 years. The prevalence of current smokers among the respondents was 15.8% (95% CI: 12%-16%). Among the students, 36.3% had ever smoked a cigarette even one or two puffs. 2.8% had smoked their first cigarette at the age of 10 or younger. There were more numbers of smokers among men as compared to women (24.3% versus 9%). About 86.3% of the students stated they had received lessons on the risks associated with smoking during their curriculum course. Around 85.5% students agreed that tobacco sales to adolescents should be completely banned. Among the current smokers, 81% want to stop smoking cigarettes now. About 88.8% suggested health professional can be role model for tobacco users in advising to quit tobacco.

Conclusion: Despite of use of tobacco among medical and dental students, majority students has positive attitude in tobacco cessation. The study

findings warrant immediate interventions to empower medical and dental students with capacity building in tobacco control and tobacco cessation interventions.

Prevalence of Tobacco among adults in rural Warangal

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Background: Tobacco use is a major risk factor for many chronic diseases, including cancer, lung disease, cardiovascular disease and stroke. It is one of the major causes of death and disease in India and accounts for nearly 1.35 million deaths every year. This study aims at finding the prevalence of tobacco among adults and the demographic features of the people living in rural Warangal.

Methods: A cross-sectional study was conducted in rural field practice area of Kakatiya medical college among adults above 18 years of age. Institutional ethical committee approval and consent of the study participant was obtained. A semi-structured questionnaire was used to obtain data. The sample size was calculated by taking prevalence p as 29% as per GATS 16-17 and precision of error as 5%. 317 participants were recruited by simple random sampling. The data collected was uploaded into Microsoft excel and exported to SPSS V 20 for analysis.

Results: 53.8% to 25-54 years. 90% of the participants were males and 10% were females. 43.8% of the participants were illiterate, 61% of the participants were self-employed, 13.8% were students. 35% (32.5% of males and 2.5% females) of participants used tobacco. Of the participants who use tobacco: 42.8% of initiated tobacco between the ages 20-29. 53.5% were illiterate. 64.3% used smokable tobacco, 28.5% used chewable tobacco and 7.1% use both. Reason for initiation among 32% was curiosity, 25% stress and 17.5% peer pressure. 14.2% had family history of tobacco use. 58.8% were asked to quit smoking by a healthcare worker. 78.5% said that they attempted to quit tobacco in the past but failed.

Conclusions: A multi-pronged approach is needed to control tobacco use among young adults in the form of health education about hazards of smoking and information about de-addiction centers for the proper implementation of anti-tobacco policies.

Prevalence of tobacco consumption among adolescents in India: A systematic review and Metanalysis

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Background: Tobacco use is one of the leading preventable causes of morbidity and mortality. Tobacco use usually starts in adolescence and continues into adult life; effect of tobacco consumption can be seen later in life. This systematic review and meta-analysis aimed to assess the pooled prevalence of tobacco consumption among adolescents in East India.

Methods: We systematically searched 3 databases PUBMED, Science direct and Mendeley for original studies published between January 2011 to December 2021 only in English language. All primary studies that reported prevalence of tobacco consumption in children were included. Study extraction and quality assessment were conducted independently by 3 reviewers using a standardised data extraction and quality appraisal form. A weighted inverse-variance random-effects model was used to estimate the prevalence of current cigarette smoking. Funnel plot were used to check publication bias.

Results: Total of 25 studies were reviewed. The prevalence of tobacco consumption among school-going adolescents ranged from 2.2% to 48.8%. The common risk factor for tobacco usage among school-going adolescents was found to be peer pressure. Parents' smoking behavior, family conflict, stress, and curiosity were also found to be additional risk factors.

Conclusions: High prevalence of tobacco consumption among adolescents was found in India. This review recommends a need for formulating sale prevention policies, strict tobacco control policies at school premises and establishing antismoking campaigners designed for school-going adolescents.

Smokeless and flavored smokeless tobacco epidemic in India and Bangladesh

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Background: To estimate the burden of flavored smokeless tobacco use in India and Bangladesh.

Methods: Flavored smokeless tobacco was identified from the publicly available adult tobacco survey data. Operationally, any additional ingredient (except slaked lime) that alters or modifies the taste of plain tobacco was considered as flavored one. The data was analyzed using SPSS and weighted prevalence estimates were reported.

Results: Use of Smokeless tobacco in India and Bangladesh were 24.1% (95% CI: 21.7-26.8) and

27.2% (95% CI: 25.5-29.1) respectively. Prevalence of flavored smokeless tobacco use in India and Bangladesh were 17.2% (95% CI: 14.3-20.1) and 27.3% (95% CI: 24.4-30.2) respectively. Gutkha (8%) and betel quid (7%) were commonly used flavored smokeless tobacco products in India, while Zarda (18%) and amp; Betel quid tobacco (10%) were commonly used flavored smokeless tobacco in Bangladesh.

Conclusions: Almost all smokeless tobacco products are flavored one in Bangladesh and more than two-third smokeless tobacco products are flavored in India. As tobacco cessation is difficult when flavoured tobacco products are used, tobacco epidemic may be aggravated in India and Bangladesh. Hence policy makers should take appropriate action to curb smokeless tobacco.

Tobacco use surveillance among dentists based on WHO-MPOWER strategies

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Background: India has the highest rates of oral cancer due to high prevalence of tobacco use. Literature showed that there is inadequate perceptions related to harmful effects of tobacco among dentists. Hence this study aimed to assess the tobacco use surveillance among dentists based on the WHO-MPOWER strategies.

Methods: A rapid need assessment survey using a cross sectional study design was conducted among dentists working in a tertiary care hospital of Mangalore, South India. Ethical clearance was obtained from the Institutional Ethics Committee. After obtaining informed consent the questionnaires were distributed to 120 dentists. The data was collected for a period of 1 month. The questionnaire consisted of 19 questions based on WHO-MPOWER strategies. A total of 90 questionnaires were returned which was statistically analysed using SPSS version 16.

Results: Among the 90 dentists, 95% of them were aware that tobacco consumption is harmful for health. Cigarettes (33.3%)were more commonly used compared to other tobacco products. 23.3% of them have tried quitting smoking in the past 12 months.75% of them had seen the dangers of smoking in the newspapers and television. 15.6% had people who smoked inside the house and 27.8% people had people smoking in their working area. 15.6% led them to quit smoking after seeing the warning labels on cigarette packs.

Conclusions: The study concludes that the majority of the dentists use smoked form of tobacco compared to smokeless forms. Hence more efforts need to be made to assess them in becoming tobacco free role models so that they can be supporters to promote smoke free work places and environment. They can add their voice and weight to tobacco control efforts like tax increase campaigns and involve themselves in prom.

Validity of self-reported smoking cessation with carbon monoxide cut-off point - A systematic review and meta-analysis of diagnostic test accuracy studies

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Background: Exhaled breath CO is an indicator for smoking cessation. Breath analyser is a device used to validate the self-reported smoking abstinence of an individual. Focused Question-At what breath analyzer carbon monoxide cut-off point among smokers can self-reported smoking cessation be validated for various devices?

Methods: The studies eligible were, diagnostic tests from 1980-August 2020 which were published. Databases like PubMed, Google Scholar, Hinari, IndMED, Cochrane and EBSCO were searched. Articles with only true positives(TP) and negatives(TN),false positives(FP) and negatives(FN) were included and data extraction was carried out on customized excel sheet and sensitivity, specificity, positive predictive value, negative predictive value was calculated using C. I. Calculator: Diagnostic Statistics. Meta-DiSC® version 1.4 was used for meta-analysis and QUADAS 2 tool was used to assess the quality of the included studies. Studies included were reviewed independently by three authors and the relevant data was extracted.

Results: The systematic review of 22 manuscripts of diagnostic test was carried out, 10 were considered for meta-analysis. Data was summarised for cut-off of 0-6 ppm and 7-10 ppm for various exhaled breath carbon monoxide values. A meta-analysis of 3 pooled studies at 7-10 ppm using piCO+ smokerlyser device and any of the Bedfont devices gave Sensitivity of 93% (CI-90-95), PPV-95 and Specificity of 87% (CI-81-92), NPV-80. On combining all device's and cut-off range from 2ppm-10ppm, the self-reported abstinence is validated by Vitalograph Inc., at around 9-10 ppm.

Conclusions: The self-reported smoking abstinence as reported by the Bedfont CO monitor was validated at cut-off 6-›7 ppm and above with Sensitivity 93% & Specificity of 87%. From cut off of 2-6ppm to ›6-›7ppm there was a jump of 8% for Sensitivity and Specificity.

Baseline results from a longitudinal study of adolescent Tobacco use in India

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Background: A cohort of early adolescents has been established in India to study tobacco use initiation in the context of family and community environmental factors.

Methods: A multi-stage sampling household survey (n=1982, 2018-19 baseline) is underway in Kolkata and Mumbai involving young adolescents (12–14 years old) and their main caregivers. Respondents complete four annual questionnaires about tobacco use and individual, family and community risk and protective factors. Sampling weights were used to increase representativeness.

Results: The baseline adolescent sample was 50% female, 92% lived with married caregivers, 15% had fathers with post high-school education and 73% lived in households with monthly income of < 15,000 INR. Adolescent tobacco use was rare (0.6% ever tried and 0.2% past 30-day use), but risk factors for future use included: intention to use tobacco (8%), peer tobacco use (37%: 33% Mumbai, 45% Kolkata, $p<0.05$), easy tobacco access (18%), and parent tobacco use (9% mothers and 34% fathers). Adolescents reported talking to parents about harms of tobacco use (30%: 34% Mumbai, 21% Kolkata, $p<0.05$). Weekly secondhand smoke exposure was low in homes (16%: 7% Mumbai, 34% Kolkata, $p<0.001$) but higher outside homes (52%: 32% Mumbai, 91% Kolkata, $p<0.001$). As to community factors, adolescents reported seeing tobacco ads near home (26%: 17% Mumbai, 45% Kolkata, $p<0.001$) and school (22%: 13% Mumbai, 40% Kolkata, $p<0.001$) and reported 'a lot' of tobacco retailers near home and school (17% and 14%, respectively).

Conclusions: Because the adolescent respondents were young, tobacco use rates were vanishingly low. Kolkata adolescents reported more peer use, secondhand smoke exposure and presence of tobacco ads, putting them at higher risk of future use compared to Mumbai adolescents. Longitudinal associations between multilevel factors and adolescent tobacco use initiation will be examined using the follow-up data.

Understanding politics of tobacco in India through two decades of parliamentary interactions

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Background: India faces the difficult challenge of balancing strong tobacco-control regulations to protect the public health while being home to a profitable tobacco industry. This dynamic illustrates the complexities around tobacco regulation. As the parliament keeps the government accountable, we analysed tobacco-related questions to map the varied concerns of parliamentarians. This work is part of an ongoing research initiative to better understand the political economy of tobacco control in India.

Methods: Transcripts were sourced from the electronic archives of both the Loksabha and the Rajyasabha of India. The keyword "tobacco" was used to identify questions about tobacco from 1999 to 2019. The retrieved documents were managed and analysed using NVivo software. We conducted content analysis, where our coding was guided by the research question "varying concerns of parliamentarians around tobacco" and themes were identified and refined iteratively.

Results: 729 unique parliamentarians asked 1315 questions about tobacco. From our analysis, we illustrate the varying concerns around tobacco as the questions emerged from competing interests around issues of health, commerce, labour, and agriculture. Over the two decades, the focus of the questions shifted from trade to health concerns, consistent with the introduction of various tobacco control regulations in India. We also found important state-level differences in the number and nature of the questions, with a majority from tobacco producing and manufacturing states.

Conclusions: We show that parliamentary questions can be an important tool in studying health policies and understanding health as a political process. This study empirically demonstrates how regulatory measures around tobacco in India are multi-institutional and are a result of negotiations of legitimate, competing interests.

Implementation' of tobacco control policies in LMICs – A realist synthesis to explain the process and its facilitators and barriers?

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Background: There has been a growing interest around implementation and unpacking the 'black-box' of how things work over the last few years. Policies are complex in their design and implementation because of the number of interacting agents, the environment and forces that influence in a given system. There is a dearth of research informing policy implementation but theory-driven inquiry is now considered to be a promising alternative. It is important to systematically understand how and why implementation.

Methods: A realist synthesis is being conducted to find the facilitators and barriers of implementation of select TCPs in low and middle income country settings. An initial framework of how COTPA implementation works was developed on the basis of review of program documents, scoping of relevant scientific literature and inputs from stakeholders working with implementers of COTPA. The realist synthesis will be using sources such as program documents, parliamentary questions and debates, program reports, departmental reviews/reports, minutes of meetings, scientific peer reviewed articles from select databases, media, websites, social media and snowballing to other relevant grey and unpublished literature.

Results: Implementation research and health policy analysis are scarcely applied in many low-and middle-income country settings. By the end of this realist synthesis we aim to develop theories explaining the facilitators and barriers of implementation of select TCPs in India.

Conclusions: COTPA which was enacted in 2003 in the next three years would be completing 20 years in existence. Such a critical policy review after nearly two decades of a law being in existence is a timely intervention to bolster our efforts in tackling the socio-economic burden of tobacco related illnesses.

Tobacco industry interference index: Assessing the implementation of article 5.3 FCTC in India for the year 2019

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Background: This study aims to assess the implementation of Article 5.3 of FCTC in India during the year 2019.

Methods: Using SEATCA's TII Index, this paper describes and quantifies the extent to which the Tobacco Industry has sought to influence the circuits of policy making and implementation, specifically in the context of health, but also in agriculture, trade and commerce. A detailed search was conducted of media reports during the year 2019, industry and government documents, websites, and press releases were collated and analyzed. We also consulted several national and state level tobacco control practitioners/advocates seeking their inputs.

Results: While we are in an advance stage of finalizing the incidents and their scoring in order to develop an overall score for the Index, we, for now, provide narrative insights on major issues concerning article-5.3 that we found so far (1) There were a high number of letters, proposals, and appeals that were made to the central and state governments by tobacco and industry bodies arguing for a reconsideration on the ban of ENDS products. However, the government did not accept any of such recommendations. (2) A number of Government-Tobacco Industry partnerships for developmental activities were found. There were also instances of various tobacco industries engaging in CSR that directly fit into the welfare policies of the government. (3) In terms of non-CSR interactions, partnerships, and collaborations between the tobacco industry and government: (a) the tobacco industry is closely involved with the state's anti-smuggling imperatives and implementation drives. (b) the ways in which the t.

Conclusions: A nation-wide policy in line with the FCTC article 5.3 is need of an hour to prevent tobacco industry interference in public policy and implementation concerning tobacco.

Prohibition of e-cigarettes in India: A multicentric retailer storefront compliance assessment

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Background: This study aimed to assess the availability of retailer storefronts that continued to sell electronic nicotine/non-nicotine delivery systems (ENDS/ENNDS) in India, and characterise such retailers following the promulgation of 2019 Indian Ordinance and Act (Ordinance/Act) that prohibit ENDS/ENNDS nationwide.

Methods: Discreet observations were conducted of retailer storefronts across different socioeconomic zones in nine major cities of India (Bengaluru, Chandigarh, Dehradun, Delhi, Indore, Kolkata, Ludhiana, Raipur, and Ranchi) from 28 November

2019 to 22 January 2020 to identify the availability of ENDS/ENNDS (i. e. electronic cigarettes, e-cigarette liquid, e-cigarette accessories, heated tobacco products (HTPs), and HTPs accessories). We report the number and proportion (%) of retailers that sold ENDS/ENNDS. Other characteristics of the retailers are also described, including indirect evaluation of the retailer's awareness of the Ordinance/Act.

Results: Of the 199 retailer storefronts visited, 37 (18.6%) sold ENDS/ENNDS and, therefore, did not comply with the Ordinance/Act. The highest availability of non-compliant retailers was in Kolkata (n=26; 83.9%). The majority of the non-compliant retailers were tobacco retailers (n=35; 94.6%), sold e-cigarettes (n=22; 59.5%), and e-cigarette accessories (n=24; 64.9%). Although many of the non-compliant retailers displayed their ENDS/ENNDS products (n=33; 89.2%) and did not feature health warnings related to ENDS/ENNDS (n=32; 86.5%) in the stores, nearly 90% (n=33) were aware of the Ordinance/Act.

Conclusions: Despite a nationwide prohibition, ENDS/ENNDS are still available in major cities in India, and concentrated in a particular city. Indian authorities should focus on law enforcement to ensure that the prohibition is effectively implemented.

Awareness and current use of electronic cigarettes in India: Findings from 2016–2017 global adult tobacco survey

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Background: Tobacco control efforts are being influenced with the increase in use of electronic cigarettes (e-cigarettes) and other electronic nicotine delivery systems. Although evidence has shown increase in awareness and use of electronic cigarette (e-cigarette) in high income countries but less is known about middle and low income countries.

Methods: Nationally representative household survey data of 74037 respondents from Global Adult Tobacco Survey, India (2016-17) was analyzed. The prevalence of e-cigarette awareness; its current use and 95% confidence intervals were calculated. Binomial logistic regression analysis was conducted and prevalence ratios (with 95% CI) were calculated.

Results: Awareness (OR= 2.07; 95% CI= 1.90-2.24) and use (OR=3.11; 95% CI= 1.19-8.11) of e-cigarettes was higher among males. Awareness levels reduced with increasing age. The use of e-cigarettes among the current tobacco smokers was significantly higher (OR= 11.02; 95% CI= 5.15-23.58). The awareness and use of e-cigarettes was higher in the respondents belonging to highest wealth quintile.

Conclusions: The awareness and use of e-cigarettes was higher among males, young adults and smokers. The males, young adults and heavy smokers should be specifically targeted by information and education campaigns. Thus, worksites and universities are potential areas for health promotion, specifically tobacco cessation. Future research should also attempt to gather information regarding intensity of e-cigarette.

Strategic and contested use of food laws to ban smokeless tobacco products in India: A qualitative analysis of litigation

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Background: Unlike other parts of the world, India's tobacco consumption pattern is dominated by the use of smokeless – mainly chewing – tobacco (SLT). Available in multiple forms and defined by the geographies that consume them. SLTs – often with disparate compositions – posit innumerable (public) health implications, necessitating a comprehensive regulatory framework. In an attempt to ameliorate the health effects, states have strategically used food laws to devise a multipronged governance structure to c.

Methods: This study identified the two prominent food laws: PFA 1954 and FSSA 2006 used to regulate SLT in India. Using the Indian legal database: Manupatra, we devised a systematic search technique to generate cases adjudicated by state high courts and the Supreme Court of India after independence. Additionally, to ensure that we were able to review orders that may not have been documented by Manupatra, we complemented our search by consulting with tobacco control experts. We then dissected each case into petitioners and their claims, respondents and their responses, the reasoning adopted by the court, and the outcome of the judgments. Following this, each section was thematically analyzed.

Results: The study identifies the manner in which laws peripheral and sometimes unrelated to tobacco (control) are tactically leveraged by states to immobilize the Industry's power complex.

Conclusions: Understanding the intersection of food laws and tobacco control via litigations is imperative to comprehend the working of laws beyond the bare

text. And, more importantly this interrogation helps map the loopholes in the legal framework that the Industry uses to destabilize policy.

Prevalence of tobacco use and level of knowledge about the harmful effects of tobacco among medical graduates, postgraduates, and faculty of a tertiary health care center: A cross-sectional study.

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Background: The global tobacco epidemic is among a public health threat that world is facing. In India, nearly 1 million people die from tobacco-related deaths every year. Recent surveys show that prevalence of tobacco use among youth and health care professional students is increasing, and prevalence of bidis and smokeless products is also high. The present study is designed to assess the prevalence of tobacco use among undergraduates, post graduates and faculty of AIIMS Rishikesh.

Methods: A cross-sectional study was conducted among 225 participants in which undergraduate students (121) (medical and nursing), postgraduate students (61), and faculty members (43) of AIIMS Rishikesh were involved. The mean age of study participant was 26.8 ± 8.04 years. Study was conducted by interviewing the study participants using a pretested, semi structured questionnaire after the informed consent was taken.

Results: Overall prevalence of tobacco use among healthcare professional was 21.33%. Out of total Under Graduates students, 11.25% MBBS, 2.43% Nursing students have ever tried tobacco use while 29.5% Post Graduate students have reported that they have ever tried tobacco. Moreover, it was observed that 46.5% of Faculty have also ever used tobacco.

Conclusions: The study reflects the worrying situation and requires health professionals who are role models for social health to take urgent anti-tobacco and cessation measures. The perceptions on the role of doctors in controlling smoking in the future are promising. This finding may be of great significance to the strict implementation and monitoring of smoking-related regulations.

RAPID FIRE ORAL PRESENTATION

How effective is tobacco vendor licensing system - A case study from West Bengal

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Background: The rampant point of sale advertisements of tobacco products, presence of tobacco sellers within 100 yards of educational institutions are regarded as major issues in West Bengal. However, the State Government had issued orders for tobacco vendor licensing in urban areas of Bengal in 2017. Against this, 10 district level orders were also issued whereas 8 Municipalities including Kalimpong Municipality adopted the Tobacco Vendor Licensing.

Methods: A tobacco vendor enumeration survey was conducted in Kalimpong in August-September 2018 by using a pre-tested interview schedule. Municipality provided the detailed map and on the basis of that all the wards were visited by the trained investigators. On the basis of the tobacco vendor licensing system establishment orders were issued by Kalimpong Municipality and public notification has been done in the month of January 2020. And after that MANT conducted another rapid survey to see the changes in violation and ascertain the number of traders.

Results: There were 243 tobacco vendors in Kalimpong in 2018 and out of that 27 were within 100 yards of the educational institutions. None of the vendors displayed signage, violating the COTPA Section 6a. However, none of the shops had outdoor or indoor advertisements of tobacco products. Approximately half (41.15%) of the vendors declined any sale of tobacco products to the minors within the last month. Results from the rapid survey showed that 20 shops within 100 yards of educational institutions have not been selling tobacco products any more. Around only 5 shops were seen in which tobacco products were being sold by minors as against 19 shops found earlier.

Conclusion: TVL is an effective implementation tool to deal with the supply side of tobacco problem in our country. It would be helpful implementing tobacco control act in our country.

Tobacco cessation intervention in community setting-experience from a Northern State of India

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Background: 38 million of the world's 56 million deaths are accounted to Non Communicable Diseases (NCDs) with tobacco use as a major preventable and modifiable behavioral risk factor for NCDs. The objective of this presentation is to share an experience of undertaking tobacco cessation intervention at NCD clinics from a northern state of India.

Methods: A cross sectional study was undertaken among 1172 patients attending two NCD clinics at district level to ascertain the tobacco use among them. Thereafter, a tobacco cessation intervention package was developed in consultation with stakeholders and experts. Afterwards the perceived feasibility of implementation was assessed through in depth interviews. We conducted 5-6 IDI's with each category of stakeholders using a semi structured IDI guide and carried out until no new responses emerged.

Results: Overall current tobacco use in any form was reported to be 10.2%. The intervention package developed comprised of a booklet for Health Care Providers at NCD clinic, disease specific pamphlets (for patients), stage of behaviour change specific short text messages in vernacular language. Then feasibility was assessed under three domains i. e., adaptability, practicality, and integration. Under adaptability individual level and structural level factors such as provision of regular training's, performance based incentives emerged while under practicality various favourable factors along with barriers surfaced on existing health care landscape. Barriers ranged from lack of adequate IEC material, non availability of separate counselling room at the level of HCPs while lack of health literacy, lack of willingness to quit emerged among tobacco users.

Conclusion: Tobacco use among the NCD clinic attendees predisposes them to develop grave complications. Implementation of effective patient centric, disease specific, tobacco cessation services at NCD clinic, might prove to be an efficient measure in

reducing complications of NCDs among patients using tobacco. The stakeholders suggested strengthening individual and structural level factors.

Which group of tobacco cessation intervention works: Results of systematic review and network meta-analysis

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Background: Despite substantial progress in tobacco control in the last two decades, there is limited literature on the most effective tobacco cessation behavioral intervention. This network meta-analysis will compare various behavior change intervention for tobacco cessation and attempt to rank them to identify the best approach for cessation.

Methods: We conducted a systematic review and network meta-analysis to assess the effectiveness of various modes of behavioral intervention for tobacco cessation. The network meta-analysis included randomized controlled trials on behavior change for tobacco cessation. The PICOS framework was used while selecting the studies from various established scientific databases viz. Pubmed, Scopus, Embase, and other sources including Clinicaltrial. gov. The outcome of interest for this review was sustained or point prevalence tobacco abstinence at 6 months and 12 months. To graphically depict and document the studies Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines along with PRISMA Network Meta-Analysis extension statement was used.

Results: Using search strategy in different databases 2384 searches were identified after the duplication removal. After title, abstract and full text screening 45 studies met the inclusion criteria for inclusion in the systematic review and network meta-analysis. Data were pooled across studies for direct comparisons using random-effects models. Network meta-analysis was used to generate the indirect comparisons. Individual counselling in combination of other intervention was almost found to the most effective intervention while self-help material and usual care were among the least effective with the lowest rank when compared at different time period.

Conclusion: The network meta-analysis provided the rankings of behavior change interventions and thus determined the most and least effective modality for tobacco cessation. The analysis not only provided the information at different time period but also with different combination for selecting the priority cessation intervention.

Prevalence and dependency of tobacco use among a particularly vulnerable tribal group in Kendujhar district, Odisha: a cross sectional study

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Background: Odisha occupies a unique place in the tribal map of the country having largest number of tribal communities (62 tribes) with a population of 4.19 crores. Government of India has classified and declared certain tribal groups as Particularly Vulnerable Tribal Groups (PVTGs) based on their low level of literacy, pre-agricultural level of technology and declining population. The focus of the present study is to determine prevalence and dependency with tobacco use among a PVTG in Kendujhar district.

Methods: The present study was a cross sectional which was done in Kendujhar district, Odisha. Oral health status of the study population was analysed using WHO Oral Health Assessment Form, 1997-modified. Tobacco dependence was analysed by Fagerstrom Nicotine dependency scale. Descriptive statistics and Chi square tests were done to establish the distribution and association of the variables, respectively.

Results: Results revealed that 45.4% were using tobacco, among them 90.7% were using smokeless (chewable) tobacco, 2.8 % were using smoking tobacco and 6.5% were using both. Among the tobacco users, 15.18% were in the age group of 115 years, 53.04% of them were 16-34 years old, 61.29% of them were 35-65 years old and 72% were above 65 years old. Gender distribution of tobacco users revealed that 92.2% of them were males and 7.8% were females and hence tobacco usage was more among males as compared to females.

Conclusion: The study population was characterised by high prevalence of tobacco use (smokeless and smoked) and associated tobacco product consumption by the younger population which is an issue of significant concern. The tribal population have very limited access to all the services as compared to their counterparts and it's our duty to educate them and create an insight about the ill effects of tobacco use.

Smokeless tobacco use in Asian countries and risk of periodontal diseases - A systematic review

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Background: Studies have reported association between smokeless tobacco (SLT) consumption and severity of periodontal diseases. Systematic reviews done on studies of US and European origin found limited evidence to support this association. The type of SLT consumed by population of Asian countries is different from US and Europe. Therefore a systematic review was conducted to analyse the available evidence on association between SLT consumed in Asian countries and risk of periodontal diseases.

Methods: Protocol of this review is registered with PROPSERO (Reg. no. CRD42019122964). A systematic search among prominent electronic databases was conducted to identify studies (of any design) comparing the periodontal status of SLT users with its non-users. Screening of titles and abstracts, full text reading, quality assessment and data extraction from eligible studies was done by two investigators independently and in duplicate. The New castle-Ottawa scale was used for risk of bias (quality) assessment.

Results: A total of 407 citations were imported into covidence software. After removal of duplicates (n=38), remaining 369 title and abstracts were screened based on pre-decided eligibility criteria. Finally, 90 studies were shortlisted for full text reading, of which 36 were found eligible for qualitative analysis. Most of these studies were conducted in India (n= 23) and Pakistan (n=7), were of cross-sectional design (n=31), utilized purposive sampling (n=28) and done on hospital-based population (n=25). Very few of them (n=9) had mentioned criteria for diagnosing periodontal diseases. Only 13(37.1%) studies achieved a score of more than 50% (5/10 stars) on quality assessment scale. Most of the included studies (n=33) reported higher scores or Odds for various periodontal diseases parameters among SLT users in comparison to non-users.

Conclusion: Current available evidence suggests SLT users have poorer periodontal health in comparison to non-users. However, longitudinal studies with rigorous methodology are required to support this elucidation.

Factors that influence initiation of smoking in adolescents: A cross-sectional study

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Background: Smoking is the most important preventable cause of death. According to the global youth tobacco survey (GYTS) presented by WHO, 25% of smokers smoked their rst cigarette before the age of 10, hence it is of great importance to investigate the effect of smoking of family members, friends and celebrity on smoking initiation of adolescents.

Methods: A descriptive cross sectional study was taken in school going adolescents of Kashmir. The list of private schools one middle school, one high school and one higher secondary school (All having co-education) were selected. Thus, a total of 27 schools, 9 from each selected district, were included in the study. A total of 1000 students participated in this study.

Results: 74.14% reported smoking by family members as did 69.21% of non-smokers. 72.41% of smokers reported smoking by close friends in contrast to only 24.63% of non-smokers and this difference was found to be statistically highly significant (P value< 0.001). 79.31% of smokers and 71.97% of non-smokers reported noticing celebrities smoking on TV/movies/shows/advertisements etc. Overall 50.80% of the participants had faced exposure to SHS.74.14% reported smoking by family members as did 69.21% of non-smokers. 72.41% of smokers reported smoking by close friends in contrast to only 24.63% of non-smokers and this difference was found to be statistically highly significant (P value< 0.001). 79.31% of smokers and 71.97% of non-smokers reported noticing celebrities smoking on TV/movies/shows/advertisements etc. Overall 50.80% of the participants had faced exposure to SHS.

Conclusion: Media, peer influence and second hand smoke exposure were the most important factors influencing smoking initiation and were common to all ethnic groups in the study. Interventions combining targeted public awareness, education, and media campaigns directed at parents/guardians should be investigated.

Prevalence of tobacco use among pregnant women of district Nuh, Haryana

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Background: Tobacco use during pregnancy increases the risk of various health problems for both pregnant women as well as developing babies

Maternal cigarette smoking is associated with increased risks for ectopic pregnancy, premature rupture of membranes, abruptio placentae, placenta previa, miscarriage, stillbirth, preterm birth, low birth weight, small for gestational age, and congenital anomalies. In addition to directly affecting the health of women and children, tobacco use also has indirect effects o.

Methods: A cross-sectional study was done among pregnant women attending antenatal OPD in the Nuh district of Haryana. Data was collected by interviewing 150 pregnant women about use of tobacco products during pregnancy.

Results: Among pregnant women 8.6% were using tobacco products during pregnancy. Of the total tobacco users nearly 70% were smoking either Biri or hukkah while others 30% were chewing tobacco in form of paan masala or paan etc.

Conclusion: Tobacco use during pregnancy is quite high is this part of Haryana in comparison to rest of the state. Various methods need to be applied to decrease the use of tobacco during pregnancy.

Missing data analysis of a randomized controlled effectiveness trial on nicotine replacement therapy for cessation of smoking among tuberculosis patients

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Background: Randomized controlled trials are the gold standard of intervention research in epidemiology. However, these trials are not devoid of missing trial participants during the study for reasons beyond the control of researchers. These missing data hamper the validity of studies conducted on intention to treat principle. Participants with missing data are a non-random group that increase the risk of biased estimates of treatment effects.

Methods: The analysis intends to impute the missing data in the randomized controlled trial conducted between the year 2018 and 2020 to determine the effectiveness of nicotine replacement therapy on smoking cessation of tuberculosis patients in Dakshina Kannada district of Karnataka. Missing data of the predictors such as smoking frequency, urine cotinine test result, Fagerstorm score, and exhaled carbon monoxide were subjected to Little's MCAR test to determine the pattern of missing data. Multiple imputation was done using SPSS 21 version to generate the missing values. These imputed data will be expressed in descriptive statistics in the study results as tables and graphs.

Results: Seventy nine out of 300 trial participants were missing at the end of six months of the study. Little's MCAR test conducted on the predictors of the study trial revealed that the data were missing completely at random. Hence the data were processed for multiple imputation. The smoking cessation outcomes before imputation were: continued use (12%), reduced use (34.66%), quit (26.34%), relapse (0.66%), and loss to follow up/missing (26.34%). Following multiple imputation, continued use, reduced use, quit, relapse, and loss to follow up were 17.66%, 46.34%, 31.66%, 4.34%, and 0% respectively.

Conclusion: Multiple imputation of the missing data improves the validity and sensitivity of the randomized trials with missing data.

Awareness about anti-smoking laws among health care workers in North Kashmir

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Background: Tobacco is one the leading causes of mortality after cardiovascular diseases and accidents globally. India is the second largest in terms of population as well as production of tobacco globally In India tobacco accounts for nearly one and a half million deaths annually. Tobacco related morbidity in India is a serious public health challenge resulting in economic loss in addition to mortality. World health organization has adopted the Framework Convention on Tobacco Control (FCTC), and India is a.

Methods: The cross-sectional study was done in block Tangmarg of North Kashmir in district Baramullah. All health workers (doctors, paramedical staff, Class IV and clerical staff) were included in study. After obtaining verbal consent the data was collected using a pre-structured and pretested questionnaire. The Data was entered in Microsoft Excel and analysed by Epi Info 7 Software. The frequencies were expressed as percentages.

Results: A total of 275 participants were enrolled in study. The awareness regarding COTPA is very low. Only 5% partcipants had heard about COTPA.68% partcipants were aware about prohibition of smoking at public places but only 20% among those knew about public places.48% participants were aware about smoking at public places being penalized,38% particpants were aware about prohibition of sale of tobacco to minors and only 2% were aware that adverstising about tobacco is not allowed.

Conclusion: Students and teachers are important stakeholders and can deliver messages through such festivals and events platforms.

Prevalence of tobacco imagery among the series in over-the-top media services available in India-Preliminary report of a cross-sectional study

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Background: To protect adolescents and young adults from exposure to tobacco imagery which may encourage them to use tobacco and related products, the Government of India has notified the Tobacco-free Film and TV Rules under COTPA 2003. In recent years, OTT media platforms such as Amazon Prime, Netflix and Hotstar are rapidly becoming popular in India which is included under COTPA. This study aimed to find out the Prevalence of tobacco imagery in OTT media web series available in India.

Methods: This is a cross-sectional study approved by Institute ethical committee approval. The investigators selected 50 popular episodes from popular OTT media available in India. A structured observational checklist was used to assess the actual use, implied use, tobacco paraphernalia and brand appearance and disclaimer. Data was entered in Excel and the analysis was done using Epi-info.

Results: Out of the 50 episodes screened, the majority (92%) classified as suitable for more than 16 years old Category. Around 68% episodes have at least one tobacco imagery among which the most common was actual tobacco use (56%) followed by implied use (40%). Static warning disclaimers were present in approximately 20 % of episodes and none of episodes had audiovisual disclaimers. The static warning disclaimers were displayed during actual use only but not during the implied use.

Conclusion: This study shows prevalence of tobacco imagery in web series available in over-the-top (OTT media service) was around 70%. This results shows an appropriate policy change is the need of time to protect adolescents and young adults from exposure to tobacco imagery.

Prevalence of consumption of smokeless tobacco and exposure to second hand smoke among women of rural Warangal, Telangana

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Background: Tobacco kills approximately 1 million people annually in India and is responsible for almost half of all cancers in men and quarter of all cancers in women. Smokeless Tobacco (SLT) is one such form that is culturally and socially acceptable by women especially in rural India. The objectives of the study is; 1. To estimate the prevalence of SLT consumption among women 2. To estimate the prevalence of exposure to second hand smoke at home 3. To determine the factors associated with SLT consumption.

Methods: A cross sectional study was done among women more than 15yrs of age in the rural field practice area of Kakatiya medical college, Warangal, Telangana. Using simple random sampling technique, 190 women were included after calculating the sample size using EPI-INFO. A semi structured questionnaire was prepared with the help of Global Adult Tobacco Survey questionnaire. The data was analyzed using EPI-INFO.

Results: Prevalence of smokeless tobacco consumption was 57% and the most common form of tobacco being consumed was tobacco with pan (40.3%). The prevalence of exposure to second hand smoke at home was 61% irrespective of their smoking habits.

Conclusion: The prevalence of smokeless tobacco consumption is higher among women in this study and this indicates the lack of awareness and the need for better strategies to reduce the burden.

Gendered prevalence and access to cigarette by minor: evidence from global youth tobacco survey, 83 countries, 2013 to 2016

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Background: Article 16 of Framework Convention on Tobacco Control (WHO-FCTC) prohibiting the sale of tobacco to and by minors is a proven strategy to reduce adolescent smoking. In this context, this study examines minor's access to cigarette in 83 countries using Global Youth Tobacco Survey (GYTS) data.

Methods: Gender stratified analysis of GYTS data (2013-2016) was done and access to cigarette among minors (13-15 years) were estimated and compared with FCTC Article 16 implementation in the country.

Results: Use of cigarette among male youths(range:41.5-100%) was higher than female(Range:0-58%) counterparts in all countries except Belarus, Bulgaria, Italy, Mozambique, Tokelau, and Uruguay. Relatively higher male and

female prevalence was noted in SEAR region and AMERICAN region respectively. Shops/vendors/kiosks were the major (>50%) source of cigarette for both males and females in all countries. The cigarette vending machine was used 19 countries. Prominent gender disparity in supplying cigarette across all except 12 countries was observed. About 72 and 53 countries had implemented FCTC-Article-16 and banned use of vending machine respectively.

Conclusion: Cigarette use by minor and access to minor is universal and gendered contextually. Contextual and gender specific strategy to reduce minor use and access to cigarette should be given priority.

Research trends and hotspots of tobacco research in India: A bibliometric analysis

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Background: The tobacco consumption is a threat to public health which kills more than 7 million people globally. The present study aimed to provide comprehensive detail of published literature on tobacco and cigarettes to plan further research activities.

Methods: We have retrieved research articles and reviews related to tobacco and cigarettes from the SCOPUS database published till 31st July 2021. The search was applied to the "title" of published studies. Studies conducted in the context of humans within fixed research areas were included. The synonymous keywords were removed, and the details about authors, institutes, journals and papers were analysed based on citations. The analysis was conducted using VoS Viewer version 1.6.16.

Results: The search identified 2436 research papers which include 2284 original articles and 151 reviews. The highest number of publications was in the year 2020. Tata Memorial Centre, Mumbai, was the highest cited institute, and The Lancet was the highest impact journal based on citations and publications. Based on keywords analysis, we found that studies based on tobacco use, smoking cessation, policy development, adverse effects, and awareness need to be developed further for research.

Conclusion: This study provided a comprehensive overview of tobacco-related publications and identified research hotspots in India. The study will help researchers and policymakers to focus on recently developed research areas.

Tobacco consumption amongst university students of India: A systematic review

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Background: India has the world's largest youth population and experiences a high burden of disease especially cancers and mortality from tobacco use which leads to subsequent addiction. Considering the enormous health complications associated with tobacco, it is important to understand factors leading to its use and plan strategies to reduce it. This review article assesses patterns of tobacco use in India, its prevalence in University Students, factors for its initiation and suggestions for its prevention.

Methods: A systematic literature search was carried out on PubMed and Google Scholar for publications between 2010 and 2020. Predecided search terms and inclusion/exclusion criteria was used. Data was absorbed from the studies in consideration and was thereafter reviewed.

Results: This review included 1944 university students across India. There were 1072 males (55.2%) and 872 females (44.8%). A total of 467 respondents (24%) consumed tobacco. Most of the study subjects consumed tobacco in smoking form-311 (15.9%) and few consumed smokeless tobacco-156 (8.1%). The findings showed more incidence of tobacco consumption in male students than the female students and was significantly associated ($p<0.05$) with having a family member or friend addicted to smoking. Some students indulged in smoking because of peer pressure or for enjoyment/ fun. This is the preliminary result after analyzing 4 studies.

Conclusion: This study will help policy makers, public health professionals, government and voluntary organizations realize the need to strengthen the national tobacco control efforts. There is an alarming need for regular and systematic education programs and counseling sessions to students about the risk factors of tobacco consumption which could help in its elimination.

Impact of tobacco use on oral health and TAC among traffic and crime law enforcement personnel of India

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Background: Occupational environment plays an important role among police personnel who are exposed to newer lifestyles, stressful working conditions, adverse habits, dietary changes which can have an effect on oral health. Aim of the study was to assess and compare the dental caries, periodontal status and Total Antioxidant Capacity (TAC) of saliva among the Traffic and Crime Personnel in Mangalore city, India.

Methods: A cross sectional study was conducted among police personnel at police quarters and police stations from March 2013 to August 2015. Ethical approval and informed consent was obtained prior to the start. Pilot study was conducted to calculate sample size. Study proforma was used to record clinical data and sociodemographic details and saliva was collected for TAC analysis. SPSS was used for statistical analysis.

Results: Mean age of police personnel was 38.84years and 89% of them were males. 35.27% of them had completed undergraduation and 73.29% of them were constables. 37.2% and 28.8% of them were using tobacco products and consumed alcohol respectively. Smokeless form was common among crime (53.5%) and smoked form was common among the traffic police personnel (52.2%). Prevalence of oral mucosal conditions was higher in tobacco users than non users ($p< 0.05$). TAC was lower in traffic personnel than crime ($p< 0.05$). When occupational stress increases, oxidative stress increases, increases in reactive oxygen species (ROS), thus decreasing TAC. Several studies have reported psychological stress inducing production of ROS.

Conclusion: Prevalence of oral diseases was high in police personnel. Tobacco used was prevalent among 37.33% of them and prevalence of oral mucosal lesions was 3.77%. Sample size was less to generalize results and further studies should be conducted to assess role of stress and other factors among police personnel. Oral health education and treatment programs should be conducted to meet the unmet needs.

Cigarette smoking is an antagonist of male fertility? India based review

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Background: According to the WHO, approximately 8% of couples globally and 10% to 15% of couples in industrialized nations encounter infertility, out of which 30% to 35% cases call for male infertility. In this study we aim to review the potential effects of cigarette smoking on male infertility including sperm count and semen quality in India and to find out the earliest defect of sperm quality considered to be the diagnostic of infertility.

Methods: Online database PubMed was explored for appropriate English publications from 2007 to 2020 applying predetermined search terms and inclusion/ exclusion criteria. Data was drawn from studies included and reviewed.

Results: 4 studies with a total number of 827 infertile male participants [481(58.2%) smokers and 346(41.8%) non-smokers] were included. Asthenozoospermia and teratozoospemia were more significantly associated with smoking as compared to oligozoospermia. Normozoospermia was hardly seen in the smokers. Among 4 studies reviewed so far, 3 of them showed dominance of asthenozoospermia.

Conclusion: Cigarette smoke appeared to contribute significantly towards male infertility. Also, asthenozoospermia observed to be the "earliest" defect of sperm quality, as seen by its dominance over other defects.

Are slums more vulnerable to tobacco and alcohol use: A cross sectional study from Indian mega cities

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Background: Evidences on prevalence and determinants of alcohol and tobacco use in the cities along with residential segregation of slum and non-slum is quite limited, which may not generalized to national and sub-national level. Therefore, this study explore the in-depth understanding of prevalence and predictors of alcohol, smoked and smokeless tobacco among male and female in slum and non-slums of Indian megacities.

Methods: Using the sub-samples from eight mega-cities of India, namely Mumbai, Delhi, Kolkata, Chennai, Hyderabad, Indore, Meerut and Nagpur, from National Family Health Survey (NFHS) conducted in 2015-2016, three outcomes were assessed: smoked tobacco, smokeless tobacco and alcohol. Predictors of the outcomes for sub-groups of population were calculated by performing univariate and multivariate logistic regression.

Results: Results suggest that the incidence of "slum versus non-slum" were clearly visible in selected eight

cities, especially in case of women. The consumption of smokeless and smoked tobacco among women residing in slums were almost double as compare to women residing in non-slum areas of the cities. Age was significantly associated with tobacco consumption. Moreover, a strong and direct evidence on socio-economic gradients; the worse off population in terms of education and occupation status are at greater risk of consuming all kind of substance use among men and women in both slum and non-slums. Additionally, the probability of consuming these substances were more prominent in slum areas and especially when we compare the women population. Slums of Nagpur, Kolkata, and Indore have quite high probability to consume both tobacco and alcohol.

Conclusion: Our study shows the potential importance for discussion and deliberation in order to achieve 'healthy and sustainable city' through addressing the ''causes of the causes'' of disease around the social determinants of health including urbanization, occupation, residential segregation along with other socio-economic and demographic attributes in city context.

A systematic review on tobacco consumption during pregnancy and it's adverse pregnancy outcomes

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Background: Exposure to tobacco smoke is harmful due to toxic effects of carbon monoxide, nicotine, and metals present in it. Maternal smoking is known to pose risks to both baby and mother. This study aims to collate available evidence on the association between maternal smoking and its adverse pregnancy outcomes.

Methods: A systematic literature search was performed in PubMed and Google Scholar for appropriate English publications from 2005 to 2020 using predetermined search terms and inclusion/exclusion criteria. Data was drawn from studies included and reviewed.

Results: 6 studies (3 from India and 3 from other countries), with a total number of 2691 expected mothers [848(31.51%) smokers and 1843(68.48%) non-smokers] were included. Maternal age ranges from 15-45 years. Majority of tobacco users reside in rural area, less education level, housewives and from low family income. Out of 6 studies, 4 studies had sample size 2498, out of which 754(30.25%) were tobacco users, whereas 2 studies had sample size 199, where 94(47.23%) were cigarette smokers. This review reported that tobacco consumption in any form leads to adverse birth outcomes. Low child birth weight and still birth were more significantly associated ($p<0.05$) with maternal smoking as compared to preterm birth, iron deficiency and birth defects. Among 6 studies, 4 studies showed dominance of low birth weight.

Conclusion: Maternal tobacco use in any form increases risk of ill effects on mother and child health. Tobacco cessation during pregnancy is necessary to reduce morbidity and mortality related to tobacco use.

Tobacco use and oral mucosal changes among women beedi rollers

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Background: Beedi rolling is a major occupation in Mangalore for a lot of women, who form the root of the industry. Since they do not make use of any protective wear, they get exposed to unburnt tobacco mainly through the cutaneous and nasopharyngeal routes. The aim of this study was to assess the tobacco use, oral mucosal conditions and dysplastic changes in the Buccal mucosa of women beedi rollers of Mangalore.

Methods: The study subjects comprised of 328 women beedi rollers. After obtaining informed consent, the subjects were examined and data related to oral mucosal condition was recorded using WHO Oral Health Assessment Proforma. Data was also obtained regarding the number and duration of Beedi Rolling and their Tobacco habits. Exfoliated cells were obtained for cytology from the Buccal mucosa and the material obtained was smeared on to the clean glass slide and stained using Papanicolaou Stain for assessment of dysplastic changes.

Results: Mean age of the participants was 42.46 years and 19.2% were smokeless tobacco users. Oral mucosal conditions were present among 3% of Beedi rollers. On Cytological examination, mild dysplasia was observed among 31.8% of the participants.

Conclusion: The prevalence of Oral mucosal conditions and dysplasia were higher among Beedi rollers with Smokeless tobacco habits. The dysplastic changes were also seen in women beedi rollers without tobacco habits. They must be educated on hazards of tobacco. They must be given opportunity for alternative livelihood. They should be advised to use protective wear like mouthmask and gloves during beedi rolling.

Perceptions and practices related to areca-nut use among adolescents in Mumbai - A qualitative study

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Background: Areca-nut has been classified as a carcinogen and is widely consumed in India. It has also been identified as one of the contributory factors for high oral cancer rates. High prevalence of sweetened areca-nut use is reported among school-going adolescents in India. More adolescents using areca-nut are likely to use tobacco in future compared to non-users. A qualitative study was conducted to explore practices and perceptions of school-going adolescents in Mumbai with respect to use of areca-nut.

Methods: In-depth interviews were conducted with 37 students and four FGDS were conducted with 30 students who self-reported current use of any form of areca-nut. They were aged 10-16 years (grades 7-9), selected across 16 municipal schools from different parts of Mumbai.

Results: All participants purchased ready-to-consume, low-priced sachets marketed as flavoured and sweetened areca nut. Areca-nut is most often initiated and used with friends. It is hard to deny when offered by peers. Areca-nut is used to kill boredom and serves as an energy booster while playing sports. Multiple brands of sweetened areca-nut are used simultaneously, at times with other tobacco products. Adolescents contrasted it to more harmful and addictive tobacco products, and perceived it as relatively harmless because of its sweet taste, mint flavours. They believed that supari is easy to quit, unless one is an intense regular user.

Conclusion: The findings have implications for policy-makers and tobacco-prevention and cessation practitioners. Focused areca-nut communication campaigns describing its harms may be required. Government will have to rethink the manner in which it is marketed. Perception of areca-nut as harmless in comparison to the more dangerous tobacco has to be examined in greater detail.

Assessing the tobacco knowledge, attitude and practices of the police officials

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Background: Police department is major enforcer of COTPA 2003 in India. But, available evidence shows rampant tobacco use among police and lack of knowledge about tobacco control law. Salaam Bombay Foundation (SBF) is working with Mumbai Police to sensitize them on tobacco ill-effects, reduce tobacco prevalence and mobilise department for stringent law implementation. In 2019-20 to initiate similar intervention, SBF conducted tobacco knowledge, attitude, practices survey among Navi Mumbai police.

Methods: It was a cross-sectional survey administered to police officials of 10 out of 20 Navi Mumbai police stations. All the police officials present at police stations at the time of morning parade where requested to participate in the survey and those giving consent were included as the participants in the study. Self-administered structured questionnaire uploaded on the tablets was used.

Results: 295 police officials participated in survey. 21% (n=62) were found to be using tobacco. 80% officials knew 'nicotine in tobacco is addictive' (75.8%-users vs 81.1%-non-users). 87% were aware about COTPA 2003. But, only 56% knew fine for smoking in public places is Rs.200/-and 18% were aware that officials above sub-inspector rank can levy this fine. Only 35% perceived that tobacco is difficult to quit. 84% opined that tobacco is harmful to everyone irrespective of age, gender, race, ethnicity etc.

Conclusion: Despite police department being the important stakeholders in tobacco control, there is a rampant use of tobacco among police. Though they are aware about tobacco ill effects and tobacco control law to some extent, continuous advocacy is required to mobilise them for stringent implementation of the law.

Characteristics of tobacco and areca-nut users and non-users: Findings from a school-based survey among adolescents

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Background: 15% of adolescents in India consume some form of tobacco and various studies have demonstrated high prevalence of areca-nut use among them as well. Characteristics of the adolescents who use or do not use these products have to be identified to design policies and programmes for controlling tobacco. We aimed to identify similarities and differences on various factors among students who had never-used tobacco or areca-nut, used tobacco only, areca-nut-only, or used both tobacco and areca-nut.

Methods: A self-administered questionnaire, completed by 1918 students from grades 7, 8 and 9 in 12 schools managed by Mumbai municipal corporation, gathered data on socio-demographic characteristics, tobacco/supari use and tobacco/supari-related knowledge, attitudes and beliefs.

Results: The mean age of the students was 13.42±1.30 years (range 10–18); 49%(n=949) were males; and 48%(n=921) were from the 9th grade, followed by 34% (638) from the 8th and 18%(342) from 7th grade. Five percent of all student participants (n=100) had ever-used tobacco; and 32% (621) reported ever-using supari. Those who used both tobacco and supari were significantly more likely to be male and older in age as compared to those who used tobacco-only or supari-only and they were more likely to think of tobacco use as a cool behavior; one that relieves stress; and that tobacco users have more friends.

Conclusion: There are some clear differences between children who use both tobacco and supari and the rest who use tobacco-only or supari-only or non-users. These factors, along with peer influences, have to be addressed in any prevention or cessation program.

Compliance/non-compliance of section 4, 5, 6a, 6b and 7 of cigarette and other tobacco product act 2003 in India-A systematic review and meta-analysis.

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Background: Information on compliance of Sections of COTPA 2003 was limited hence a systematic review and metaanalysis was carried out with the focused question-Are the States and Union Territories of India compliant/Non – compliant with Section 4, 5, 6a, 6b and 7 of COTPA, 2003.

Methods: Electronic search on various data sources like PubMed, Hinari, Google scholar, EBSCO host, IndMed was done. Observational studies, cross-sectional studies, questionnaire studies, brief reports in English from 2003 to December 2019 were eligible. Retrospective studies, letter to editors were excluded from this review. People in the community, Public places, Tobacco packets, Tobacco vendors, Educational institutes were the participants.

Results: A preliminary search yielded 307 studies. 174 from this was excluded based on screening through titles. 66 were found to be duplicates and thus 67 articles were screened based on abstract. 11 were excluded and 56 full text articles were assessed for eligibility and included in the qualitative and quantitative synthesis. The open metaanalyst software with random effect model was used for metaanalysis.

Conclusion: For section 4, compliance Vs non – compliance was 72% Vs 43%.For section 5 compliance Vs non – compliance was 66% Vs 57%. For section 6a, compliance to tobacco products sold to minors was 41% and sold by minors was 63% while non – compliance to tobacco products sold to minors was 23% and sold by minors was 44%. For section 6b compliance Vs non – compliance was 45% Vs 51%.

Assessment of behavior change in smokeless tobacco users during COVID-19 pandemic

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Background: ICMR has stated that chewing or smokeless tobacco products increase the production of saliva, followed by a very strong urge to spit. Spitting in public places could enhance the spread of COVID-19. The State Government of UP in India has banned the sale of 'paan masala',in view of the raging pandemic. This study aims to assess the change in smokeless tobacco consumption pattern and behaviour of its users due to COVID-19 pandemic.

Methods: A community based cross sectional mixed method study was conducted among 209 smokeless tobacco users. Chi square test was used to compare proportions.

Results: Change in the pattern of consumption during COVID pandemic was observed in terms of product change (0.7%), Brand change(5.9%), Frequency change (75% including both increased and decreased both) and initiating SLT use(1 %).Increased frequency of consumption was found in 20% whereas decreased frequency of consumption was found in 55% of SLT users. Quitting was found in 4.8% of the SLT users. Change in the behaviour pattern in terms of spitting on streets has decreased from 62.4% before COVID pandemic to 37.7% during COVID pandemic by SLT users. Disposal of tobacco remains by SLT users on streets has decreased from 51.2% before COVID pandemic to 32.5% during COVID pandemic.

Conclusion: COVID 19 pandemic had an impact on smokeless tobacco users in terms of consumption and behaviour pattern. Raising awareness in users regarding effect of smokeless tobacco consumption on

COVID-19 is the need of the hour reducing the burden of both COVID-19 as well as tobacco pandemic. Aknowledgement: ASTRA team Dr. AmanjotSingh, Dr. BharadwajP, BhistU, TiwariP, DabiY. AroraI.

A study on prevalence and awareness of health effects of tobacco consumption among medical students: A cross sectional study in South India

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Background: Tobacco consumption is one of the biggest public health threats the world is facing today as it is, the leading cause of illness, impoverishment and kills more than 8 million people each year. While more than 7 million of the deaths are the result of direct tobacco use, around 1.2 million are the result of non-smokers being exposed to second-hand smoke. In India, tobacco kills more than 1 million people each year, accounting for 9.5% of all deaths, and many of these deaths occur among people.

Methods: A non-randomized, cross sectional study was conducted in a Medical College in Mangaluru (Karnataka) over a period of six months from 01 July 2018 to 31 December 2018 which included medical students from first year to third year. A pre-tested, validated questionnaire was used to collect the data by interview method after obtaining ethical clearance from the Institutional ethical committee.

Results: A total of 404 medical students were enrolled in the study. The study brought out a prevalence of smoking to be 15.9% among male and 5.3% among female students among first years, 21.0% among male and 5.3% among female students among second years while the prevalence among third year students was found to be 24.6% among male and 9.2% among female students. The study further brought out that 79.9% of students among first years, 82.3% among second years and 93.7 % among third years were aware of ill health effects of tobacco. Interestingly, 100% smokers expressed the desire to quit smoking and to be educated of the process to be followed to so.

Conclusion: The study brings out a need for inclusion of a structured teaching programme for our medical students on harmful effects of tobacco use and its cessation techniques.

Awareness about COTPA and pictorial warnings on tobacco products among general population in Dakshina Kannada District

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Background: Tobacco use is a major public health problem in India. According to the National Family Health Survey in India, over half of men and over one tenth of women in the age group of 15–49 years use tobacco in some form. The Indian Parliament enacted the Cigarettes and Other Tobacco Products Act (COTPA) on May 18, 2003. The aim of this study is to assess the Awareness about COTPA and Pictorial warnings on tobacco products among general population in Dakshina Kannada District.

Methods: A cross sectional questionnaire study was conducted among the general population. The questions consisted of two parts. In the first part participants were asked to enter basic demographic details and second part related to participant's knowledge and awareness towards COTPA and Pictorial warnings on tobacco products. The questions were circulated through Google forms among those gave consent.

Results: A total of 249 people participated in the survey. Only 25.2 % of people use any type of tobacco products. 86.2% used tobacco in smoked form. 94.3% were aware about the COTPA Law. But 19.4% of them were unaware of the penalty for violation of the law. 76% noticed anti-tobacco messages through Mobile/Internet. According to 78.9%, warning labels on the tobacco packages will have a negative impact on the general public who smokes while 61.1% assumed these warnings will enable people to quit.

Conclusion: The COTPA act has been able to have a greater impact on the society. Most of the participants had awareness and had an overall positive attitude towards Act. Yet nearly half of the participants opined that these warnings won't enable people to quit tobacco. Hence the Act should be implemented in true spirit so as to prevent the population from falling victims to the Tobacco epidemic.

Assessing the level of nicotine dependence in smokers visiting a dental college in Belgaum city: A questionnaire study

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Background: To estimate the level of nicotine dependence in a group of smokers by using six-question Fagerstrom Test for Nicotine dependence (FTND). 1) To assess the level of nicotine dependence. 2) To evaluate the level of nicotine dependence with duration of the habit.

Methods: The total sample size of the above study includes 130 patients. The age groups ranged between 16-60 years were selected. Six-questions from Fagerstrom Test for Nicotine dependence (FTND) were used to elicit the nicotine dependence. The study group included tobacco users with only smoking habit and excluded the subjects not willing to participate and also smokers who are also tobacco chewers. All the results were transferred onto Microsoft excel sheet and evaluated statistically by using Chi-square test.

Results: Depending upon the age of the smokers, 4 grouping was done as follows. The number of individuals in study participation noticed between 21-30 years were 101 smokers (77.69%). With least noticed in >40 years age group 6 (4.6%). Frequency of smoking ranging between <5day to >10 |day, no of smokers, with frequency of <5 |day were more 91 (70%), followed by 6-10 |day among 31 (23.85%) of them, with frequency of >10 |day in 8 (6.15%) individuals. Duration of smoking mentioned in number of years ranging from <5 years to >10 years. Highest no. of smokers that is 105 (80.77%) were smoking <5 years with least number of smokers 5 (3.85%) smoking from last 10 years. Determines type of nicotine dependence, ranging from mild to severe variant. Majority of Nicotine dependence was mild noticed among 86 (66.15%). Smokers with least numbers noticed as severe nicotine dependence among 6 (4.62%) smokers. Association of duration of smoking with dependence statistical significance noticed. Statistical sign.

Conclusion: Short study reveals the type of nicotine dependence, ranging from mild to severe by six-question Fagerstrom Test for Nicotine dependence (FTND) based on duration & frequency of smoking.

Impact of larger pictorial health warnings on smokers in India: Findings from the 2011 to 2019 tobacco control policy surveys

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Background: Studies show that larger pictorial health warnings (PHWs) on tobacco packs are more effective than smaller warnings. In 2016, India's PHWs on tobacco packs were enlarged to 85% (25% text/60% picture). New images were introduced in September 2018. This study examines the impact of larger PHWs on cigarette and bidis smokers approximately 3 years after they were first implemented.

Methods: Data were from Tobacco Control Policy (TCP) India Surveys (n=3775, adult (18+) smokers who participated at least one wave) conducted in 2010-11, 2012-13, and 2018-19. GEE regression models with weights were used to estimate health warning measures and test changes over time, adjusted by sex, age, smoking frequency, state, urban/rural and time in sample.

Results: There was strong, but no change in awareness of PHWs between 2012-13 (96% cig; 81% bidi) and 2018-19 (99% cig, 74% bidi). Compared to 2012-13, more smokers reported that PHWs made them more likely to quit in 2018-19 (24% vs 9% cigarettes, $p<0.01$; 21% vs 6% bidis, $p<0.01$). Compared to 2012-13, there were no changes in smokers' noticing PHWs (61% cigarette; 61% bidi in 2018-19), looking at/reading PHWs (13% cigarette; 10% bidi), and avoiding PHWs (22% cigarette, 25% bidi). In 2018-19, fewer smokers reported forgoing smoking a cigarette (16% vs 39%; $p<0.001$) and forgoing bidis (13% vs 32%, $p<0.001$) because of PHWs. The majority of cigarette smokers (77% in 2018-19) last purchased loose/single cigarettes.

Conclusion: India's PHWs are among the world's largest and increased smokers' reporting that the warnings made them more likely to quit. High prevalence of purchasing single cigarettes presents an opportunity to strengthen implementation. Strong implementation of this ban in India would remove a PWH implementation loophole and increase smokers' exposure to PHWs.

Tobacco smoking and its association with hypertension in rural Rohtak, Haryana

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Background: Cardiovascular diseases is one of the leading causes of morbidity and mortality worldwide. Hypertension and tobacco smoking are two modifiable risk factors. The prevalence of tobacco smoking in rural Haryana as per NFHS-4 data was 39.7% in males and 1.6% in females. The current student aims to find the prevalence of hypertension and tobacco smoking in rural Haryana and their association for better control and management of cardiovascular comorbidities.

Methods: community based cross-sectional study was conducted on 800 volunteering adults residing in Chiri block (rural Haryana) field practice area of Department of Community Medicine, Pt. B. D. Sharma PGIMS Rohtak.50 volunteering adults were selected from each of 16 subcenters, information

about tobacco use was collected using a pretested interview schedule, blood pressure was measured as categorized as per American Heart Association (AHA) guidelines.

Results: Out of the 800 participants, 40.1% of the interviewed subjects were male and 59.9% were female. Majority, 30.3 % of the participants were in the 18-28 age group, followed by 29-38(26.9%). Age groups 39-48 years (18.6%) and 49-58 years (17.6%), had similar participation only 6.6% in 59-68 years age group. The mean age of participants was 37.49±12.592. 16.1% of the participants were engaged in some form of tobacco smoking and 30.9% of the individuals were hypertensives as per AHA guidelines. There was significant association between tobacco smoking and hypertension ($\chi 2$=18.135 df=3 p<0.05).

Conclusion: Hypertension & Tobacco smoking is a precursor for other serious cardiovascular comorbidities. Presence of both in the same population increases the risk of disease and hence adding to the morbidity burden. Targeted interventions to ensure compliance to anti-hypertensive medications and policy changes to reduce access to tobacco and related products are needed for better control of hypertension.

Second and Thirdhand smoke exposure among rural women: A public health challenge

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Background: Tobacco kills upto half of its regular users. Exposure to Secondhand Smoke and Third hand Smoke (SHS, THS) leads to added morbidity among pregnant women and children. Women are exposed to smoke more at home. Studies have shown that the use of tobacco is higher in rural areas. In this context, this study examines the awareness regarding SHS and THS exposure among rural women.

Methods: A community based cross sectional study was carried out among rural women in a rural area of Mangalore, India. Women who have children and who are exposed to tobacco smoke at home were eligible to participate in the study. A pretested structured questionnaire was used to collect data on sociodemographic characteristics, awareness regarding Secondhand and Thirdhand smoke exposure, measures taken and the reasons that made it difficult to have a smoke free home environment was also explored.

Results: A total of 753 women participated in the study.72.5%of them were exposed to Secondhand smoke at home. A total of 67.3% of them believed that Secondhand Smoke exposure was harmful to children. Only 12.74%of them were aware that particles can remain in a room for days. 77.42% of them wanted a legislation to be passed for a smoke free community.23.37% of them responded that they donot allow anyone to smoke near them or their children.

Conclusion: The study reveals that the awareness regarding ill effects of thirdhand Smoke was less when compared to secondhand Smoke. Low level of education and literacy on health matters is a key problem in rural India. Hence it is essential to educate the whole family and a multisectorial intervention involving Primary health care providers, policy makers and social scientist could play a critical role.

Technology-based tobacco cessation training in Indian context

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Background: Treatment gap for tobacco use disorders (TUDs) is high. Training health professionals can reduce treatment gap and bring attitudinal change. Technology-based training can be useful in training large numbers. Objective of this study is to assess the practices and determine the change in knowledge and attitude among health professionals following an online training program (OTP). We hypothesized that OTP would improve the knowledge and change the attitude of health professionals related to TUDs.

Methods: A half-day OTP on tobacco cessation was conducted on 31 May 2021. Google Forms based pre-OTP and post-OTP survey was done. A semi-structured questionnaire, developed based on knowledge, attitude and practices, was used. R-software was used for paired t-test analysis.

Results: Among 650 health professionals registered across India, 328 attended and 293 completed both surveys. Among them were, 189 medical professionals, 48 dental professionals, 4 AYUSH practitioners, 52 nurses and social workers. Majority were male (57.6% (169)). Knowledge assessed at the end of OTP was higher (Mean of Difference (MOD)=-0.32) but found statistically insignificant (p=1.2). Compared to pre-OTP, post-OTP scores in attitudes did not change significantly for the responsibility domain, in both individual (MOD=-0.37, p=6.2) and life circumstances (MOD=-0.003, p=0.9). Post-OTP,

they felt less angry and disappointed towards tobacco users (MOD= 0.21, p=0.0007). Further, they felt more sympathetic and concerned (MOD=-0.22, p=0.0005); and acknowledged tobacco-users deserve the same medical care as non-users (MOD=-0.177, p=0.001). In practices, a greater number of health professionals asked and advised about the tobacco use.

Conclusion: Technology based training program can result in attitudinal changes towards tobacco users. The translation of such changes into real-life clinical practices needs to be explored.

Smokeless tobacco use and public health nutrition: A global systematic review

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Background: Smokeless Tobacco (SLT) consumption among low and middle-income countries where food security remains a challenge poses several concerns. Adverse health impacts of SLT including oral cancer, cardiovascular and reproductive morbidities are well known but no attempts have been made to understand the SLT linkages with food insecurity and nutrition.

Methods: Systematic review of articles extracted from PubMed and Scopus from January 2000 to December 2020 Included studies that demonstrated the relationship between SLT and nutrition-related factors i. e., body mass index, malnutrition, anemia, poor birth outcomes, and metabolic disorders. Total number of 41 studies were finally used in the systematic review, which included Cross-Sectional (31), Cohort (3), and Review papers (7).

Results: SLT use has a huge impact on body weight, though mixed results have been obtained on either decrease or increase in body weight. The differences in the food consumption pattern among the SLT and non-SLT users highlight the urgent need to address the diet intervention in concert with SLT consumption. Alteration in taste, oral poor health, and low consumption of fruits and vegetables associated with SLT use can be attributed to malnutrition. Maternal use of SLT in various forms not only leads to anemia but also hampers birth outcomes. Increased risk of metabolic syndrome and gallstone disease is also well documented.

Conclusion: Review affirms that Smokeless tobacco compounds the food insecurity issue and together they contribute to the major public health concerns. Inclusion of SLT is crucial in the context of food security and nutritional interventions in LICs and LMICs. The nexus between tobacco and poverty presents a unique opportunity for policy makers to emphasize on tobacco cessation for tackling malnutrition.

Tobacco turmoil in teens and preparedness of pediatric dentists: A global survey

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Background: Tobacco use amongst adolescents causes significant health problems affecting almost all the organs and significant effect on normal growth and development. Smoker adolescents are also more prone to oral health problems than non-smokers. Pediatric dentists can play a significant role in providing tobacco cessation counselling to adolescents.

Methods: A cross sectional online survey with convenience sampling was planned to assess the knowledge, perceptions, training and practices of paediatric dentists across the globe in dealing with tobacco menace amongst adolescents. Survey was done through a self-administered questionnaire in the form of an online google form. The study population consisted of the paediatric dentists attending International Academy of Pediatric Dentistry (IAPD) virtual conference, 2021.

Results: Out of a total of 1564 participants targeted, 235 answered the survey with the response rate of 15.02%. Attending tobacco cessation intervention (p<-0.001) and training in post-graduation on tobacco cessation (p<-0.002) showed significant association with favourable practices scores. However, in perceptions domain age in years (p<-0.043), country of residence (continent, p<-0.001) was found to be significantly associated along with attending tobacco cessation intervention (p<0.001) and training in post-graduation (p<0.001).

Conclusion: The results of the study emphasize the need for recommendations for educating pediatric dentists by inclusion of tobacco cessation interventions in core curriculum, continuing dental education programs and promoting professional responsibility to help achieve tobacco free youth all across the globe.

Exploring barriers and challenges in tobacco research among adolescents in academic institutions: Qualitative study among teachers and students in schools of India

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Background: Educational institutions provide important settings for tobacco control interventions. However, tobacco-related issues remain neglected due to their absence in school curriculum. This study is panned to understand the dynamics in research among youth and the confounding factors in the process of conducting the research from the perspective of students and teachers.

Methods: Cross sectional qualitative study was planned in eight schools selected by purposive sampling. In depth interviews were conducted for 30 teachers involved in conducting tobacco related study with students and four FGDs were conducted among students. Inductive analysis of the qualitative data was done with grounded theory-based analysis in which repeating themes were identified, grouping the codes were grouped into concepts hierarchically and then categorization of the concepts was done through relationship.

Results: The teachers involved in conducting study related to tobacco focused on administrative challenges from school authorities and refraining attitude of parents especially for their girl child. Students were totally aware of tobacco products and were in favour of conducting tobacco related studies in schools. They suggested innovative ideas regarding study settings, method of conducting tobacco studies and agreed to be messengers of tobacco free initiatives in community. Three perspectives of teachers, parents and students were evolved for tobacco related study which will be help in improving further research.

Conclusion: Behavioural research on attitudes, perceptions and beliefs regarding tobacco-related issues among youth, their parents as well as their teachers in schools are helpful to design appropriate research, strategies and contents for tobacco education. Community approaches incorporating behavioural change communication aimed at reducing tobacco use among youth would be critical.

Prevalence of illicit smokeless tobacco products in the markets of India: Findings from pack analysis

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Background: The presence of illicit trade in SLT can increase its affordability by undercutting already low prices, increased consumption eroding the fiscal revenue of the governments, undermining tobacco control efforts in the process. Hence this study was planned to report the extent and pattern of illicit SLT sales in Delhi, India.

Methods: SLT packs were collected from markets in Delhi and analysed as per tobacco control laws for identifying the hallmarks of illicit products. The operational definition included features contemplated in "Market Retail Price (MRP) Disclosure", "Pictorial Health Warning (PHW) Pertinence", "Appropriate Textual Health Warning (THW)". and "Using Misleading Descriptors (MD)". If a product failed to meet the standard in any one of the mentioned parameters, it was categorized as illicit.

Results: Total 41 SLT packs were analysed for packaging and labelling. Manufacturer particulars were absent in 15% (6/41) packs. 93% (38/41) packs had no information regarding the exact weight per ingredient the manufacturer had used for the product. Considering Textual Health Warning (THW) and Pictorial Health Warning (PHW), in India only 2% (1/41) SLT packs had no THW. Among those that contained THW, 95% (38/41) used national or regional languages. Although the majority of SLT packs contained PHW in India, 9 out of every 10 packs, PHW were not compliant with the required size (should cover 85% or above of pack surface). 92% (38/41) had illegal features and hence the share of illicit SLT products was estimated as 92% in the market concerning specific features such as MRP (2.4%), THW (7.3%), and MD (31.1%).

Conclusion: The poor enforcement of tobacco control policies are weakening the impact of SLT control in India. Standardized rules and guidelines are required for manufacturing and packaging.

Illicit tobacco trade during COVID-19 lockdown

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Background: Tobacco use is a major challenge in reducing the health care burden around the globe. The consumption of tobacco and spitting in public places is a potential threat to increase the COVID-19 transmission in community. Despite the ban on tobacco sale to curb the mass transmission of COVID-19 illegal sale of tobacco was observed in Delhi. Hence, a study was conducted to assess tobacco sale during the COVID-19 pandemic.

Methods: A cross-sectional study was conducted with non-probability convenience sampling method in un-lockdown 1 during June-July 2020 in market areas of East Delhi. 209 adult male smokeless tobacco consumers were interviewed randomly with pre-tested

structured questionnaire. The non-tobacco consumers and smoking tobacco consumers were excluded from the survey.

Results: All 209 subjects confirmed that tobacco was being sold in different stores and at different places despite the ban. 195 subjects confirmed that the price of tobacco products was increased (200%-500%) during lockdown as compared to normal days. 137 bought tobacco from essential daily need stores, 23 bought from a backdoor or window in closed point of sale, 9 bought from other salesman in person, 18 bought from mobile venders, 7 stock up the products in mass from wholesale stores and 15 stopped consumption due to ban.

Conclusion: Majority of users got the tobacco product of their choice despite ban on tobacco sale in Delhi. The customers were willing to compromise on quality of the product and pay extra in order to satisfy the addiction. Due to high demand of tobacco products among its consumers, the price and illicit trade was higher during lockdown.

Is second hand smoke associated with child's nutritional status? A meta-analysis

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Introduction The strong relation between parental smoking, children exposure to Second Hand Smoke (SHS) through parents and child growth has been proven. However, the effect is not well defined. Through this meta-analysis we sought to determine the relationship between SHS exposure and child nutritional status.

Methods A meta-analysis has been performed which included articles between 2005-2019, associated with SHS exposure and child nutritional status which is accessed through child growth outcomes (Stunting, Wasting, Underweight and Obesity). Relevant studies were searched through Medline, PubMed, JStor and Cochrane Library.

Results 17 articles were identified which comprised of various growth outcomes such as overweight, obese, stunting, severe stunting, underweight, severe underweight, wasting and severe wasting. 10 studies showed SHS exposure was highly related to overweight with pooled risk of 0.26 with 95% CI 0.22-0.29 (I^2 = 73.6%). Few studies reported other growth outcomes such as stunting, underweight and obese. Subgroup analysis was done to see risk associated with different growth outcomes.

Conclusion: The current review identified that exposure to SHS may be related to adverse growth outcomes in children. It is crucial that active smokers, specifically people who abide children or with a pregnant partner, are made conscious of the potential effects of SHS exposure on non-smokers. Further studies are needed to determine the impact of SHS exposure with different measures of child nutritional status.

Prevalence and social contextual factors of smokeless tobacco use: Insights from schools of Delhi

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Background: Adolescents are the most vulnerable population to initiate tobacco use along with various other contributing factors. The study aims to determine the burden of smokeless tobacco (SLT) use and to investigate the relationship between socio-demographic characteristics and other factors associated with SLT use among school students.

Methods: A school based cross sectional study was conducted among 714 students from 9th-12th class. Data was collected using a pre-tested modified Global Youth Tobacco Survey (GYTS) questionnaire. Chi square test was used to determine association of socio-demographic factors with SLT use.

Results: Among 714 students, 31.2% students were from 9th class, 30.1% from 10th class, 20.2% from 11th class and 18.5% from 12th class. 85.3% were males, 85.6% were Hindus. Prevalence of SLT use was 11%. The students who were exposed to tobacco (smoked and smokeless form) at school and saw teachers consuming SLT in school premise consumed SLT significantly higher than non-exposed students ($p < 0.0001$, $p = 0.016$). The presence of exposure to tobacco at home and public places was significantly associated with SLT consumption in students ($p=0.03$, $p=0.04$). Consumption of SLT in students who had exposure to tobacco advertisement and promotion via different mode of media such as social media, television, radio, print media was found to be statistically significant ($p=0.04$).

Conclusion: Factors like exposure to tobacco at home, public places, at school and school teachers using SLT, being exposed to tobacco advertisement and promotion via different mode of media were found to be associated with the use of SLT among

students highlighting the need to intensify the activities for identification of vulnerable groups in order to counsel them for prevention and control of tobacco use.

Onset trajectories of tobacco use in India, Pakistan and Bangladesh: A synthetic cohort analysis from Global Adult Tobacco Survey

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Background: Tobacco is a primary contributor to preventable diseases and mortality. Monitoring of tobacco use, especially among youth and children is crucial; risk of health effects are highest among those who start tobacco use early. Recent studies have identified subgroups with propensity to initiate tobacco use. However, literature on age at initiation, especially on smokeless tobacco use, in developing nations remains scarce, despite constituting a disproportionate percentage of global tobacco burden.

Methods: In a first-of-its-kind study, age of initiation of tobacco use (smoked tobacco (ST)/SLT) was analysed from early adolescence to late adulthood across India, Pakistan and Bangladesh using synthetic cohort analysis. Data from the Global Adult Tobacco Survey was utilised to determine pattern of Age of Initiation of tobacco use across six decades. This analysis was conducted across gender (Male/Female), geographical distribution (Rural/Urban), Level of educational attainment and main work status.

Results: In India, in a span of six decades, the percentage of individuals initiating use of ST at the age of <15, has become distressingly five-fold. In Pakistan, 6.32% (95% CI 1.4-24.24) individuals aged ≥75 reported SLT use at <15 years, that number has risen to 11-times at 70.15% (95% CI 49.57-84.89) among those individuals who were between the ages 15-19 at the time of interview. Staggering lowering of age at initiation is observed among women smokers and SLT users, those with no formal schooling and those not engaged in any economic activity such as students.

Conclusion: These figures are a cause for concern and point to the inability of the current tobacco-control strategies in taming this epidemic. This is especially crucial as children and youth are vulnerable to marketing ploys of tobacco companies aimed to increase and sustain consumption. Identification of vulnerable sub-groups will enable effective and judicious use of preventive resources and development.

Identifying policy compliance of tobacco control laws at point of sale and public places across Mumbai and Kolkata

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Background: Point-of-sale (POS) tobacco availability and marketing are related to increased youth susceptibility to tobacco use. The Cigarettes and Other Tobacco Products Act (COTPA) regulates tobacco at POS and public places. Some measures include tobacco advertisements, ban on tobacco sale to minors, vendor location within 100 yards of educational institution, placement of tobacco products near candies or snacks at POS; presence of ashtrays, presence of no-smoking signage at public places.

Methods: This cross-sectional study was conducted across a random sample of 52 communities in Mumbai and Kolkata. All tobacco vendors (n= 4936) and public places (n= 2823) in each community were mapped using Collector on ArcGIS. Public places included educational institutions (n= 255), bus stops (n= 432), and others (n= 2136) like restaurants, restaurants and bars and hospitals. Compliance with COTPA regulations was assessed using a random sample of 1229 of mapped vendors and 937 of mapped public places.

Results: None (>99%) of the tobacco vendors and public places were fully compliant. Of the assessed 1229 tobacco vendors, 12% had more than two entrance ads and presence of one or more non entrance ads. Also, 76.5% of vendors had tobacco products placed near candies or snacks, contrary to COTPA regulation. Of the assessed 937 public places, 67% were non-compliant with "no-smoking" signage. Also, 30% of assessed educational institutions had one or more tobacco vendors present within 100 yards of their campus.

Conclusion: Compliance with COTPA national tobacco control policies at POS and public places was extremely low. Presence of vendors near educational institutions and placement of tobacco products near candies and snacks foods need urgent attention of policy enforcers. Future research could focus on strategies to improve enforcement of existing policies.

Study on knowledge, attitude and practice about the pictorial tobacco product's pack warnings among young adults in India

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Background: According to Canadian Cancer Society, India ranks fifth among the largest pictorial warning on cigarette packs with 85% coverage on both sides. To make people aware of hazardous effects of tobacco products, pictorial health warnings on tobacco products can be very strong and cost effective method. Hence, the objective is to study the knowledge, attitude and practice among young adults concerning Pictorial Health Warnings on tobacco products and its influence on cessation of its consumption.

Methods: A cross-sectional, observational study was conducted on 2nd April and is still going on. Convenience sampling method was used. An electronic semi-structured questionnaire was created on Google docs, with an attached consent form. Participants between 18-35 years of age, understand English and give informed consent were included. Data was analyzed using SPSS Version 23.0 (SPSS Inc., Chicago, IL, USA).

Results: Over 3 weeks, data of 102 participants were collected. Response rate was 98%. After analyzing 100 participants, mean age of participants were 25.58 ± 3.03 years. 98% of the participants have noticed warnings on tobacco products. For 33% of participants pictorial graphics were more understandable. On assessment of knowledge, attitude and practice, it was found that 55% of participants have adequate knowledge regarding pictorial warnings on tobacco products, 52% have positive attitude towards the pictorial warnings and 53% of participants do not practice consumption of any type of tobacco products.

Conclusion: On the basis of data obtained, it is noted that pictorial warnings on tobacco products are impactful yet its effectiveness is uncertain.

A qualitative study exploring perceptions and practices of adolescent E-cigarette users in Mumbai

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Background: E-cigarettes are surging in popularity among Indian adolescents. With a lot of recent evidence on the harmful effects of E-cigarettes and the fact that they have been predicted to lead to initiation of conventional smoked products, the Indian Government has banned production, import and sale of e-cigarettes. However, its use is still reported. This study aimed to build evidence on e-cigarette use by exploring perceptions and practices of adolescent e-cigarette users.

Methods: We did a qualitative study conducting face-to-face in-depth interviews with 23 adolescents (12 boys, 11 girls) who self-reported use of e-cigarette. They were aged 12-16 years (studying in grades 7-9), selected across nine municipal schools in Mumbai.

Results: Adolescents called e-cigarette as "Pen-hookah" as the device looked like a pen. They initiated the use of e-cigarettes because of peers and curiosity regarding the smoke, the electrical device and technology. They continued to use because of availability of varied flavors, ability to release smoke and doing some tricks with it, having fun with friends in groups. Social media played an important role in influencing the students. Students were not sure regarding the nicotine content and harmful effects. Students also reported the availability of the device even after the ban. In comparison with other tobacco products, pen-hookah was rated as less harmful and less addictive.

Conclusion: Strict measures to implement the ban for controlling the use of e-cigarettes, especially by the adolescents are urgently required. Awareness regarding harmful effects of e-cigarettes is required.

Scripting a new chapter in youth epidemics: Pen Hookah

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Background: Electronic nicotine delivery systems (ENDS) are often a controversial product in tobacco control debates. Previous studies suggest that use of ENDS by youth in numerous countries is rampant, however very limited information on use and access is known for the Indian market. Salaam Bombay Foundation (SBF) conducted cross-sectional study among Mumbai youth to assess the prevalence, knowledge and perceptions of youth about e-cigarettes.

Methods: This study was conducted using both quantitative and qualitative survey methods. Close ended self-administered paper and pencil survey was administered to 306 randomly selected youth followed by the personal interviews. The quantitative data was analysed using SPSS and qualitative data was coded and analysed using Microsoft Excel.

Results: 'Pen Hookah' was found to be common term for ENDS devices being sold in Mumbai. Out of 306 respondents 73.2% (n=224) admitted to be

exposed to it. 33.5% (n=75) of exposed reported its ever use. Ever use (n=75) was higher among 20-25 years (52.7%) compared to 16-19 years (46.7%). Out of ever users, 46.3% (n=63) were males and 13.6% (n=12) were females. Only 20% (n=15) ever users of ENDS were current tobacco users. Participants in this survey reported that youth starts using ENDS out of curiosity and gradually turn towards traditional smoking tobacco products. Continued efforts of SBF and like-minded organizations using this data as evidence resulted in Government of India releasing an ordinance in September 2019 banning the country-wide sale of ENDS products.

Conclusion: The study revealed that e-cigarettes are gaining popularity among youth and though they are considered to be the effective harm reduction devices, in reality they act as gateway to tobacco use among youth. Realizing its potential of being gateway and causing health harms, 25 countries have banned or restricted its use.

A comparative study to determine the online sales and availability of ENDS in a South Indian District before and after the National Legislation on ENDS ban

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Background: As we are creating awareness to shun the use of conventional tobacco products, we are facing threat from newer products like ENDS, which are claimed to be less harmful. However, as ENDS has easily executed itself to the rapidly expanding online retail market it is not all that easy for enforcement of the prohibition laws. The present study was carried out to assess the impact of its online sales pre and post legislation in Udupi District that is declared as a high compliance district for COTPA.

Methods: This study was conducted by checking the online sales of ENDS before the national ban with only a state level ban in place and after the National ban came into force. In year 1, we searched for 10 websites and in year 2,we searched for the same websites and also checked if new websites were selling ENDS and their availability in Udupi district. Specific details pertaining to the models were observed.

Results: The search included three type of products namely E cigarette, E liquids and Combo Packs for availability that showed 265 models across 49 brands of E cigarette; 1539 models across 198 brands of E liquids and 100 models across 12 brands of combo packs in year one. Similarly, in year two, 436 models across 104 brands of E cigarette; 1828 models across 195 brands of E liquids and 21 models across 5 brands of combo packs were observed.

Conclusion: Although there has been a drastic decrease in the availability of ENDS from Indian sites from 6 out of 10 websites in year one to 1 out of 10 in year two, the absolute numbers are still high especially on the global front and recommendations from the study can be imperative evidence to policy makers in developing stringent laws for international trade.

Assessment of noxious gases emission from herbal and conventional cigarettes – A comparative study toward health promotion

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Background: Smokers, who wish to stop smoking, are commonly introduced to another equally harmful product called as herbal cigarette, this is being in order to help tobacco addicts to manage with their withdrawal symptoms, these products are presented as safe alternatives. Unfortunately, Herbal and Conventional brands both release noxious gases whose levels are not mentioned on the packaging such as carbon monoxide and nitric oxide. This survey is an attempt to identify the level of these gases among Herb.

Methods: Smoke of seventeen cigarette brands belonging to conventional and herbal cigarette respectively were exposed to the sensor which reports the emission of gases in ppm. This process is being repeated twice in order to reduce the margin of error and eliminate bias. The mean CO and NO values were calculated for all the conventional, herbal cigarette belonging to different length categories of the cigarette.

Results: Herbal cigarettes emitted mean of 5256 ppm and 95 ppm of CO and NO respectively whereas Conventional cigarette reported mean of 4137 ppm and 103 ppm of CO and NO respectively. Maximum CO emission was reported for 80 mm length cigarette with 5469 ppm of CO less than that 5439ppm of mean CO release is for 64 mm. length emitted 4042 ppm, and cigarette of 80 mm length produced 5470 ppm of CO.

Conclusion: The authors conclude that there is no direct association of release of noxious gases with

the length of product, considering the deleterious effects reported by CO and NO on the human body the tobacco companies must be directed to mention the levels of these gases on the packaging. Herbal cigarettes should be validated by a competent authority prior to their use as an alternative to NRT.

Analysis of criminal litigations filled under COTPA-cross sectional study of high court judgements across India

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Background: COTPA Act, criminalizes acts like distribution of cigarettes without the health warning with imprisonment extending to five years (Section 20). There is some documentation of the role of litigations in tobacco control globally, but in India, such documentation is sparse. The aim of the study is to analyse the successful use of COTPA to punish persons accused of flouting tobacco control law by studying the criminal cases filled under the COTPA act and the verdict of High Court (HC) in such case.

Methods: This is a cross sectional descriptive analysis. The Judgments accessed from https://www.scconline.com/. Inclusion criteria-HC judgement having the words "Cigarettes, tobacco, penal, criminal, bail etc" inside their body. Criminal cases filled under other acts (eg-Food Safety and Standards Act) without involving COTPA were excluded. Data was represented as percentage (Qualitative) and Median with IQR (Quantitative).

Results: 17 judgments met the inclusion criteria. The cases included Regular Bail petitions (10, 58.8%), Anticipatory Bail petitions (5, 29.4%), and appeal against conviction (2, 11.7%). The HC decision favoured the accused in 4 cases (bail was granted etc.). Additional Sections of Indian Penal Code (IPC) were levied against accused in all cases. Most cases were from Andra Pradesh HC (4, 23.5%) followed by Bombay HC (3, 17.6%).

Conclusion: The acts criminalized under COTPA are bailable offences. In all the 13 cases where bail was denied it was only on the basis of additional non bailable IPC sections levied against accused. It's possible that in many instances IPC can't be invoked. Therefore it must be re-examined if the offences under COTPA could be amended from being bailable to non bailable to make the act more robust on its own.

Youth vulnerability towards access to cigarettes in seven South-East Asian countries

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Background: Youths are lured to smoking to make them tobacco customers. Limiting access to tobacco products by youths is a proven strategy to reduce youth tobacco use. This study aims to examine the burden of cigarette smoking and access to it by youths in seven South-East Asian (SEA) countries.

Methods: Publicly available Global Youth Tobacco Survey (GYTS) data from seven SEA Region countries-Bangladesh, Bhutan, East Timor, Indonesia, Myanmar, Sri Lanka, and Thailand was analysed. The GYTS recorded response from the 8th-9th grade students during 2013-16 covering 16,547 youths. The burden and physical (methods of obtaining cigarette), financial (cigarette affordability by pocket money), and illegal (sale to minors) access to cigarettes among school-going boys and girls were examined by analysing GYTS data and triangulation with country-specific legal provisions.

Results: The proportion of youths reporting cigarette smoking was highest in East Timor [Boys: 55.57% (51.93-59.21), Girls: 11.35% (9.12-13.59)] and lowest in Sri Lanka [Boys:2.96% (2.91-3.0), Girls:0%]. Smoking prevalence was higher among boys than their girl counterparts and their smoking was positively correlated (r=0.849, p=0.032). The most common method of obtaining cigarettes for boys and girls was 'buying it from a store/kiosk/street hawker' and 'other sources' respectively. Vending machine use to obtain cigarette was limited to East Timor and Indonesia. Except in Indonesia, financial access was limited for the majority of youths to buy a cigarette pack with 20 cigarettes. Financial access had a positive but negligible and insignificant influence on cigarette smoking. Despite legal restrictions on sales to minors, students were able to obtain cigarettes from the vendors.

Conclusion: Contextual cigarette smoking and access to cigarette by youth's despite of legal ban and unaffordability is a concern. Country-specific socio-cultural-economic and legal dimensions need to be examined for limiting cigarette use among youths. GYTS may be routinely implemented to monitor youth tobacco use.

E-POSTER PRESENTATION

Understanding the strategic and contested use of food laws in prohibiting smokeless tobacco products across India

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Background: Unlike other parts of the world, India's tobacco consumption pattern is dominated by the use of smokeless – mainly chewing – tobacco (SLT). Available in multiple forms and defined by the geographies that consume them. SLTs – often with disparate compositions – posit innumerable (public) health implications; necessitating a comprehensive regulatory framework. In an attempt to ameliorate the health effects, states have strategically used food laws to devise a multipronged governance structure to c.

Methods: This study identified the two prominent food laws: PFA 1954 and FSSA 2006 used to regulate SLT in India. Using the Indian legal database: Manupatra, we devised a systematic search technique to generate cases adjudicated by state high courts and the Supreme Court of India after independence. Additionally, to ensure that we were able to review orders that may not have been documented by Manupatra, we complemented our search by consulting with tobacco control experts. We then dissected each case into petitioners and their claims, respondents and their responses, the reasoning adopted by the court, and the outcome of the judgments. Following this, each section was thematically analyzed.

Results: The thematic analysis of claims highlight how the Industry repetitively contests the definition of food to exclude its SLT products from being regulated by food laws; the manner in which they posit disharmony between COTPA and the existing regulations; how they tactically use litigations to challenge the power of state governments issuing the bans under the PFA and the tension between the Centre and state(s) in regulating tobacco.

Conclusion: Understanding the intersection of food laws and tobacco control via litigations is imperative to comprehend the working of laws beyond the bare text. And, more importantly this interrogation helps map the loopholes in the legal framework that the Industry uses to destabilize policy.

Effect of tobacco use on mental health of school-going adolescents around a Tertiary Care Hospital

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Background: The psychological morbidity of adolescent age group can be due to parents' expectations of lofty achievements, academic pressure, peer influences and poor socioeconomic conditions. The adolescents frequently turn to tobacco use as a way of coping, and in turn get stuck in a vicious cycle of deteriorating mental health. Our study aimed to find the mental health status among adolescents studying from 9th to 12th standards nearby a tertiary hospital in Bihar.

Methods: It was an Analytical Cross-sectional study among 360 adolescents aged 13-19 years studying from 9th to 12th standards in 10 high schools around a tertiary hospital in Bihar. Stratified Random Sampling was used with proportional allocation method. The selected students were given Indian Adolescent Health Questionnaire. Mental health status, in the form of Strengths and Difficulties Questionnaire Score was calculated and compared across their history of tobacco use using Independent t-test, ANOVA or Kruskal-Wallis test. Multiple Linear Regression was used to predict the significant factors, and significance level was set at $p<0.1$.

Results: More than a quarter adolescents had non-normal SDQ scores (16-40). 24 (6.7%) had history of tobacco chewing or cigarette smoking at least once ($p<0.001$), whereas 15 (4.2%) had used in the previous month ($p<0.001$). 14% ($p=0.065$) and 26% ($p=0.002$) participants reported that their fathers and their close friends smoked regularly, which were significant predictors in poorer mental health having adjusted R squared value of 8%.

Conclusion: Predicting these factors is important for taking decisions by teachers and school administrators regarding counselling about mental health awareness. Attention and timely intervention needs to be given at this tender age to prevent adoption of risk factors like tobacco usage.

Integrative tobacco cessation: practices and perspectives among health care professional students – A cross sectional study

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Background: Health professionals are not only responsible for primary health care but also need to provide health education regarding tobacco cessation to combat the menace of tobacco epidemic. Hence, the curriculum, awareness & perception of health professional students regarding tobacco cessation are assessed.

Methods: A descriptive, cross sectional, questionnaire study was conducted to include clinical students from Medical, Dental & Ayurveda streams from Tumkur city, Karnataka. Pre tested questions regarding their training, awareness and to check their attitude towards tobacco cessation were included with dichotomous response options.

Results: A total of 219 students participated in the study with mean age 21.79 ± 1.53 years. Medical & dental students (100%) were more aware about tobacco & its adverse effects compared to Ayurveda students, where only few of them had a formal training. Many were willing to undergo the training in all the streams but mentioned lack of time, fear of losing patients if advised, low motivation from patients as major barriers in tobacco cessation.

Conclusion: The effective integration of the course, curriculum & training of all the health professional students regarding integrative tobacco cessation is required to combat the curse of tobacco & assist its users to quit the habit.

Capacity building and empowerment of primary health care workers for a smoke free house initiative

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Background: Second hand smoke (SHS) is an important component of maternal and child health. Though Government of India has prohibited smoking in public places, the compliance is inadequate. SHS exposure also occurs at home. Health care providers were involved as they play key role because of high public contact. Their small step, by starting this initiative in their homes can help them in tackling larger tasks as opportunity arises.

Methods: The present study targeted primary health care workers of Mangalore. It was conducted as follows: Phase I: Ethical clearance and Informed consent was obtained. Baseline data regarding their awareness on SHS was obtained. Focus group discussions were conducted, rationale for developing smoke free homes was explained and videos were projected. It was emphasized that the initiative will focus on encouraging smokers to smoke outside their house. Phase II: After six months data related to initiatives taken and reasons for failure was collected. Smoke free home sticker was distributed to smoke free homes. The event was publicized.

Results: Total of 1048 Primary Health care workers participated. Secondary education was completed by 63.16%. A total of 91.79% and 83.39% of them agreed that SHS is harmful to children and pregnant ladies respectively. Convincing their spouse to smoke outside their house, by counselling was the initiative taken. Only 32.81% agreed that they have made their house smoke free. The reason given for failure was that the women's opinion was disregarded and lack of awareness of the men regarding SHS.

Conclusion: The present study revealed that majority of them were aware of the harmful effects of SHS. The major limitation of the study was not including their family. This would have further emphasized that it is a combined effort to be taken. However comprehensive tobacco control measures with counselling, targeting behavioral changes would have given greater impact.

A Study on tobacco addiction and knowledge among government and private university students of Delhi, NCR

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Background: Tobacco consumption in any form is the second major cause of death all over the globe. Cigarette smoking among college students is a critical public health problem. Adolescents and college going students are the most vulnerable group that develop this bad habit of tobacco consumption. Preventing tobacco consumption and awareness generation through health education among them would contribute to the prevention of cancer, lung diseases, and chronic obstructive pulmonary disease (COPD).

Methods: A cross-sectional study was conducted among 219 participants using the Global Adult

Tobacco Survey (GATS) questionnaire among Government and Private University Students containing 6 sections and a total of 23 questions. It is a global standard for systematically monitoring adult tobacco use (smoking and smokeless) and tracking key tobacco control indicators. The study is still going on.

Results: Out of 219 data collected so far 57.5% of males and 39.7% of females responded to the survey. 47.9% of participants were smoking tobacco users. 42.9% of participants were smokers from Private Universities and 57.1% of participants were smokers from Government Universities. 57.1% of participants smoke tobacco on daily basis. 4.1% of participants were smokeless tobacco users. 79.5% of participants were aware about second hand smoking. 90.4% of participants were aware about the harmful effects of tobacco consumption.

Conclusion: Continuous health education about harmful effects of tobacco consumption and its cessation is necessary to increase awareness among young adults. Health intervention programs specifically targeted to university students are important to prevent oral and lung cancer, heart diseases, stroke, lung diseases, diabetes and chronic obstructive pulmonary disease (COPD).

Compliance assesment of anti-smoking law in a Tertiary Care Hospital in Warangal District, Telangana

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Background: Tobacco is the leading cause of preventable premature deaths across the globe. India being the second largest consumer and producer of tobacco accounts for about one million deaths due to tobacco each year. Tobacco free hospital campus is one way of showing allegiance to health and wellness. Tobacco free hospital campus requires complying with provisions under section 4, 5 and 6 of The Cigarettes and Other Tobacco Products Act (COTPA) 2003. The study aims at assessing the compliance of a govern.

Methods: A cross sectional observational study was conducted in a tertiary care health facility on November 2019. Using universal sampling method, all the target sites were observed for compliance. Data was collected with the help of The John Hopkins Bloomberg school of public health checklist based on COTPA 2003 guidelines with respect to section 4, 5 and 6. Data collected was analyzed using MS EXEL.

Results: No active smoking was observed in 91.43% of sites within the hospital building and overall compliance for it was 77.3%. No smoking boards were present only in 13.2% of sites. 100% non compliance was observed regarding display of designated reporting officer in all sites. Compliance regarding “no secondary indicators such as cigarette buds, gutka/pan papers, etc “ was 45.8% within hospital building and overall compliance to it was only 30.2%. Tobacco selling was observed near all the entry gates and within 100 yards of the institution.

Conclusion: The lower compliance rates emphasizes various inadequacies in successful enforcement of the law. Health care facilities should have a well coordinating administrative system for promoting healthy environment and successful implementation of the laws.

Factors influencing tobacco use and associated premalignant conditions among Police personnel

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Background: Despite being the significant stakeholders in tobacco control, police officials in India are addicted to tobacco. The available evidence shows that prevalence of smokeless tobacco forms is significant among the Indian police officials. To understand various factors influencing tobacco use and tobacco induced pre-malignant conditions, Salaam Bombay Foundation conducted cross-sectional study among Navi Mumbai Police officials in January 2020.

Methods: Initially meetings were held with Navi Mumbai Police Commissionerate to receive blanket permission to organize survey and oral screening at police stations. After receiving persmission both survey and oral screening were conducted at each police station around morning parade time. Informed consents were obtained separately for participation in survey and oral screening. Self-administered survey questionnaire uploaded in tablets was used for survey. Oral screening was conducted in collaboration with a dental college in Navi Mumbai.

Results: 295 police participated in the survey and 307 officials underwent oral screening. 21% (n=62) police officials participated in the survey self-reported current tobacco use; but oral screening identified 25.4% (n=78) current tobacco users. All current tobacco users were males. The prevalence of current tobacco use was directly associated with years in police service. Peer influence (23%), work pressure (17%) and long duty hours (17%) were the most

common self-reported reasons for tobacco use. 8.8% (n=27) police officials were diagnosed with pre-malignant conditions that included tobacco pouch keratosis (70.4%), leukoplakia (25.9%) and oral sub-mucous fibrosis (3.7%).

Conclusion: Study revealed that most of the factors predisposing the police officials to tobacco use are occupational. Tobacco use may predispose some of them into the pre-malignant conditions which further predisposes them to oral cancers if not intervened on time. Thus, making oral screening facilities available along with tobacco cessation counselling and treatment of tobacco users is important.

Technology-based tobacco cessation training in Indian context

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Background: Treatment gap for tobacco use disorders (TUDs) is high. Training health professionals can reduce treatment gap and bring attitudinal change. Technology-based training can be useful in training large numbers. Objective of this study is to assess the practices and determine the change in knowledge and attitude among health professionals following an online training program (OTP). We hypothesized that OTP would improve the knowledge and change the attitude of health professionals related to TUDs.

Methods: A half-day OTP on tobacco cessation was conducted on 31 May 2021. Google Forms based pre-OTP and post-OTP survey was done. A semi-structured questionnaire, developed based on knowledge, attitude and practices, was used. R-software was used for paired t-test analysis.

Results: Among 650 health professionals registered across India, 328 attended and 293 completed both surveys. Among them were, 189 medical professionals, 48 dental professionals, 4 AYUSH practitioners, 52 nurses and social workers. Majority were male (57.6% (169)). Knowledge assessed at the end of OTP was higher (Mean of Difference (MOD)=-0.32) but found statistically insignificant (p=1.2). Compared to pre-OTP, post-OTP scores in attitudes did not change significantly for the responsibility domain, in both individual (MOD=-0.37, p=6.2) and life circumstances (MOD=-0.003, p=0.9). Post-OTP, they felt less angry and disappointed towards tobacco users (MOD= 0.21, p=0.0007). Further, they felt more sympathetic and concerned (MOD=-0.22, p=0.0005); and acknowledged tobacco-users deserve the same medical care as non-users (MOD=-0.177, p=0.001). In practices, a greater number of health professionals asked and advised about the tobacco use. However, relatively lesser assessed, assisted and referred.

Conclusion: Technology based training program can result in attitudinal changes towards tobacco users. The translation of such changes into real-life clinical practices needs to be explored.

Emerging issues and opportunities to address co-occurring tobacco, alcohol and drug abuse among young population

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Background: Tobacco, alcohol use and substance abuse is well-documented among the adolescent and youth population. While many factors contribute towards this, the effect of abuse is greatest among this vulnerable population. The study objective is to review the emerging issues and opportunities to address co-occurring tobacco, alcohol and drug abuse, especially among young people. This review will reflect upon the successful models, case-studies and instances in the mgmt of complex multi-addiction cases.

Methods: The review article is currently under progress and we are reviewing the published articles in databases such as Pubmed, Scopus, Google Scholar, to name a few. The review comprises of the published research or reviews related to the topic in the last 5 years; the data and information is being collated to come up with relevant findings and recommendations for the Policy Makers and Program Managers. This will further help in dealing with complex multi-addiction cases and coming-up with more efficient and adaptive rehabilitation services. The focus is to come-up with relevant and practical solutions for population suffering from co-occurring tobacco, alcohol and drug abuse.

Results: As the review is still in progress, so, the findings, implications of the results, key recommendations will be shared and presented.

Conclusion: As the review is still in progress, so, the findings, implications of the results, key recommendations will be shared and presented.

Need assessment of tobacco control awareness among school teachers: An exploratory study

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Background: Tobacco use is major public health concern. National legislation (COTPA) has focused on school children with dedicated section (section 4, 6a, 6b) for tobacco control at Educational Institutions. School and school teachers play essential role in tobacco control. Implementation of laws is always challenging due to multiple reasons. It is important to explore such needs from time to time. Hence present study was conducted to assess need of tobacco control awareness among school teachers in Delhi.

Methods: A cross-sectional study using self-administered validated questionnaire, was carried out on convenience sample of 150 school teachers in Delhi. The Questionnaire consisted of 15 items was formulated that included questions related to tobacco control laws was administered via online survey form. Data was entered into digital spreadsheet and analyzed with SPSS software. Descriptive statistics was obtained in frequency (%), mean (SD), and appropriate test of significance was applied.

Results: Out of 150 school teachers, 121 completed questionnaire (Response rate= 80.66%). Mean age was 41.85 + 9.76 years with mean teaching experience of 10.35 + 6.53 years. Amongst male participants, 3 (2.5) were current tobacco users and 6 (4.95) previous users. Overall awareness about COTPA was 47.9%. Only 37.2% were aware about COTPA sections 4 and 6. Only 33.1% teachers have ever been trained in implementation of tobacco control at school level. Majority 72 (59.5) reported lack of access to training material and never conducted any health education programs for tobacco awareness.

Conclusion: The present study indicates that participants have inadequate training and capacity towards tobacco control. Therefore, a concerted effort has to be made to increase the awareness of the act amongst the school teachers. Tobacco control policies as well as training school teachers needs to improve and further measures must be taken to implement COTPA.

Endline Compliance Assessment of Indian Tobacco Control Act (COTPA) resulted in declaration of 4 districts complaint to various sections of COTPA

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Background: Endline compliance assessment gives us an idea about the actual implementation and helpful in measuring the success of the intervention done. The objective of the assessment was to understand the compliance of section 4,5 6a,6b and 7 of Indian Tobacco Control Act(COTPA).Its Section 4 prohibits smoking at public places, section 5 prohibits advertisements of tobacco products, section 6a prohibits sale of tobacco to minors,6b prohibits sale of tobacco within 100 yards of educational institutions an.

Methods: It was an cross sectional observational study conducted in 7 districts i. e. Ashoknagar, Guna, Shivpuri, Datiya, Bhind, Morena and Sheopur districts of Madhya Pradesh. For assessing compliance of section 4 and 6b a total of 3063 public places were observed, for assessing section 5,6a and 7,total 817 shops were observed with the help of well trained team and well developed observational sheet. Major indicators like availability of smokefree signage, absence of cigarette bidi butts, no sale of tobacco to below 18 years, no presence of tobacco related advertisements, no sale within 100 yards of educational institution etc were observed.

Results: A total of four districts which have scored 80% and above compliance on major indicator were declared compliant to various sections of COTPA, based on the decision taken by the administration. Morena district declared compliant to section 4,5,6a,6b and 7,Guna district declared compliant to section 4 & 5, Datiya declared compliant to section 4,6a and 7 and Ashoknagar declared complaint to section 4,5,6a and 7 by the administration.

Conclusion: Endline compliance assessment was useful to know the status of intervention and to do evidence based advocacy for implementation of tobacco control act and helped district administration to declare district compliant to different sections of COTPA.

Assessment and comparison of micronucleated cell frequency in passive smokers and non-users of tobacco

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Background: Passive smoking is inhalation of cigarette smoke of another individual or exhale of a smoker. Passive smoking can adversely affect health of non-smokers of all age groups. Micronucleated cells (MNC) are induced in oral epithelium by a variety of substances including genotoxic agents and carcinogenic compounds in tobacco. Thus, quantitative estimation of micronuclei may serve as

an indicator of genetic damage. There is lack of literature regarding MNC frequency among passive smokers, non-users of.

Methods: Rural areas of Mangalore. Sample size: 15 in each group Sampling technique: Convenience sampling Study participants: Study participants who gave consent. Study participants above 18 years of age. For, Group I: Individuals who are non-smokers and exposed to another person's tobacco smoke for atleast 15 minutes daily. Group II: Healthy controls who are not exposed to any form of tobacco. Procedures and techniques: Basic demographic details, history of exposure to tobacco was collected. Exfoliated cells was obtained by scraping buccal-mucosa of individuals with wooden spatula. Scraped cells were placed on pre-cleaned slides, fixed, stained under PAP stain. Scoring procedure was carried out under microscope to obtain MNC frequency. Statistical analysis: Data was analysed using SPSS version 23. Continuous variables were expressed as.

Results: Mean MNC frequency for passive smokers and non-smokers is 8.73±8.3 and 5.60±4.5 respectively. There was no stastical significance in MNC frequency between passive smokers had non-smokers ($p>0.05$).

Conclusion: Exposure to tobacco smoke would have contributed to increased mean MNC frequency among passive smokers.

Prevalence of oral lesions in tobacco and alcohol users

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Background: Smoking, tobacco chewing and alcohol use are common habits that are prevalent in India. The main objective of the study was to investigate the prevalence of oral lesions associated with these adverse habits.

Methods: The study was conducted in a hospital based setting. A total of 710 patients with tobacco (smoked and smokeless), alcohol and gutka chewing habits visiting the department of Oral Medicine and Radiology of Dr Harvansh Singh Judge Institute of Dental Sciences and Hospital, Chandigarh were made a part of the study. An interviewer based questionnaire was used to record the details of the adverse habits of the patients and they were clinically examined for the presence of white oral lesions. The data collected was subjected to Chi-square test to assess the statistical significance.

Results: Among the 710 patients who were examined for oral lesions 68.2% were smokers, 33.5% were tobacco users, 0.7% were gutka chewers and 25.1% consumed alcohol. Those who smoked tobacco presented with oral lesions like smoker's palate(88.2%), pre-leucoplakia(17.8%), erythroleukoplakia(17.6%), leucoplakia(100%), melanosis(33.9%) and oral cancer(2.7%). More than one type of oral lesion was observed in those individuals who concurrently smoked and consumed alcohol. Tobacco pouch keratosis (86.1%) and leucoplakia(5%) was seen in patients who used smokeless tobacco. 80% of the gutka chewers presented with oral submucous fibrosis.

Conclusion: This study suggests a positive correlation between tobacco and alcohol use and the prevalence of oral lesions. Counseling for cessation of use of such products and smoking prevention programs should become an integral part of dental teaching and practice to reduce the public health burden of tobacco in India.

Disparities in regulation and taxation between different tobacco products and its impact on rural tobacco consumers

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Background: India is the world's second largest consumer of tobacco but legal cigarettes constitute only 9% of overall tobacco consumption, as against a global average of 90%. India accounts < 2% of global cigarette consumption despite comprising 18% of world's population. However, taxation rules are more stringent towards cigarettes than other forms of tobacco which in reality are actually consumed more. The aim is to recommend how revising taxation protocols of different tobacco products will bring change.

Methods: A cross sectional study was performed at a rural village-Jawan belonging to the district of Aligarh in Uttar Pradesh with a sampling frame that included different kinds of tobacco consumers. Sample size of the study was calculated as 352 with 95% confidence interval and a 5% margin of error, taking into account that 35.5% of people in Uttar Pradesh consume tobacco.

Results: In rural parts of the country, consumption of tobacco in non cigarette forms is much higher compared to that of cigarette form. More than 80% of the current bidi smokers responded that increasing the price of bidis will necessarily lead them to reduce the number of bidi's consumed everyday by them.

The study also showed that bidi's were considered a healthier form of smoking tobacco compared with cigarettes due to various reasons including non depiction of warning pictures over the packs of bidi's. The study showed that increasing the price of other forms of tobacco, will bring a decrease in the tobacco consumed in the community.

Conclusion: Removing the small producer's exemptions for bidis would be a major reform to India's system of tobacco taxation and would make a significant contribution to tobacco control, both by reducing the number of smokers and by increasing the country's revenue earned that could further be used for different policies in tobacco control.

"Prevalence of tobacco smoking and influence of pictorial warnings on smoking abstinence among the college students of university of Delhi, India"

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Background: Tobacco use is on the rise among the youngsters especially college students. Govt. of India has made mandatory display of pictorial health warning for both smoking and smokeless forms of tobacco products under Cigarettes and Other Tobacco Product Act (COTPA) 2003. The objective of the present study was to assess prevalence of tobacco smoking and influence of pictorial warning on cigarette packages on smoking abstinence among college students of University of Delhi.

Methods: A cross-sectional study was conducted among 400 college students of Delhi university during October to December 2019.Self-administered questionnaire was used to collect data on smoking, pictorial warnings and Fragerstrom criteria was used to assess nicotine dependence.

Results: Out of 400 study participants 92 (23%) participants were ever smokers. Among 62 current smokers, mean age (± SD) of initiation of smoking was 17.3 years (± 2.07), Median (IQR) number of cigarettes smoked per day was 3 (2-6), majority (80.7%) used to smoke after 30 mins of waking up in the morning, Majority (59.7%) had low nicotine dependence. Nearly half of the past smoker 47% (14 out of 30) and current smoker 58% (36 out of 62) told that they had no effect of pictorial warning for quitting or decreasing smoking.

Results: The present study revealed that tobacco smoking is prevalent among college students of Delhi. Majority of smokers and non-smokers perceived that pictorial warning is ineffective for motivating students to quit smoking.

Awareness regarding the anti-tobacco laws and perceptions regarding interventions for effective tobacco control among young adults of Haryana, India

Madhur Verma*, Nikita Sharma, Sonu Goel, Garima Bhatt

*Assistant Professor, All India Institute of Medical Sciences Bathinda, Punjab, India

Background: Tobacco is one of the major behavioural risk factors for Non-Communicable Diseases (NCDs) in India. Annually, effective tobacco control can save the lives of about 1.3 million Indians. Tobacco control depends not only on the formulation of the legislation but also on its implementation, public awareness, and practices of anti-tobacco measures. The present study documents the awareness of young adults regarding the anti-tobacco laws and their perception regarding interventions for effe.

Methods: A cross sectional study was conducted in two districts of Haryana. The estimated sample size for the study was 1470. A semi structured questionnaire was used to assess the tobacco use, awareness of participants about sections 4, 5, 6 (a), 8 of COTPA Act, sources of information about anti-tobacco laws, and their implementation. The perception of participants about the effectiveness of various provisions of anti-tobacco laws was assessed by using a three-point Likert scale viz. least effective, medium effective, and very effective.

Results: About 517 (35.2%) participants were smoking or using smokeless products. Media (84.6%) was the single most important source of information about anti-tobacco laws followed by the health department (57.6%) and family/peer group (44.9%). A significant proportion of tobacco users obtained the information from media as compared to non-users (90.3% vs. 81.4, $p<0.01$). Majority of the participants were aware of prohibition of smoking in offices or banks, educational institutions, hospitals, and other public places. Both tobacco users and non-users perceived health education programs to be an effective intervention to reduce tobacco use ($p<0.01$).

Conclusion: The awareness regarding COTPA act has increased among the general population. Media could act as a powerful tool to counteract the pro-tobacco cues in the society. The need of the hour is to focus on the improving compliance to anti-tobacco

laws at the population level to achieve a tobacco free India.

Tobacco free generation-a challenging issue for a state

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Background: Different countries in the world now try to reach a state of tobacco free generation or era. European countries where prevalence rate is less than 5 percent. India also try to reach on that position with the help of awareness among common people as well as banning of tobacco containing products. Smoking-free zone is not a new concept in India but it helps to reach our country in a commanding position. India also pave the way to reach a perfect position. Presently NTCP programme result also good.

Methods: Research Design-Cross-sectional study among labours of different unorganized sectors. Study Area-6 districts of West Bengal. Sampling Method-Simple Random Sampling. Sample Size-800 population among labour class peoples of different unorganised sectors. Study Period-01/01/2021 to 30/06/2021.

Results: There is a correlation between addiction of tobacco smoking and socio-economic situation of those peoples. Total 600 peoples of low socio-economic status severly suffers from respiratory troubles and their adult family members always avoid tobacco chewing, smoking and other means of intake of tobacco products. Odd ratio is 1,seen among the status of cessation of tobacco smoking among adult population of those severly affected persons family.

Conclusion: Knowledge regarding bad effect of tobacco smoking, banning of tobacco related products and punishment regarding smoking among common people really helpful to control bad effects of tobacco smoking. Awareness programmes under National Tobacco Control Programme as well as experience of common people, specially of adults will be helpful to create a generation without tobacco.

A study on prevalence of smokeless tobacco use among refinery workers, Chennai District, Tamil Nadu: A cross sectional study

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Background: Smokeless tobacco use is a major cause of preventable morbidity and mortality and its burden is expected to increase over the next two decades especially among people employed in occupations like refineries as they are not able to smoke any form of tobacco in the work place areas. It is need of hour to assess the various problems associated with occupational health problems affecting the behavioral change among the target population.

Methods: A cross-sectional study was carried out among 174 workers in a refinery located at Chennai District selected by simple random sampling method. Data was collected using a self-administered validated Global Tobacco Surveillance System (GATS) questionnaire and sociodemographic details, smokeless tobacco use and associated factors were assessed by using the pre-structured questionnaire. Data was entered in MS-Excel and analyzed by SPSS 25 version.

Results: A total of 174 workers responded to the survey and the prevalence of smokeless tobacco use was found to be 45% among study population. The predictors of smokeless tobacco use were found to be duration of working hours, shift of work, associated substance use like alcohol consumption and increasing age.

Conclusion: Nearly half of the study population were found to be consuming smokeless tobacco. This necessitates the use of health promotion programmes and Behavioural change communication workshops to be conducted periodically by qualified health workers at work places like refineries which will help in creating awareness and motivate them in gradual withdrawal of smokeless tobacco usage.

Past research on smokeless tobacco: "A citation analysis" of top fifty cited articles

Soumya Swaroop Sahoo*, Udit Kumar Panda

*Assistant Professor, All India Institute of Medical Sciences, Bathinda, Punjab, India

Background: Smokeless tobacco (SLT) is widely consumed in various forms including betel quid, khaini, gutkha, zarda, snuff etc. SLT is currently consumed by about 300 million users, mostly residing in South-east Asian countries. Epidemiology, determinants of use and health effects of SLT is a nascent area in the field of addiction medicine. Number of citations is a surrogate marker of impact of a published literature in scientific community. We conducted a citation analysis of top fifty most cited research.

Methods: We used search terms "Smokeless Tobacco", "Betel Quid", "Khaini", "Zarda", "Paan", "Gutkha" with Harzing's publish or perish software

(V6) in google scholar database. With each search term, articles with more than 50 citations were identified and listed. Opinion pieces, patent documents, animal trials were excluded. From the list, top 50 articles with maximum citations were extracted and analyzed.

Results: Most cited articles were in the decade 2000-2009 (n=25) with a significant dip in the last decade (n=9) between 2010-2019. Researchers working in public health, dentistry and Oncology had maximum publications, with relatively less contribution from pharmacology, psychiatry and other medical fields. Most articles addressed the issue of physical comorbidities associated with SLT use like dental/ oral comorbidities, oncological comorbidities or cardiovascular comorbidities. Epidemiology and policies relating to SLT were other common themes. Interestingly, we found only four publications that discussed interventional aspects making in to the top cited list.

Conclusion: Citation analysis provides an excellent opportunity to look back at classical literature in a clinical area and determine the research trend. Our attempt at citation analysis for smokeless tobacco provided important discernment that comorbidities of SLT use have been the focus of research interest. More quality research work on pharmacological and behavioral interventions should be encouraged.

Smoking prevalence, knowledge and attitude among medical interns working at tertiary health care centre Sagar, Madhya Pradesh

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Background: Background-Tobacco is a major public health problem and every year around 8 million people are killed worldwide due to consumption of different forms of tobacco products. NFHS-4 fact sheet of M. P. data shows that 59.5% men and 10.4% women use one or the other form of tobacco. The most common form of tobacco which is used worldwide is cigarette.

Methods: Study design-A Cross-Sectional Study. Study Centre-Bundelkhand Medical College, Sagar, Madhya Pradesh Study Participants-All Medical Interns working in different departments of Bundelkhand Medical College, Sagar Inclusion Criteria-1.Individual should be a medical intern of Bundelkhand Medical College. 2. He/She should give consent for participation. Sample Size-The sample size is calculated by formula for estimating proportions Applying the formula n=(Z^2 pq)/d^2 Where P= 22% from previous study, d=10% (Absolute Precision) q= 78, sample size comes out to be 68.6 & rounded off to 70 Sampling Technique-Convenient Sampling Study Tool-Data is collected through a semi-structured questionnaire. Statistical Analysis Plan-Descriptive statistics was applied, proportion and percentage were calculated.

Results: In this study it was found that the prevalence was more among the males as compared to females and in this study majority of interns who are smoking were above 22 years of age and their place of residence was hostel. Majority of interns had knowledge about adverse effects of Smoking.

Conclusion: The medical students from the starting years of medical school should be counselled and all the adverse effects of smoking should be made known to the young medical students.

Early detection of oral cancer and prevalence of tobacco use among the general population in Hassan District

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Background: Globally, oral cancer is one of the most common cancers with incidence of oral cancer ranging from 1 to 10 cases per 100,000 people with tobacco and being a major causal factor. India alone accounts for one third of the world's oral cancer. Visual inspection of the oral cavity under adequate light is widely used screening method and helps in preventing deaths from oral cancer. Objective-To determine the prevalence of tobacco use & identify the oral premalignant lesions.

Methods: Study design: Cross sectional study. Study setting: Hassan, Karnataka. Sampling technique: 100 villages (clusters) were selected by systematic random sampling. 37 individuals from each village were screened as per norm of every 100 population there are 37 individuals of age ≥30years. Sample size was-37x 100 = 3700. Sample size estimation: According to prevalence of oral premalignant lesions, P= 7 % taking allowable error as d= 20%. Sample size = 4 pq/d2 = 1308.Hence sample adequate. Method: House to house survey. Study participants were individual's ≥30 years of age according to NPCDCS age for early detection of cancer. Individuals with known risk factor for oral cancer were examined using torch and mouth mirror according to WHO, Oral Health Assessment criteria.

Results: It was seen that prevalence of tobacco use was 38.5% of which 54.9% was smokeless tobacco and 45.09% were smokers. On examination, 10.2 % subjects were found to have oral premalignant

lesions, most common being Keratosis (5.7%). Presence of premalignant lesions were significantly associated with tobacco use (p<0.05).

Conclusion: Screening for oral pre-malignant lesions among tobacco users will help in early detection and management of oral cancers.

Integrative tobacco cessation: Practices and perspectives among health care professional students – A cross sectional study

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Background: Health professionals are not only responsible for primary health care but also need to provide health education regarding tobacco cessation to combat the menace of tobacco epidemic. Hence, the curriculum, awareness & perception of health professional students regarding tobacco cessation are assessed.

Methods: A descriptive, cross sectional, questionnaire study was conducted to include clinical students from Medical, Dental & Ayurveda streams from Tumkur city, Karnataka. Pre tested questions regarding their training, awareness and to check their attitude towards tobacco cessation were included with dichotomous response options.

Results: A total of 219 students participated in the study with mean age 21.79 ± 1.53 years. Medical & dental students (100%) were more aware about tobacco & its adverse effects compared to Ayurveda students, where only few of them had a formal training. Many were willing to undergo the training in all the streams but mentioned lack of time, fear of losing patients if advised, low motivation from patients as major barriers in tobacco cessation.

Conclusion: The effective integration of the course, curriculum & training of all the health professional students regarding integrative tobacco cessation is required to combat the curse of tobacco & assist its users to quit the habit.

Awareness regarding the anti-tobacco laws and perceptions regarding interventions for effective tobacco control among young adults of Haryana, India

Madhur Verma*, Nikita Sharma, Sonu Goel, Garima Bhatt

*Assistant Professor, All India Institute of Medical Sciences Bathinda, Punjab, India

Background: Tobacco is one of the major behavioural risk factors for Non-Communicable Diseases (NCDs) in India. Annually, effective tobacco control can save the lives of about 1.3 million Indians. Tobacco control depends not only on the formulation of the legislation but also on its implementation, public awareness, and practices of anti-tobacco measures. The present study documents the awareness of young adults regarding the anti-tobacco laws and their perception.

Methods: A cross sectional study was conducted in two districts of Haryana. The estimated sample size for the study was 1470. A semi structured questionnaire was used to assess the tobacco use, awareness of participants about sections 4, 5, 6 (a), 8 of COTPA Act, sources of information about anti-tobacco laws, and their implementation. The perception of participants about the effectiveness of various provisions of anti-tobacco laws was assessed by using a three-point Likert scale viz. least effective, medium effective, and very effective.

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Conclusion: The awareness regarding COTPA act has increased among the general population. Media could act as a powerful tool to counteract the pro-tobacco cues in the society. The need of the hour is to focus on the improving compliance to anti-tobacco laws at the population level to achieve a tobacco free India.

Tobacco consumption pattern among health care professionals - A cross sectional pilot study

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*Associate Professor, Department of Hospital Administration, India

Background: Tobacco use is increasing globally, particularly in low and middle-income countries. According to WHO estimates, 194 million men and 45 million women use tobacco in smoked or smokeless form in India.

Methods: To study the socio-demographic profile, prevalence and associated reasons or beliefs of tobacco consumption among the different categories of health care workers in a teaching hospital setting. Methodology: It was a cross sectional pilot survey carried in the month of August, 2021 at the Out Door Patient (OPD) Complex of a teaching Hospital of Haryana. The study participants were comprised of sanitation workers, Bearers and Security Guards (n=147). A questionnaire in vernacular language was prepared after extensive literature review and used as the study tool. Questions in this tool included those about socio-demographic variables of participants, tobacco use, different type of tobacco products and awareness about its harmful effects etc. The Questionnaire was administered among the participants after taking their informed consent.

Results: There were a total of 144 respondents. It was observed that 47% participants were in the age group of 31-40 years, 63% were males, 46% were Bearers and 33% were educated up to senior secondary level. Out of total respondents 15% were consuming tobacco. There was significant association of tobacco consumption with gender and designation of health care workers (p-value<0.05). It was also observed that with increase in education level, the tobacco consumption was decreasing among the respondents (p-value<0.05).

Conclusion: This pilot study showed that smoking is most common type of tobacco consumption among the respondents. The health care workers were also aware about the injurious effect of tobacco consumption. Key Words: Health Care Workers, Tobacco use, smoking.

Quality of life of tobacco users - A correlation with duration of use and nicotine dependence

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Background: Few studies have investigated the relationship between health-related quality of life and nicotine dependence, while none are from India. This study aims to explore the quality of life among patients with nicotine dependence and examine the clinical and demographic correlates of quality of life.

Methods: This was a cross-sectional study in which 130 active nicotine dependence individuals were interviewed. Participants were selected using random sampling from the various clinical department of a tertiary health care setting of Northern India. Information about the quality of life and severity of nicotine dependence was assessed using SF-12 and Fagerstrom test for Nicotine Dependence questionnaire. One way ANOVA test compared the means among different tobacco users, while Pearson or Spearman tests assessed the correlation between the quality of life and nicotine dependence.

Results: The mean age of the respondents in the study was 42.72 (SD = 15.68); with 66% using smoking tobacco, 53.07% had a high dependence towards tobacco. We observed a negative correlation between the physical health component and years of regular use (r=-.503, p=.000). There was also a negative correlation between FTND score and physical health component (r=-.180, p=.049).

Conclusion: Duration of tobacco use and the severity of nicotine dependence negatively influence health-related quality of life in treatment-naive individuals. Keywords: quality of life, nicotine dependence, cross-sectional.

Prevalence and pattern of Tobacco consumption in a rural setting of Odisha: A cross-sectional study

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Background: Tobacco consumption is one of the major public health Concern in India. As per the Global Adult Tobacco Survey (GATS) report of WHO, around 28% of adults use tobacco products (either smoked or smokeless form or both). How-ever there are disparities in tobacco consumption in rural and urban setting. This study was conducted to assess the pattern of tobacco use among adults of rural population of Odisha.

Methods: A cross-sectional study was done during the period of April 2021 to May 2021 at a rural area of Khordha district. Simple random sampling was adopted. Structured questionnaire was used to collect the data from the adult participants aged 30 years and above. Data was collected using Epicollect and analysed using SPSS version 20 software.

Results: This study revealed that 67% of participants are using tobacco, out of whom 5.5% are using both smokeless and smoking form of tobacco, around 58% are using smokeless form of tobacco and only 3% are using smoked form of tobacco. There is no significant difference in tobacco consumption between male and female. How-ever there is significant difference in tobacco consumption across different age groups. Prevalence of tobacco consumption is increasing as the age group increases.

Conclusion: In rural area smokeless tobacco is being used in a very rampant way. This situation demands prompt and strong public health action to be taken. More awareness needs to be generated in the community regarding hazardous effect of tobacco consumption. Law enforcement like COTPA act needs to be strengthened in every section of society.

Factors influencing initiation and cessation of tobacco in Warangal

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Background: Tobacco is the only legal drug that kills that kills many of its users when used exactly as intended by the manufacturers. In India, tobacco kills more than 1 million people each year and accounts for 9.5% of all deaths. However, during nearly the past two decades, overall use of tobacco has fallen from 1.397 billion in 2000 to 1.337 billion in 2018 according to WHO global report on trends in prevalence of tobacco use 2000 to 2025 third edition.

Methods: A cross-sectional study has been conducted in field practice area of Kakatiya medical college, Warangal, among adults above 18 years of age in the months of April-May 2020. A convenience sample, with a sample size of 225 is taken based on prevalence of 17.4% according to literature and precision of error as 5%. Individuals who are tobacco users above 18 years are being included after taking consent. A pre-designed, pre-tested, semi structured questionnaire is used.

Results: The age of respondents ranges from 18 to 84 years, mean age being 44.5. Age at initiation of tobacco ranges from 8 to 40 years, mean age being 20.6. 3.5% of respondants used more than one tobacco product. 40% of respondents used cigarette, 35% used beedi, 21% chewed tobacco and 4% other products. 60% of the respondents were asked to quit smoking by a health care provider. 18.8% of the respondents are not interested in quitting tobacco, 18.8% are willing quit but not in the next 12 months, 16.3 % are planning to quit after 12 months,16.3% within 12 months and 30% say that they stopped using tobacco.

Conclusion: Strategies that include incentives and periodic health awareness programs to encourage quitting the use of tobacco must be introduced.

Compliance of Section 4, 5, 6a, 6b and 7 of cigarette and other tobacco product act 2003 in India - A Systematic review and meta-analysis

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Background: Information on compliance of Sections of COTPA 2003 was limited hence a systematic review and metaanalysis was carried out with the focused question-Are the States and Union Territories of India compliant with Section 4, 5, 6a, 6b and 7 of COTPA,2003.

Methods: Electronic search on various data sources like PubMed, Hinari, Google scholar, EBSCO host, IndMed was done. Observational studies, cross-sectional studies, questionnaire studies, brief reports in English from 2003 to December 2020 were eligible. Retrospective studies, letter to editors were excluded from this review. People in the community, Public places, Tobacco packets, Tobacco vendors, Educational institutes were the participants.

Results: A preliminary search yielded 307 studies. 60 full text articles were assessed for eligibility. The MedCal 20 with random effect model showed compliance for Section 4,5,6b,7, NoSmoking, TFI board as 72%, 59%, 49%, 58%, 42%, 27%. Sale of tobacco to and by minor was 62%, 93%. Publication bias and Sensitivity analysis was done.

Conclusion: This countrywide study has unraveled the variation in the range of compliance. It points to a critical need for a stronger and more effective enforcement mechanism that should not only be robust but it should totally eliminate potential for any non-compliance. The Government of India should enact at an earliest the amendments proposed by the MOH.

Technology-based tobacco cessation training in Indian context

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Background: Treatment gap for tobacco use disorders (TUDs) is high. Training health professionals can reduce treatment gap and bring attitudinal change. Technology-based training can be useful in training large numbers. Objective of this study is to assess the practices and determine the change in knowledge and attitude among health professionals following an online training program (OTP). We hypothesized that OTP would improve the knowledge and change the attitude of health professionals related to TUDs.

Methods: A half-day OTP on tobacco cessation was conducted on 31 May 2021. Google Forms based pre-OTP and post-OTP survey was done.

A semi-structured questionnaire, developed based on knowledge, attitude and practices, was used. R-software was used for paired t-test analysis.

Results: Among 650 health professionals registered across India, 328 attended and 293 completed both surveys. Among them were, 189 medical professionals, 48 dental professionals, 4 AYUSH practitioners, 52 nurses and social workers. Majority were male (57.6% (169)). Knowledge assessed at the end of OTP was higher (Mean of Difference (MOD)=-0.32) but found statistically insignificant (p=1.2). Compared to pre-OTP, post-OTP scores in attitudes did not change significantly for the responsibility domain, in both individual (MOD=-0.37, p=6.2) and life circumstances (MOD=-0.003, p=0.9). Post-OTP, they felt less angry and disappointed towards tobacco users (MOD= 0.21, p=0.0007). Further, they felt more sympathetic and concerned (MOD=-0.22, p=0.0005); and acknowledged tobacco-users deserve the same medical care as non-users (MOD=-0.177, p=0.001). In practices, a greater number of health professionals asked and advised about the tobacco use. However, relatively lesser assessed, assisted and referred.

Conclusion: Technology based training program can result in attitudinal changes towards tobacco users. The translation of such changes into real-life clinical practices needs to be explored.

To study the awareness about ban on single use plastic items among the nursing professionals of a Medical College Hospital

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Background: The gravity of harmful impact of plastic waste was raised by Hon'ble Prime Minister of India during the 73rd Independence Day and appealed to the citizens to make the country free of single use plastics and to work towards this mission whole heartedly. Therefore, this study is planned for assessing the awareness of Nursing Personals about ban on single use plastic, so that the future need of training (if any) may be assessed and the hospital may be made plastic free.

Methods: To study the awareness regarding ban on single use plastic items among Nursing Professionals & to find out the association between the knowledge differential vis a vis different variables. This was a prospective study & the awareness was studied in 50% (i. e. n=534) of the nursing staff on roll of the institute. The participants were chosen by convenient sampling method. The study tool was the self administered questionnaire. The Nursing staff who furnished their willingness/ consent were included.

Results: The data was entered and analyzed using version 26.0 of the Statistical Package for Social Sciences software package (SPSS Inc., Chicago, IL). Total 492 participated in study and majority of them were females (95.3%). Majority (38%) of them were in 31-40 year age group. T-square test was used to test association and p-value <0.05 was considered as significant association.

Conclusion: The present study had thrown light whether or not there's any relationship between the extent of awareness concerning the hazards of single-use plastics and also the attitude towards its ban among the nursing staff.

Intersectoral approach towards tobacco control: A boon or a curse

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Background: Public private partnerships can play a significant role in controlling the illness and death caused by preventable chronic diseases. It can contribute to achieve the goal of reducing tobacco consumption, help in tobacco cessation services and resolving the related issues. But it can also cause negative impact on the different health agendas and programs by being favourable to the tobacco industry. So, this research paper will attempt to reflect upon and explore its role in tobacco issues.

Methods: A narrative literature review is being done to reflect upon the different role of the PPP in tobacco control and is it a boon or a curse to the industry. In this review published and unpublished resources including books, articles, periodicals, scholarly journals, database for literature search (scopus, pubmed, etc.) are being consulted. The key terms used in the searches include public-private partnerships, partnerships, health, health promotion, industries, public health, non profit organisation, health policies and tobacco control.

Results: Not yet available as the review is in progress. This review will contribute in assessing the roles of PPP pertaining to tobacco industries.

Conclusion: Not yet available as the review is in progress. This review will contribute in assessing the roles of PPP pertaining to tobacco industries.

Adolescents' perception towards standardised packaging

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Background: Morbidity and Mortality due to tobacco use is highest among LMIC and delivering message on its health risks through large pack warnings is an important and inexpensive move to bolster tobacco control measures. These warnings require further supplementation to avoid wear and tear forcing a need to explore 'standardised packaging', wherein packs are made less attractive, and branding is limited to only product name in a certain font, size and colour.

Methods: After obtaining the institutional ethics committee approval, we carried out this cross-sectional study in Udupi district among 1786 students from 2nd year undergraduate colleges that were selected by two stage random sampling. Prior written permission from the principal of the college had been obtained and participant information sheets were distributed. After taking consent, a printed pre-validated semi-structured questionnaire was distributed. Standardised Packaging was assessed on five parameters namely less appealing, create awareness, discourage tobacco use in general and in youth and requirement of tobacco companies to sell tobacco in standardized packs.

Results: Out of 1786, 30 incomplete surveys were excluded for analysis. The mean age of the study participants was 19.26 (SD 1.113). Around 60% of the respondents were females. About 30% of participants belonged to the middle socio-economic class. Our study revealed that about 45% of total participants perceived that standardised packaging created more awareness, a third of the 1756 participants felt it to be less appealing and a similar percentage felt that young were less likely to use. A total of 607 (34.6%) students felt that tobacco companies are required to sell tobacco in standardised packaging.

Conclusion: The current 85% health warnings on tobacco packs are a deterrent to tobacco use and standardised packaging could be a promising addon to these existing large set of rotated warnings that could facilitate strengthening of the prevailing tobacco control law.

Change in cigarette dependence among a cohort of smokers following COVID-19 diagnosis in Kashmir valley

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Background: COVID-19 diagnosis should serve as an impetus for smokers to discontinue its use but the associated anxiety can lead to increased use. This study was conducted to estimate change in cigarette dependence among newly diagnosed COVID-19 cases in Kashmir valley.

Methods: Study was conducted between Oct-Dec 2020 at two primary care hospitals involved in testing and Outpatient treatment of COVID-19 patients. Observational follow-up design was employed and confirmed COVID-19 male patients who were active smokers at the time of diagnosis were included. Baseline socio-clinical information was recorded at diagnosis in addition to estimation of cigarette dependence using Fagerstrom Test for Nicotine Dependence (FTND) and health status using Post COVID-19 Functional Scale (PCFS). Follow-up was done at 2 weeks after recovery using FTND test and PCFS. Wilcoxon signed rank test, paired t test and ANOVA were used for univariate analysis and multivariate analysis was done for variables significant on univariate analysis. Subjectswith spO2 less than 91 and requiring hospitalization at baseline visit were excluded.

Results: A total of 171 subjects with mean age of 43.79 years were included. FTND scores decreased significantly from the day of diagnosis to follow-up visit with 79% of subjects reporting a decrease. On univariate analysis, decrease in FTND had a significant correlation with presence of comorbidity, any symptoms, presence of respiratory symptoms and if supplemental oxygen was administered. On multivariate analysis, symptomatic COVID-19 disease, higher age, PCFS at baseline and PCFS at follow-up had a significant association with decreased PCFS values at follow-up.

Conclusion: COVID-19 diagnosis was followed by significant decrease in FTND score particularly for symptomatic subjects. Post COVID follow-up visits should be used as an opportunity by health providers to ensure its sustainability and for achieving cessation.

Tobacco smoking in medical students after COVID wave

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Background: Tobacco kills more than 8 million people globally every year. Studies found that smokers are more likely to develop severe disease

with covid-19, compared to non-smokers. Tobacco use in budding doctors is a seriously neglected area. Doctors are crucial in reducing tobacco use in the population in their position as role models.

Methods: Study design: the study was a cross-sectional study design. Study tool: the study data collected was done using an online questionnaire using GATS questionnaire which was modified for the country and research question. which was pretested in a pilot study and then later was done through Google forms. Study population: medical students of Government Medical College, Srinagar using mobile phones and having access to internet. Statistical test: all analysis was done in excel for descriptive results.

Results: In our study we had 154 participants out of which 56.5% were males. About 13% 'currently' smoke tobacco on a daily basis, 4.5% less than daily. 14.9% had smoked tobacco daily in the past.11% were less than 18 years when they first started smoking tobacco 'daily'. Around 3.2% take their first smoke immediately that is within 5 minutes after they wake up whereas 5.8% take their first smoke within 1 hour. On an average, >10 cigarettes' were taken by 4.5% of the medical students.13.6% have you tried quitting smoking. About 6.5% say that the pandemic has had an impact on their smoking habit.

Conclusion: Despite the fact that these medical students are the future role model we can see a lot have already succumbed to the smoking habit. A regular adequate counselling and training now becomes more required than ever for these young doctors in making.

Epidemiological trend and determinants of tobacco use among Indian population: A secondary data analysis of National Family Health Survey

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Background: Tobacco use epidemic is the biggest public health threat the world has ever seen. Tobacco for consumption is available in various forms, while cigarette smoking remains the commonest means of tobacco usage. The use of tobacco is associated with significant economic cost and substantial burden of healthcare costs due to the illnesses resulting from its use. It has been estimated that around 80% of tobacco users worldwide belong to low-and middle-income countries. Tobacco is the heaviest killer.

Methods: This study uses data from NFHS survey round III and IV conducted in the year 2005-06 and 2015-16 respectively. The data is available in public domain for analysis. The state-wise prevalence of any form of tobacco was calculated with 95% confidence level. Logistic regression model was used to identify the underlying factors of tobacco. Spatial analysis of data was done using ArcGIS v8.0 to find significant hotspots using Getis Ord Gi statistics.

Results: The declining trend in prevalence of tobacco use was observed with prevalence of 56.1% in NFHS-III and 45.5% in NFHS-IV, with a relative decline of 18.75% among man of 15-54 years of age. On multivariable analysis marital status, educational status, richest wealth index was observed to be significant predictors. State wise prevalence was observed to be variable, with highest prevalence in north-eastern states.

Conclusion: This study describes the declining trend of tobacco use among man and women of different states of India. The study also highlights the spatially significant hotspot regions for specific directed interventions in those regions.

Smoking initiation and maintenance: A qualitative study among adolescents in a rural area of West Bengal

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Background: Tobacco smoking is one of the leading global causes of premature but preventable deaths. Despite strict policy measures have been enacted for the past few decades to reduce its consumption, the prevalence of smoking in adolescents in India especially in rural areas, have been found to be significantly high. This study thus aimed to explore the factors that initiate and maintain smoking among adolescents in a rural area of West Bengal.

Methods: This qualitative study with grounded theory approach, was conducted from July-August 2021, in Gosaba island, West Bengal. Participants were selected purposively and data collection was done till the point of data saturation with the help of a predesigned interviewer guide. Five focus group discussions were conducted among 30 adolescents (aged 13-18 years) who are current smokers and six in-depth interviews were conducted among important stakeholders at the community level. Data was analyzed manually with the help of a thematic approach.

Results: From the adolescents' perspectives, the two major themes generated were factors associated with initiation and maintenance respectively. The major factors in the first theme were parents themselves acting as idols, peer pressure and

perceived well-being. Maintenance factors included lack of awareness regarding harmful effects, dependence and lack of parental monitoring and communication. Stakeholders at the community level suggested that strict implementation and monitoring to reduce easy accessibility can help in improving the situation.

Conclusion: Awareness campaigns at the community level to motivate and counsel both parents and adolescents regarding harmful impacts of smoking would help in improving the current scenario. Strict monitoring and vigilance to reduce easily availability and accessibility of smoking equipment in the hands of the adolescents should be given utmost priority.

DTC bus staff awareness regarding various legislations related to tobacco control in public places: An exploratory study

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Background: The enormity of global epidemic caused by tobacco usage led India adopted COTPA that came into force on May 1, 2004. While enactment of law is usually onetime process, its implementation is continuous procedure. Regular monitoring and evaluation should be done to prevent violations at public places by individual or community, hence addressing gaps in implementation strategies. One of the main gaps identified is inadequate awareness regarding tobacco control laws, especially in groups like public.

Methods: A cross-sectional study was done among public transportation staffs, Delhi. Convenience sample size of 330 participants were recruited and assessed using structured pre-validated questionnaire. Multivariate analysis was done using SPSS.

Results: The Interim results of ongoing study shows that the mean age of participants (n=120) was 40.25 ±10years. Majority of them (n=71, 54.9%) belong to Lower-middle socio-economic class. Tobacco warning in public places was noticed by 100% (n=120) and signs promoting tobacco use was noticed by 80.4 % (n=96) participants.

Conclusion: A coordinated effort by all stakeholders is required to increase the awareness towards the Tobacco Policies of India which can provide a great support in controlling and regulating the tobacco sale and consumption.

Compliance of specific sections of The Cigarettes and Other Tobacco Products Act-2003 around Educational Institutions in Bhopal, Madhya Pradesh.

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Background: The country of India faces a big challenge in the form of tobacco as a public health problem. The implementation of COTPA in Madhya Pradesh has been poor so far, with official state documents indicating the direct lack of compliance to tobacco control laws and delays in following orders. The burden of tobacco on the economy and the health status of the youth, where the tobacco industry makes its most victims, needs to be decreased.

Methods: The present study was a cross sectional study to observe the compliance of sections 4, 5, 6 (a) and 6 (b) of COTPA in and around 125 educational institutions of urban Bhopal in Madhya Pradesh, and to assess the knowledge of different stakeholders about the various sections of COTPA. Multistage sampling was used. Data was collected using a structured checklist for the compliance of various sections of COTPA and a validated questionnaire to assess the knowledge of different stakeholders.

Results: It was observed that the compliance of COTPA in and around the educational institutions was poor in the city and needed strict enforcement by the law and participation by other stakeholders as well. Assessment of knowledge of the stakeholders provided us with the finding that the knowledge of most of the police officers and the heads of the institutions was good, but the knowledge of the tobacco sellers and the customers was not appropriate regarding the tobacco control laws.

Conclusion: The need for stricter law enforcement was felt throughout the study. Greater involvement of the other stakeholders to increase the compliance of COTPA among the educational institutions is needed.

Knowledge and attitude towards vaping products use among college going youth

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Background: The trend of smoking is changing with drastic increase in vaping products use. Vaping devices are battery-operated devices that people use

to inhale an aerosol, which typically contains nicotine (though not always), flavourings, and other chemicals. They are known by various names like 'e-cigarettes','e-hookahs','vape pens', 'tank systems' and 'electronic nicotine delivery systems (ENDS)'. It is an important public health concern with W. H. O. reported increase in use of e-cigarettes in some count.

Methods: This study was conducted in two randomly selected colleges of Delhi. A list of all colleges located in Delhi was made from which two colleges were selected randomly. Permission was obtained from the Head of the Institution of each selected colleges. A list of all the classes were obtained for each of the selected colleges. A combined list of all the classes were made. Classes were randomly drawn from this list using a table of random numbers, till the minimum required number of students were interviewed. A pre-tested, structured, semi-open ended questionnaire was used to collect information.

Results: The study sample of 101 comprised of college going youth of Delhi of which 51 (50.5%) were female. The mean (± SD) age of respondents was 19 (± 0.9) years. Lifetimeever electronic vapor products use was reported by six (5.9%) of the respondents. Among the six, four were males and remaining were female. Out of the total, 27.7% felt that vaping products are better for health than cigarettes, 8.9% perceived that vaping productsare 'cool' to use, and 6.9% respondents felt that vaping products should not be banned. The lifetime ever use of vaping products was significantly associated with higher age (p= 0.02).

Conclusion: Preventing use of vapor products in young adults still poses a challenge. Awareness should be create dregarding the potential health risk of vaping products. KEY WORD: Vaping products, vaping, youth, college students.

Assessing the prevalence of tobacco use and its effect on treatment outcome among pulmonary tuberculosis patients in Bengaluru: A prospective study

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Background: India bears a large burden of world's Tuberculosis patients contributing to one-fourth (27%) of the global total in 2019. Smoking is one of the most important risk factors for TB. India is the world's second-largest tobacco consumer, third-largest producer of tobacco. India has highest number of both TB patients and smokers. This study was undertaken to determine prevalence of smoking in pulmonary TB patients and effect of smoking on disease outcomes in Tuberculosis Units of Bengaluru.

Methods: A prospective study was undertaken in Tuberculosis units of Bruhat Bengaluru Mahanagara Palike (BBMP) among sputum positive, drug-sensitive Pulmonary Tuberculosis patients during January-June 2020. Stratified random sampling technique was used. Sample size was calculated to be 250, based on a previous study by Mahashale V et al, in which prevalence of tobacco use among pulmonary tuberculosis patients was 32.21% (p), with absolute precision (d) of 6%. A semi-structured questionnaire was administered through interview technique, after obtaining consent from the participants. Data collected was entered in SPSS Version 23.0 Descriptive statistics mean and standard deviation for continuous variables and frequencies, proportions for categorical variables were used to arrive at the study results. Chi-square test was used to check association.

Results: Prevalence of tobacco use among TB patients was 28.4% (71). 22.8% (57) of these were smokers and remaining use smokeless tobacco. Treatment success rate was 90.2% among non-smokers and among smokers was 78.9%. Case fatality rate among tobacco users was 9.9% compared to 5.0% among non-users. Treatment success rate was significantly higher among patients who quit tobacco smoking during course of treatment as compared to those who had not quit.

Conclusion: Smoking adversely affects treatment outcome among TB patients. Death from TB is higher among smokers compared to non-smokers. Further, it increases risk of failure of culture conversion, treatment failure, loss to follow-up.

Prevalence and determinants of tobacco use among young adults of Tumkur - A cross sectional study

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Background: Tobacco consumption is increasing every year. For tobacco control—the Government of India has led down Legislation and enforcement laws for tobacco control. Health care professional and paraprofessional are actively involved in educative programmes for school children, youth and adults. But still not able to curb its use. Hence the study had been undertaken with an aim to assess the

Prevalence and influencing factors for tobacco use among young adults of Tumkur University.

Methods: Descriptive cross sectional questionnaire study was conducted among young adults (18-35yrs) of Tumkur University by using simple random. Statistics : SPSS version 17 used where descriptive statistics, t test and Anova applied and p value less than 0.05 considered statistically significant.

Results: Study included 1500 students who completed the questionnaire. Majority of the participants (82.6%) agreed that tobacco use will give pleasure and relaxation where are other influencing factors were tension (53%), imitating their heroes (62%), Concentration (70%). Whereas 1% of participants were poly-tobacco users and they use tobacco depending on types of places and social groups. All the participants know that tobacco is harmful to health.

Conclusion: Physiological, psychological, personal as well as social factors are main influencing factors. Planning of our next approach should consider all these factors.

Association between tobacco use and body mass index among adolescents and their main caregivers in Mumbai and Kolkata, India

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Background: Body mass index (BMI) is a well-recognised field measure of an individual's body fat composition. Studies show that BMI is inversely associated with tobacco use. Parental BMI typically predicts adolescent child's BMI. We report preliminary results of these associations using data from a population-based study of adolescents and their main caregivers in Mumbai and Kolkata, India.

Methods: The data were obtained from a random sample of household interviews with adolescents aged 12-14 years and with their primary caregiver. 944 adolescents in Mumbai and 1038 in Kolkata and their caregivers were interviewed independently by trained investigators. Height and weight were assessed using standardized fieldwork procedures.

Results: Most caregivers (>80%) were mothers with one-third between 35-39 years old, 22.7% in Mumbai and 9.3% in Kolkata reported past 30-day tobacco use. 6.0% of caregivers in Mumbai were underweight (BMI<18.5), 40.0% were overweight (BMI=>25 and <30), and 19.8% were obese (BMI=>30). Similarly, in Kolkata, 5.1% caregivers were underweight, 35.1% were overweight and 19.1% were obese. In Mumbai the BMI range was observed from 24.0 to 26.8 while in Kolkata it ranged from 24.2 to 26.5. Caregiver BMI increased with age in both cities. BMI was lower among past 30-day tobacco users versus non-users in Mumbai (25.3. vs 26.4) and Kolkata (24.3 vs 26.0). Adolescent BMI was correlated with caregiver BMI (r= 0.3; p <.05) in both cities.

Conclusion: The prevalence of overweight/obesity is high in urban India. Caregiver tobacco use is inversely associated with BMI. Caregiver BMI was also associated with their adolescent child's BMI. Intervention efforts to reduce caregiver tobacco use should probably address the need to prevent unwanted weight gain following tobacco use cessation. To optimize impact, lifestyle change efforts to reduce population.

Preliminary findings of multi-component canteen and behavioural change intervention on cardio metabolic risk of workers from Maharashtra, India

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Background: CVD is the leading cause of morbidity, mortality, and disability in South Asia. There is robust evidence that lifestyle changes, particularly weight loss, increasing physical activity, tobacco cessation and healthy diet can prevent or delay diabetes and reduce cardio metabolic risk factors. We are planning to investigate the effectiveness of the multi-component intervention on two or more of their cardio-metabolic risk goals, measured as reductions in blood pressure, triglycerides, and HbA1c.

Methods: At first step we will adapt and implement evidence-based canteen intervention to increase healthy eating habits at a worksite. At second step eligible participants will be randomised into two groups, allocating half of the participants to canteen and behavioural intervention on prevention of cardio-metabolic risk and the other half to receive only canteen intervention.

Results: Preliminary data were used for this analysis is from the routine annual medical check-up held in the worksite during September`2019. Of the 806 employees who participated, 764 were males and 42 were females. Based on the WHO-BMI classifications for Asians, among males, 6% were morbidly obese, 41% were obese, and 18.8% were overweight. Among females, 16.6% were morbidly obese, 28.5% were

obese, and 11.9% were overweight. Based on The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure 55.1% of males and 35.7 % of females were pre-hypertensive and 14.5 % of males and 2.3 % of females were hypertensive. According to the American Diabetes Association classification of pre diabetes, 8.6% of males and 9.5 % of females were pre diabetic. Less than 1% males reported of smoking habits and information on smokeless tobacco use was not asked during the health check-up.

Conclusion: Obesity, pre-hypertension and pre-diabetes prevalence was high in the workers demonstrating it as an appropriate target population for multi-component intervention.

Effect of smoking on physical activity and quality of life among adults in India

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Background: Cigarette smoking is one of the major public health concern in the world. The adverse effects of smoking on the health of individuals are commonly known by all, while the impact of smoking on physical activity and health-related quality of life (HRQOL) in the developing countries like India are still unclear. So, the objective is to study the effects of smoking on physical activity and Health-Related Quality of life (HRQOL) among adults in India.

Methods: A cross sectional study was conducted among adults in India and still going. Convenience sampling method was used. Each Participant provided information was obtained on socio demographic, smoking pattern, through a questionnaire on google doc. The level of physical activity was assessed using the International Physical Activity Questionnaire and HRQOL was assessed through the world health organisation quality of life instrument. Data were analysed using SPSS Version 23.0 (SPSS Inc., Chicago, IL, USA).

Results: So far data of 124 Participants were collected and we are presenting the preliminary result. It was observed that the mean age of the participants were 26.26 ± 5.5 years. About 34.7% were smokers out of which 79 % were aware of the health concerns of smoking consumption. We found higher incidence of moderate physical exercise in a smoker than those of non smoker ($p<0.001$). After completion of data collection, we will find out the association between the smoker, non smoker, and quality of life.

Conclusion: Our finding indicates a positive correlation between smoker and physical activity.

Acute respiratory infection and secondhand tobacco smoke exposure among children aged 0-5 years in India: A secondary analysis of national family health survey

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Background: Across India,15% of all under five children deaths is attributed to acute respiratory infection (ARI). The high percentage of under five children mortality is due to the prolonged common and preventable illnesses such as cough, fever and shortness of breath. This study aims to analyse the ARI prevalence among children (0-59 months) while incorporating secondhand tobacco smoke exposure in the household during the fourth round of National Family Health Survey conducted in 2015-16.

Methods: The study utilized nationally representative data from the fourth round of National Family Health Survey (NFHS-4). This cross-sectional survey data has followed a two-stage stratified random sampling providing the information on 2,44,508 children and 6,01,509 households. ARI prevalence and other respiratory illness among children were assessed based on both type of cooking fuel usage (clean or impure fuel) and current smoking behaviour in the household. The households which are exposed to secondhand smoke by the household member as well as non-household member were included. Bivariate logistic regression was performed on the type of fuel usage and tobacco induced secondhand smoke along with other explanatory variables such as children's age, mother's education, place of residence, wealth quintile, and across Indian regions.

Results: Findings depicted ARI prevalence has been recorded highest among children aged 10-29 months with the highest prevalence of 13.5%. The ARI prevalence has been recorded highest among male children than females. ARI is more prevalence in the north and north-east regions across India. Bivariate results indicate, the ARI prevalence is positively associated with secondhand tobacco smoke exposure, mother's poor education, and household wealth and negatively associated with place of residence.

Conclusion: Both regional and state policy action should focus on curbing the high tobacco consumption in north and north-east region of India which also eliminates the risk of secondhand tobacco smoke exposure in the household.

Patterns in smoking and smokeless tobacco use among young people in Delhi, NCR

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Background: Tobacco consumptions among young adults in countries remains a public health problem. And High burden of tobacco usage & its effects on the health is a big issue in countries. This study investigates the smoking behaviour & use of smokeless tobacco among Young adults in Delhi, NCR.

Methods: A cross-sectional study was conducted among 140 participants in Delhi, NCR region. A questionnaire was constructive Global Adult tobacco survey (GATS) & Global youth tobacco survey (GYTS). Data was analysis with SPSS Software.

Results: A Total of 140young adults of age group (18-30 years) were included in this study. Out of total 51.8% were females are responded to the survey. Overall 19.3% of participants were daily smokers. Only 4.3% were use smokeless tobacco & 13.6% were smoking daily in the past. The percentage of people who is smoked cigarettes, used water pipes, snuff used by mouth, snuff used by nose & chewed tobacco were 32.1%, 30.7%, 22.1%, 19.3% & 19.3% respectively.

Conclusion: Continuous awareness program should be conducted to in hand awareness ill effects of smoking & smokeless tobacco among young adults. The tobacco control programs Education & policy intervention help to reduce smoking rate among young adults.

Study on knowledge, attitude and practice of waterpipe (shisha) smoking among young adults in India

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Background: Tobacco can be consumed in various forms, and water pipe smoking is one of the worldwide trends among young adults and is a potential health risk. This study aimed to assess the knowledge, attitude and practice of water pipe (shisha) smoking among young adults in India.

Methods: A cross sectional, observational study was conducted among young adults between 18-35 years of age on April 1st and the collection of data is still ongoing. By using Google docs, an electronic semi-structured questionnaire was created with an attached informed consent form. Participants who understood English and who had been given informed consent were included and convenience sampling technique was used. The collected data was analyzed using SPSS Version 23.0 (SPSS Inc., Chicago, IL, USA).

Results: Over 3 weeks of data collection, 100 samples of data were collected and analyzed. Among the 100 study participants, 72% were predominantly female and 28 % were male. The mean age was 24.95 years. On assessment of knowledge, attitude and practice, it was found that 54% of the participants have adequate knowledge about the water pipe (shisha) smoking. Only 21% of the participants know the contents of the water pipe (shisha) tobacco and 41% of the participants were not sure if water pipe (shisha) smoking is legal or illegal. It was noted that 51% of the participants have positive attitude towards water pipe (shisha) smoking and 23% of the participants practiced water pipe (shisha) smoking.

Conclusion: On the basis of the results, it can be noted that water pipe smoking is associated with lack of knowledge and a false belief about the harmfulness of smoking water pipe (shisha).

Awareness regarding tobacco among adolescents of Mangalore city

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Background: The global adult tobacco survey India reported that among the minors 9.6% consumed tobacco in some form or the other. most of the tobacco users start during their adolescence. refraining from tobacco use can add 20 years to the life of a teenager. there is also evidence linking smoking to depression and anxiety and they are more vulnerable to use due to increases in academic pressure and peer pressure. Thus understanding adolescent awareness and the barriers to prevent use will help.

Methods: A cross-sectional study was conducted among adolescent of Mangalore city. Those who were present on the day were included. Prior permission of the institutional ethical committee and the concerned school authorities were taken. The purpose of the study was explained to the students and their participation was voluntary. The identity of the students was not included to facilitate the students to enter freely. A structured pretested questionnaire was administered containing 14 items. Incomplete forms

were not considered for analysis. data was analyses using spss 16 and descriptive statistics were applied.

Results: Among the 341 students who participated 71.3% of the students strongly agreed that tobacco users were likely to get lung cancer, heart diseases, and gum diseases but only 37.8% were aware that nicotine causes addiction. 88.6% strongly disagree that they would use tobacco if their friend pressured them to use. it also is seen that 72.1% strongly disagree that they would use tobacco in stressful condition and 81.2% strongly disagree to use tobacco if any family member used it.

Conclusion: They study results showed that the awareness among the adolescents was good but there is lacunae in their knowledge and efforts need to be directed to inform them about ill effects of tobacco.

Understanding livelihood challenges and safer alternatives for marginalized workers in smokeless tobacco sector

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Background: Several of the workers in the tobacco sector, especially at the margins, face some degree of precarity and health hazards. Increasing mechanization of the industry and tobacco control regulations are likely to reduce work opportunities in the sector. Identifying safer alternatives is essential both in the interest of workers and tobacco workers and should go beyond mere replacement of one economic activity with another and, comprehensively capture the impact of transition on the lives of workers.

Methods: This is a doctoral study in its early stages. We propose three sequential and linked phases. In the first phase we would identify processes and workers involved in the sector by mapping the supply chain of select commercially manufactured chewing tobacco products. We would use secondary data and structured interviews with key stakeholders to map the supply chain. In the second stage, we would conduct a literature review to understand the current discourse on alternative livelihoods. We would also develop case studies around former tobacco-workers to capture their experience concerning the transition. Finally, building on the findings of the earlier stages, we would develop case studies around the current tobacco-workers on how they perceive their livelihoods and potential to shift to alternatives if any.

Results: We have just started to map the supply chain. Through this abstract, we hope to promote discussion around this somewhat neglected topic and gather inputs for our study. We hope to uncover the dynamics and drivers of alternative and safer livelihoods for the most vulnerable workers within smokeless tobacco sector.

Conclusion: We wish that such knowledge would inform processes that protect workers (from occupational-hazards and livelihood losses) as the demand and supply for smokeless tobacco hopefully reduces with tobacco control measures.

National tobacco control program in India - An overview

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Background: Tobacco use is a major public health challenge in India with over 267 million consumers. Various initiatives have been used to control and reduce tobacco usage but few of them are studied in detail. One of them is the National Tobacco Control Programme (NTCP) that ensures the enforcement and implementation of tobacco control laws/measures.

Methods: The purpose is to systematically study the NTCP using the Health Policy Analysis model by analyzing and evaluating the goals and objectives of the programme. Here, we use data from secondary sources: (a) peer reviewed scientific literature about the programme, (b) policy and programme documents, operational guidelines, and national and state government reports from the programme and ministry websites. Data collected through these document reviews were used to test the programme's intended outcomes and identify gaps in various policy stages.

Results: The policy analysis exercise proved valuable in conceptually outlining NTCP's priorities and challenges faced by efforts to reduce tobacco consumption. Despite a normative understanding of the programme's goals and objectives, NTCP's outcomes are different across different Indian states which is a subject for further studies.

Conclusion: Research that draws upon the use of different conceptual frameworks is needed to assess and test outcomes in order to understand how tobacco control programmes like the NTCP operate in the global south.

Awareness about COTPA and the perceived effectiveness of the proposed amendments among youth

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Background: Government has been creating awareness about the tobacco control legislation through various media. In spite of all these, awareness and implementation of COTPA seems to be not completely complied with. Many studies prove that there is very low level of awareness about the tobacco control laws among the population.

Objectives: 1. To understand the awareness level of COTPA, 2003 among youth in the Hyderabad City 2. To assess the level of perceived effectiveness of the proposed amendments to the existing law, i. e. Cigarettes & Other Tobacco Products Act (COTPA, 2003). Materials and methods: This cross-sectional study will be done in Hyderabad, Telangana state during the period of May-June 2021. The random sampling will include participants between the age group of 15 and 29 years. All consented participants will be communicated through mails to take up the survey. Considering an indefinite population of the youth in Hyderabad City, awareness level of COTPA was considered as 50% and the following formula was applied and a sample of 384 participants is considered for the study. Outcome variables.

Results: It's an ongoing study current results are preliminary. Out of the 66 participants, 46 were non-smokers, 20 were smokers; 39 didn't hear about COTPA; 61 knew smoking in public places is banned;23 knew fine was rs.200 for section 4 violation; 54 thought advertising tobacco products is illegal; 39 opined 18 is the minimum age to buy/sell tobacco products according to the existing law and 61 think tobacco products are not allowed to be sold near educational institutions according to the existing law.

Conclusion: About 88% people have opted for the proposed amendments against the provision and rules around the cigarette smoking and sale, indicating a sensitisation among the public. The proposing can be taken forward but the implementation still remains a challenge.

Impact of tobacco control policies and programs on tobacco consumption from 2010-2021: Narrative review

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Background: Evaluation of tobacco control policies and programs is very important and plays a crucial role in achieving reduction in mortality targets. As per the literature review developing and under developed countries such evaluation is very scarce. A comparative review of policies and programs is being done for different states of India and globally using the Korean Sim Smoke model. Age, Gender, Life Style factors and Tobacco History, Co-Morbidities will be the prime factors of review.

Methods: Review of scientific database including both published and unpublished resources in form of books, periodicals, journals, database (Pubmed, Google Scholar etc) is being done. The Key terms used in the searches include tobacco control program, policies and tobacco control models. Korean Sim Smoke model is used to determine the effect of Indian policies on tobacco cessation.

Results: Not yet available as the study is under review. The result of this study can be valuable in assessment of Indian policies and programs implemented for tobacco cessation.

Conclusion: Not yet available as the study is under review. The result of this study can be valuable in assessment of Indian policies and programs implemented for tobacco cessation.

Awareness towards second-hand smoke exposure among women in Mangalore: A cross sectional study

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Background: Second-hand tobacco smoke (SHS) comprises the smoke released from the burning tip of a cigarette (or other smoked tobacco product) between puffs (called sidestream smoke) and the smoke exhaled by the smoker (exhaled mainstream smoke). Second-hand smoke exposure is linked with various serious deleterious health problems. The aim of the study is to assess the awareness towards SHS among women residing in Mangalore city.

Methods: A cross-sectional study was conducted using a questionnaire which was developed from previous studies. The developed questionnaire was standardized. It consisted of 11 closed –ended questions related to their socio-demographic factors and their awareness towards SHS. Responses were placed on a 3 point Likert scale. The data was collected from those who consented using Google Forms. The data was analyzed using SPSS Software Version 23.

Results: A total of 102 women participated in the study. Even though they were aware of SHS exposure, 63.73% were unaware of the third-hand exposure. They were conscious about the harmful effects of SHS exposure on themselves, children and pregnant women with a percentage of 90.02%,

98.04% and 82.35% respectively. A total of 43.13% didn't feel the need to be educated regarding harmful effects of SHS exposure. Majority of study participants distance themselves from people who smoke.

Conclusion: This study proves that women are aware of ill-effects of second-hand exposure. The SHS exposure is highest at home, as women in rural areas are in an vulnerable position and the have less than senior secondary level of education. Thus, policies need to be framed in order to curb this menace which is a vicious one as women don't really have an alternative as far as this exposure is concerned.

Technology-based tobacco cessation training in Indian context

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Background: Treatment gap for tobacco use disorders (TUDs) is high. Training health professionals can reduce treatment gap and bring attitudinal change. Technology-based training can be useful in training large numbers. Objective of this study is to assess the practices and determine the change in knowledge and attitude among health professionals following an online training program (OTP). We hypothesized that OTP would improve the knowledge and change the attitude of health professionals related to TUDs.

Methods: A half-day OTP on tobacco cessation was conducted on 31 May 2021. Google Forms based pre-OTP and post-OTP survey was done. A semi-structured questionnaire, developed based on knowledge, attitude and practices, was used. R-software was used for paired t-test analysis.

Results: Among 650 health professionals registered across India, 328 attended and 293 completed both surveys. Among them were, 189 medical professionals, 48 dental professionals, 4 AYUSH practitioners, 52 nurses and social workers. Majority were male (57.6% (169)). Knowledge assessed at the end of OTP was higher (Mean of Difference (MOD)=-0.32) but found statistically insignificant (p=1.2). Compared to pre-OTP, post-OTP scores in attitudes did not change significantly for the responsibility domain, in both individual (MOD=-0.37, p=6.2) and life circumstances (MOD=-0.003, p=0.9). Post-OTP, they felt less angry and disappointed towards tobacco users (MOD= 0.21, p=0.0007). Further, they felt more sympathetic and concerned (MOD=-0.22, p=0.0005); and acknowledged tobacco-users deserve the same medical care as non-users (MOD=-0.177, p=0.001). In practices, a greater number of health professionals asked and advised about the tobacco use. However, relatively lesser assessed, assisted and referred.

Conclusion: Technology based training program can result in attitudinal changes towards tobacco users. The translation of such changes into real-life clinical practices needs to be explored.

Herbal smoking products: Web-based content analysis and mapping of the online retail market

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Background: Herbal smoking products (HSPs) are slowly gaining popularity on the pretext of being 'nicotine-free' and totally ignoring the other harmful effects of smoking. As internet use significantly affects the individual's decision making and autonomy, it is essential to ensure the credibility of the content available online. Thus, the present study aims to analyze the information published on the internet regarding HSPs and to assess their online availability as well as e-marketing strategies.

Methods: Google, Yahoo, Bing and YouTube online platforms were searched using relevant keywords. The first 50 records were retrieved for each keyword and duplicates were removed. The records were screened according to the eligibility criteria and categorized into informational content (video records and still records) and retail content. Data was extracted from each selected webpage as per the pre-tested data extraction forms for retail and informational content respectively. Statistical analysis was performed with a significance level at 0.05.

Results: Out of the 1050 records retrieved, 73 retail webpages, 174 still records and 94 video records were included. The retail webpages presented with 24 brands and about 189 flavour variants. The price per pack (20 sticks) of herbal cigarettes was found to be ranging from INR 51-1830 (median:588). 67.8% of the still records and 87.2% of the video records promoted the use of HSPs, wherein, most of the content is posted by the general public/manufacturers. Moreover, the online sale and marketing of HSPs is unrestricted with respect to age-restrictions and display of health warnings about smoking.

Conclusion: Overall, it is alarming to see the internet being exploded with promotional content regarding use of HSPs which have an enormous potential to be

used as a gateway to tobacco smoking. The online informational content and sale of HSPs is unrestricted, deceptive and affordable necessitating the need for some regulations.

A mixed method study on barriers associated with smoking cessation among current smokers in Perambalur

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Background: Unassisted smoking cessation is defined as the quit attempts made by the smokers without any assistance in the form of pharmaceutical or behavioral interventions. The unassisted smoking cessation in India is very low unlike in west. In India, tobacco users quit after they develop complications. Therefore, the present study aims to assess the factors responsible for lack of smoking cessation behavior and to identify various cessation methods or models practiced by current smokers.

Methods: Study Design: A mixed method study Study Population: Current smokers who are greater than 18 year of age. According to Centre for Disease Control and Prevention (CDC), current smokers are the adults who has smoked 100 cigarettes in his or her lifetime and who currently smokes cigarettes.3 Study area: Field Practicing area of Dhanalakshmi Srinivasan Medical College and Hospital, Perambalur. Sampling technique: Snowball sampling Sampling size: The data collection will be stopped when there is saturation of responses.

Results: An informed oral consent will be obtained from current smokers who are willing to participate. A semi structured questionnaire, which focuses on demographic and smoking characteristics and cessation behavior will be used. The responses will be recorded through call recording system after obtaining permission from the participants. The participants will be enquired about any known current smokers known to them at the end of interview and the eligible population will be recruited for the study following informed consent. Data analysis: Tape-recorded interviews will be transcribed verbatim and data will be analysed following the principles of thematic analysis. The thematic analysis is one of the standard methods for analysis of qualitative data. Results are yet to be derived.

Conclusion: Smoking cessation, India, Qualitative study.

Smokeless tobacco use and quit behaviour assessment in 35-44 years and 65-74 years old village dwellers of Jamul (Chhattisgarh): A cross-sectional household survey

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Background: Smokeless tobacco (SLT) control needs in Chhattisgarh are large and complex. Evaluation of prevalence of tobacco use and outcomes of quit attempts to date has been limited data. Hence this study was aimed to assess the smokeless tobacco use and quit behaviour in 35-44years and 65-74 years old village dwellers of Jamul (Chhattisgarh).

Methods: The current study was done as a cross-sectional survey among 450 people aged 35-44 and 65-74 in a small village in Chhattisgarh called Jamul using convenient sampling method. Using a pre-tested, professionally delivered questionnaire, the researchers determined the prevalence and outcome of current smokeless tobacco users' quit attempts. The data collected was analysed utilizing IBM SPSS vs. 21; descriptive statistics and the test of association were used, with a P-value of 0.05 regarded statistically significant.

Results: There were 61.1% males and 38.9% females among 450 people participating in the survey. Prevalence of SLT was found to be 67.8%. 59.1% of the 305 current SLT users said they used it every day. The majority of middle-aged people chose gutkha, while the elderly preferred khaini. Tobacco and pan with tobacco were also common kinds. Gudakhu was one of the most common smokeless tobacco products used for oral hygiene and easy defecation (71.34 percent). Television warnings and SLT packages were the most successful techniques of disseminating information about the dangers of SLT use. SLT users who tried quitting smoking independently reported one or more withdrawal symptoms, which posed a significant obstacle to quitting smokeless tobacco.

Conclusion: Community-based awareness programs offered via regional television channels and cessation initiatives utilizing professionally administered counseling with added pharmaceutical interventions and peer pressure should be implemented. Smokeless tobacco intervention programs must focus on changing attitudes against SLT usage and providing a tobacco-free environment in and around.

Exploring the potential of complementary and alternative medicine for tobacco cessation in India: Findings from Global Adult Tobacco Survey-2

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Background: Tobacco consumption and nicotine dependence makes it difficult for tobacco users to quit the habit. It has been estimated that approximately 160 million deaths may occur globally by the year 2050 if tobacco cessation strategies are not implemented pro-actively. Complementary and alternative medicine/ therapy (CAM) is becoming a popular method of tobacco cessation globally since last many years. The current study explores the prevalence and correlates of CAM as a cessation method in India.

Methods: This is a secondary analysis of nationally representative Global Adult Tobacco Survey (GATS), 2016-17 data. The primary variable used in the analysis was "use of traditional medicine as a method of tobacco cessation". Chi square test was applied to find the association between the "use of traditional medicine" and its correlates (age, gender, residence, education, and occupation) considering $p<0.05$ to be statistically significant.

Results: A total of 30.8% tobacco users attempted to quit tobacco, among which 2.3% used traditional medicine as cessation method (2.6% among ever smokers and 2.1% among ever SLT users). The prevalence was found to be the highest in the age group 25-44 years (52.2%), males (78.6%), rural areas (64.3%), users with no or less than primary education (46.5%), and students (33.4%) as compared to their counterparts/other categories with p-value <0.001 for all correlates.

Conclusion: The current study identifies CAM as a potential cessation method in a country like India where the consumer base of alternative medicine is significantly large. A robust, country-wide evidence-based research in this area is needed to fully implement it as a tobacco cessation method. Evidence around CAM can also prove to be a major breakthrough for tobacco-related policy change.

Does tobacco use enhance the risk of SARS-CoV-2 infection: findings from a need based research?

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Background: Tobacco users tend to have more severe and critical outcomes related to COVID-19 disease, with angiotensin converting enzyme 2 (ACE2) being a possible explanation to this association. However, it is still not known whether tobacco use causes more likelihood of getting infected with SARS-CoV-2. The World Health Organization and findings from a recent systematic review and meta-analysis have also cited need to gather evidence in this direction.

Methods: The present study is an analytical cross-sectional study carried out among 950 individuals reported to the Department of Pharmacology, Rajendra Institute of Medical Sciences, Ranchi, Jharkhand during April-May 2021 for the diagnosis of COVID-19 disease. List of all the persons with their phone numbers and COVID-19 disease status/result were obtained from the department and were invited telephonically to participate in the study. Telephonic responses were obtained to record their tobacco related habits using a brief self structured 10 item closed ended questionnaire. Severity and symptoms related to COVID-19 disease were also recorded from the confirmed positive cases. Data obtained was subjected to statistical analysis using SPSS software.

Results: A total of 521 responses were obtained. The mean age of participants was 40.43±17.42. Two hundred and fifty six participants were confirmed positive cases and 57 were tobacco users. Risk of smokers getting infected with SARS-CoV-2 was higher in the tobacco users than the non tobacco users; OR=1.78 (1.01-3.13).

Conclusion: Risk of SARS-CoV-2 infection appears to be higher amongst the tobacco users. Findings elucidate the role of tobacco as risk factor for SARS-CoV-2 infection. However more studies are required to substantiate this effect.

Impact of Tobacco Smoking on COVID-19: A retrospective observational study

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Background: Tobacco is one of the leading risk factors for many respiratory infections and is linked to the clinical severity of the disease. We therefore, investigated the association between tobacco consumption and COVID-19.

Methods: A cross sectional observational study was conducted by recruiting study participants from a list of laboratory-confirmed COVID-19 positive patients aged 18-70 years in district Moradabad. A total of 470 patients who were previously infected with SARS-

CoV-2 in the past one month and who gave consent were recruited.

Results: Among the 470 study participants 322 (68%) were males and 148 (32%) were women; median age was 35 years [interquartile range 28-25 years]. The proportion of COVID-19 infected participants who were asymptomatic and symptomatic were 199 (42%) and 271 (58%) respectively while 24(5%) required hospitalization for SARS-CoV-2 infection. Tobacco consumption was found among 98 (21%) of the study participants and among them 39 (40%) were smokers, 54 (55%) consumed smokeless form of tobacco while 5(5%) consumed both smoke and smokeless form. The median frequency of tobacco consumption observed was 4 times per day [interquartile range 3 to 6 times per day]. Among those who were COVID-19 infected and tobacco users, 75% of current smokers were symptomatic while remaining were asymptomatic [OR= 1.2; 95% C. I. 0.44-3.32; p>0.707]. On univariate analysis current smokers who were female had odds ratio of 0.05 times (95%C. I. 0.006-0.522, p=0.012) as compared to males who were current smoker vs former s.

Conclusion: Tobacco use may worsen the symptoms of COVID-19 and may be associated with more symptomatic infection.

PRESENTATIONS (Public Health)
ORAL PRESENTATION

E-resource centre for tobacco control: A game changer in the digital era for strengthening tobacco control in India

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Background: The tobacco epidemic is one of the biggest public health threats. To curb this menace, Govt. of India has made tremendous efforts. However, there is a felt need to disseminate lessons learned and challenges across states and find solutions to further strengthen tobacco control in India, the Resource Centre for Tobacco Control was established from where all the reliable information related to tobacco control activities can be fetched easily.

Methods: Over the time, E-RCTC has become increasingly engaged with world's tobacco problem and organizes various activities along with systematically organizing technical resource material for capacity building of program implementers, academia and researchers for multistakeholder engagement and networking. It is helping the public, health professionals, and other people working on, or interested in areas of tobacco control in providing variety of authentic information regarding tobacco control activities.

Results: In the span of 3 years, the portal has been visited by more than 3 lac visitors from around 85 countries. Additionally, the portal has conducted 30+ workshops and webinars for the capacity building of around 2500+ program managers and academicians per event. The portal serves as a one-point platform for various circulars/orders (1000+ from 36 states), policies and legislations, multidisciplinary p.

Conclusion: E-Resource Centre for Tobacco Control (E-RCTC) will provide a one-stop solution to all the existing challenges of information gap and misleading information in tobacco control & facilitating speedy implementation of WHO-FCTC, MPOWER and other tobacco control interventions.

In-school tobacco control leadership programme for adolescents: A route to tobacco-free generation

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Background: Creating awareness on harms of tobacco and tobacco control law, building capacities of school going adolescents to enable them to fight for their right of tobacco free environment is the most effective long term solution to counter youth centred marketing strategies of tobacco industry. Salaam Bombay Foundation (SBF) has been implementing In-school Tobacco Control Leadership Programme in 350 Mumbai schools.

Methods: In-school Tobacco Control Leadership Programme is designed for 7th, 8th and 9th graders in order to create awareness on tobacco ill-effects, tobacco control law and stakeholders in tobacco control; build life skills and leadership skills to transform adolescents into change agents. The programme involves tobacco control sessions for the students followed by awareness activities to reinforce the information given through the sessions. 7th grade students are involved in anti-tobacco awareness activities and 8th and 9th graders are given opportunities to reach out to stakeholders and policymakers through various platforms to demand stringent implementation of tobacco control law.

Results: Outcome assessment results showed In-school Tobacco Control Leadership Programme has positive effect on adolescents' attitude and behaviour. 88% adolescents reported that they disseminated anti-tobacco information received through sessions, among peers and family. 24% admitted that they refused tobacco offer from peers and informed them about tobacco's health harms.

Conclusion: School based tobacco control programme helps to create tobacco free environment at schools and causes long term impact on adolescents' behaviour and equips them to stay away from tobacco throughout life.

Implementation of Article 5.3 of the World Health Organisation framework convention on tobacco control: A subnational assessment

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Background: According to Article 5.3 of the WHO Framework Convention on Tobacco Control (FCTC). Governments must take efforts to protect health policy from commercial and other vested interests of the

tobacco industry. Given India's wide geographical region and the heterogeneity of its states, it is important to examine the level of implementation of Article 5.3 at the sub-national level. As a result, this study was conducted to investigate the implementation of Article 5.3 in the Karnataka state.

Methods: The Tobacco Industry Interference (TII) index of the Southeast Asia Tobacco Control Alliance (SEATCA) was adopted and applied in the study. A desk review was undertaken for the year 2018. Publicly available evidence of tobacco industry interference was scored based on its frequency, severity, and the government's response to it. Lower the score, effective the level of governance against the TI interference, which indicates good for the state.

Results: The study demonstrates a score of 46 out of 95 in the implementation of article 5.3 in Karnataka, which is lower when compared to the national score of 69 out of 100. The key areas that require additional attention to comply with the standards of Article 5.3 include corporate social responsibility, conflicts of interest, and unnecessary interactions with the TI.

Conclusion: Overall, Karnataka needs to improve its execution of Article 5.3 and establish a plan that follows international best practices. This assessment can assist the national government and other states in identifying particular areas where improvements are required.

Smokeless tobacco ban during COVID-19 pandemic-national and sub-national experience from India

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Background: COVID-19 has presented India with a unique set of challenges. India's depleted and dilapidated health systems and widespread ignorance on hygiene and safety has since caused the spread of COVID-19 infection.

Methods: In India, national and sub-national governments have responded to this challenge by proposing a slew of policies measures to stop COVID-19 transmission. Among these was prohibiting smoking and spitting especially which is induced by the use of smokeless tobacco (SLT) in public places which could potentially spread the COVID-19 infection further. Besides national level directives/advisories and state orders, subnational governments have also issued orders restricting tobacco trade, sale, use and spitting to curtail COVID-19 transmission in India.

Results: Overall 27 states and union territories and 284 districts in the country have issued specific directions and guidelines relating to the ban on sale and use of tobacco and spitting in public. National, state and local governments have used various legislations other than tobacco control laws to advance tobacco control during a health emergency.

Conclusion: High SLT burden countries, especially from the Southeast Asia region should emulate Indian experience in containing COVID-19 by prohibiting and preventing tobacco use, sale and spitting in the larger public interest.

Integrative approaches in tobacco control-experience from a hilly state of northern India

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Background: Himachal Pradesh having a population of about 7 million is a hilly state in northern India. Shimla the capital city of the state is a famous tourist destination and was the summer capital of India during British rule. High prevalence of smoking among males (33.4%) than the national average (24.3%) with high passive smoking exposure (82.5 %) at home was remained a cause of concern (GATS 2009-10). Tobacco use had a high socio-cultural acceptance and smoking was recognised as a status symbol.

Methods: In order to reduce the burden of tobacco use, the mapping of all key stakeholders ministries, departments, institutions, individuals, media, NGOs was done and their roles and responsibilities were well defined for tobacco control. Smoke free city pilot project was tested successfully in the Capital City Shimla in 2009-10. The smoke free movement was scaled in the entire state in a phased manner. The funds collected as fine are utilised for financing tobacco control. A robust mechanism is in place to make all educational institutes Tobacco Free with a provision of Rs 5 lakh cash award for Tobacco Free Gram Panchyat to achieve tobacco endgame.

Results: Based on the compliance of the smoke free rules Shimla city was declared Smoke Free in 2010. Subsequently entire state was declared Smoke Free state in 2013. The tobacco use declined from 21.2 to 13.5 % and passive smoking has declined from 82.5 to 20.9 % at home since 2009-10. Tobacco control has become the mandate of all key health programs including School health, TB control and NCDs control.

Conclusion: Tobacco control is a multi-dimensional issue. Integrative approach is a cost effective and the way forward for effective tobacco control in low resource settings.

RAPID FIRE ORAL PRESENTATION

Behavioral tobacco cessation counseling amongst transgenders of Pune city and Pimpri-Chinchwad – An interventional study

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Background: Introduction-Transgenders are one of those neglected special vulnerable groups as stigma is associated with their community as well as they believe in secretive living. Special attention is required to improve the health and oral health of this community. Tobacco use is the single largest cause of preventable deaths and illness worldwide. Tobacco use is a major risk factor for Cancer, Cardiovascular Diseases, Diabetes, Chronic Lung Disease, stroke, blindness, Tuberculosis, Oral Cavities etc.

Methods: The transgenders who were selected through snowball sampling were shown a picture panel showing short and long term oral ill effects of tobacco use. 5As and 5Rs model by WHO was used for behavioural tobacco cessation. Oral examination was carried out and teeth cleaning was done through mobile dental clinic. They were followed up telephonically every month for 6 months and motivational intervention for tobacco use for those who had not abstained from tobacco habit was provided. Urine cotinine analysis was done.

Results: 52 participants in the age group of 18-58 yrs from the transgender community from 5 sites were involved in the oral health status assessment. Those (38 participants) who were contemplating on giving up the tobacco habit were enrolled in the behavioural intervention study. 54% of participants were below the age of 30yrs and 58% of them were educated till class 10th or below.

Conclusion: Behavioural councelling for tobacco cessation in a low resource setting like India can help the community members in giving up the habit and preventing premature death.

Evaluation of awareness regarding pictorial warning on tobacco packets and its effect on cessation among tobacco users in Lucknow

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Background: Tobacco use has been identified as the leading cause of the preventable death worldwide, and estimates that it currently causes 5.4 billion deaths/year. Of the 1.1 billion population who smoke globally, 182 million (16.6%) live in India. In fact, India is suffering a phase of tobacco epidemic. Therefore, the present study was conducted to evaluate the awareness regarding pictorial warning on tobacco packets and its effect on cessation among tobacco users in Lucknow.

Methods: A hospital based study was done among patients attending the outpatient department of Public Health Dentistry, KGMU, Lucknow. The study was conducted among 200 patients, having the tobacco habits. Patients younger than 17 years or those who were suffering from systemic illness which may impact the oral mucosa were excluded from this study. Oral consent was acquired from all the study participants. A self structured questionnaire was made in English and Hindi language.

Results: Multiple tobacco habits was most prevalent 61 (30.5%) across all age groups, majority 185 (92.5%) of subjects had seen the tobacco warnings., 113 (56.5%) participants had seen both types of warning (pictorial and written warning). 110 (55%) of subjects said that warning should be on both sides. 82 (41%) of the study subjects had never tried to quit tobacco habits, 43 (21.5%) of subjects tried to quit.

Conclusion: Majority of study participants have observed the warnings on tobacco packets and most of them believe that they could recognize and understand warnings. The study participants believe that warnings on tobacco packets create alertness about various deleterious effects of all tobacco habits and help in dropping or give up these habits. Pictographic warnings were more effective than text warnings.

Adverse health outcomes and willingness towards alternative livelihoods in household Beedi Rollers in Charama Block of Uttar Bastar Kanker District of Chhattisgarh: A cross-sectional study

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Background: The beedi industry in India employs an estimated 5 million (50 lakh) workers, around 90 percent of whom are women. They are usually from low socio-economic status, have high incidence of known severe health effects of beedi rolling. There is a need for provision of healthcare, occupational safety

measures and policy interventions for their wellbeing.

Methods: Objectives: To assess awareness about health hazards, occupational safety practices and adverse health outcomes in household beedi rollers, and their willingness to shift to alternative livelihood options in Charama block of Uttar Bastar Kanker district of, Chhattisgarh. Methodology: A cross-sectional study was conducted among 200 household beedi rollers, conveniently selected from five villages from the Charama block in Uttar Bastar Kanker district. Mixed method approach was used where quantitative data was collected using an interviewer administered questionnaire and qualitative data was collected using focus group discussion among beedi rollers to capture self-reported adverse health outcomes, occupational safety practices; and perception and willingness towards alternative livelihoods.

Results: Various adverse health outcomes were reported in the study with highest prevalence of musculoskeletal problems (71.5%) followed by neurological problems, eye problems and respiratory problems. When adjusted for other socio-demographic, occupational and economic factors, number of beedis rolled per day were significantly associated with adverse health outcome (p value < 0.05).

Conclusion: Beedi rollers were willing to shift to other alternatives; however major challenges and barriers reported were non-availability of other livlihood options, lack of skills to perform other activities, regular wages, availability of market for the finished products, lack of transportation facility, inability to travel long distances from the village for alternative options of work.

Behavioral interventions for tobacco cessation in workplaces for low resource settings: Best practices from India

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Background: More than half of tobacco users want to quit their habit. Behavioral cessation interventions help people to quit. They vary in their content, delivery, and availability ranging from brief advice, self-help materials, and telephone counseling to more intensive programs including multiple counseling sessions. There are very few workplace cessation programs in India and guidelines are not available.

Methods: LifeFirst, a tobacco dependence treatment program implemented an intensive behavioral intervention which included one detailed face-to-face counseling session followed by five face-to-face follow up sessions with the registered current tobacco users in four workplaces. The same program was to be implemented in three more workplaces which were geographically distant and less accessible for face-to-face counseling sessions and increased the cost of the program. Based on these challenges, the program was tailored where sessions were delivered through one detailed face-to-face counseling session followed by three telephone and three face-to-face follow-up counselling sessions. In both the programs, an awareness session was conducted for all the employees prior to the counseling session.

Results: In the intensive programme, 3768 employees were sensitized, of which 876 (23%) registered for counseling and 579 (66%) employees self-reported that they had stopped using tobacco at the end of the program. Through the modified program, 1558 employees were sensitized and 603 (39%) registered for counseling. At the end of this program, 348 (58%) self-reported that they stopped using tobacco.

Conclusion: Telephone counseling in combination with face-to-face is also effective especially in a setting where the available resources are low.

Establishing tobacco cessation service for pregnant women attending antenatal care clinic in an urban government hospital

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Background: According to National Family Health Survey (NFHS)-3, 8.5% of pregnant women use some form of tobacco. This has an adverse effect on the mother and foetus. Many women make quit attempts during pregnancy but few attempts are successful and some relapse during the post-partum period. There is a dearth of tobacco cessation interventions for pregnant women in India. Antenatal Care (ANC) services create an opportunity to identify tobacco users and provide cessation services.

Methods: LifeFirst tobacco cessation counselling program was implemented in an urban municipal hospital ANC clinic from December 2017 to March 2019. All pregnant women attending the ANC services were screened verbally for tobacco use. Current tobacco users (last 30 days) were motivated to register voluntarily for LifeFirst and a detailed first session was conducted. Six follow-up sessions were conducted by telephone over six months.

Results: Of the 1727 pregnant women screened, 44 were current tobacco users (43 used smokeless)

and all enrolled for the counselling service. 45% of them were highly dependent (Fagerstrom score) and 37 (84%) had never made a quit attempt. At the end of the six-month follow-up, 27 (61%) were lost to follow up mostly due to change in contact phone numbers and all the remaining self-reported quitting use.

Conclusion: Integration of tobacco cessation with ANC services is feasible. Creating awareness about ill-effects of tobacco during pregnancy and providing cessation support is required.

Prevention of initiation of smokeless tobacco consumption among rural children of Ahmedabad District

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Background: India Global Youth Tobacco Survey 2009 observed that 14.6% of the young age group (13-15 years) consumes some form of tobacco (19% are boys and 8.3% are girls). No interventional studies were carried out among children before the initiation of the SLT use. This study was carried out with the objective to estimate the current prevalence of consumption of tobacco and non-tobacco products among young children and provide school and community based interventions to bring behavioral changes.

Methods: Health Education and Quit Rate.

Results: The prevalence of smokeless tobacco consumption and non-tobacco product in children was found to be 1.3% and 36.5% respectively. 80.6% of non-tobacco product users initiated the consumption because of fun. After intervention, the quit rate of non-tobacco product consumption was 40.5% while 37.4% had decreased the consumption.

Conclusion: The habit of consumption of non-tobacco products eventually leads to consumption of smokeless tobacco products. So, targeting the age group of 9-11 years students, for prevention of initiation of non-tobacco products will be useful in prevention of initiation of smokeless tobacco products as is evident from the findings of this study.

E-POSTER PRESENTATION

National Tobacco Control Program: Capacity building

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Background: Capacity Building Training being an important component under National Tobacco Control Programme, has a vital role to make the programmes successful in terms of effective enforcement of important stakeholders and partnership building towards achieving a desired goal of significant reduction of mortality and morbidity due to tobacco use. Training Programme consist of technical and operational aspects of National Tobacco Control Programme which will not only provide knowledge of tobacco.

Methods: The information on prevalent tobacco habits in India, health hazards and environmental hazards due to tobacco use, passive smoking and its impact, economics of tobacco, legislation to control tobacco, the tobacco cessation services and the way ahead for effective tobacco control are discussed. Government of India has launched NTCP in the year 2008 to create awareness, reduce both the production and distribution of tobacco sales. It has a three-tier structure based on the level of control i. e. national, state and district. WHO has provided support for the national tobacco control programme by capacity building that is building human resource capacity by training health and social workers, NGOs, school teachers and enforcement officers.

Results: Although results show that huge problems still exist, capacity building has increased the awareness especially among the youth. To evaluate the results of the programmes implemented,18 tobacco control consultants have been appointed to supervise the effective implementation and notice the drawbacks of the programmes.

Conclusion: Capacity development occurs collaboratively and thus national and regional networks are important resources for information exchange, technical assistance, and mentoring relationships that could help tobacco control researchers to develop the policies accordingly.

A cross sectional study to assess the nutritional status, prevalance of smoking among post COVID patients in a tertiary care center at Kanyakumari District, 2021

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Background: Nutritional status of the population has become an important public health issue but often neglected. Both undernutrition and overnutrition are important public health priorities. The aim of our study Is to assess the nutritional status of Patients recovered from covid 19 admitted in ward and intensive care unit. In this study we describe and find out the prevalence of undernutrition and the factors influencing it and its nutritional management in post covid patient.

Methods: Diet Assessment in ward or ICU should be done regularly. Height and weight monitoring should be done weekly. Assessment of nutritional status frequently by monitoring BMI to Find a nutritional deficiency and supplementation of electrolytes by intravenous fluid or by orally can be done Government food supply in ward monitoring and quality should be checked regularly. If patients have diarrheal diseases give ORS and zinc supplement. Deworming by albendazole 400mg tablets every six months If patients have malabsorption syndrome, treat the patients by Replacement of nutrients, electrolytes and fluids and dietary modification like gluten free diet in celiac disease, lactose avoidance in lactose intolerance and antibiotic theraphy to treat Small bowel bacterial overgrowth. Give gluten free diet recommended for people with celiac disease, gluten sensitivity or the skin disorder dermatitis herpatiformis. It may be helpful for some people with irritable".

Results: Our study included 105 Patients, the average age Of the patients was 44.5 ± 15.38, mean weight in kg was 64.1 ± 10.28, Mean height in cms is 160.79 ± 4.60, Average BMI was 24.79 ± 3.70kg/m2, 33% had weight loss, 3.80% had undernutrition. Among 105 patients,74 were in Normal nutrition, 5 were in malnutrition, 26 were undernutrition, 32 are alcoholics,26 are smokers.

Conclusion: Conclusion: In covid ICU admitted patients 20.83% has malnutrition, 62.5% are at risk of Malnutrition. In patients admitted in covid wards 0% has malnutrition and 13.6% are at risk of malnutrition. The patients admitted in covid ICU had more malnutrition. There is a need to decrease the risk of malnutrition in covid 19 patients both in ICU and in wards in order to achieve good recovery.

Teacher's perspective about implementation of the COTPA act in Akola district of Maharashtra: A qualitative study

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Background: Tobacco use within India contributes substantially to this increasing global public health threat with its enormous population and use. The challenge to provide effective tobacco-use prevention programs to all young people is an ethical imperative, where schools are ideal settings and teachers can serve an important front-line role in tobacco control efforts being the role models and opinion leaders in community.

Methods: A Descriptive qualitative research was conducted from November 2019 to February 2020 in which 70 teachers selected with purposive sampling from private and government schools in Akola district participated. Data was collected with an open-ended questionnaire rather than individual interviews, to observe their personal views on social norms relating to the tobacco use in students. Informed consent was taken with the confidentiality of an FGD.

Results: Total 70 teachers, 55 males, 15 females from all types of schools were involved. Their average (SD) teaching experience was 9.4 (8.9) years. Their views on perceptions of students' use of tobacco and reasons for their use, factors responsible, knowledge of the health hazards of tobacco use among teachers, perceptions of use of tobacco among teachers and ways to include tobacco use prevention.

Conclusion: A multi-pronged approach to tobacco use prevention in schools is needed, school authorities must implement COTPA act prohibiting tobacco use among teachers and students. Including tobacco use prevention into the curriculum will be most effective when accompanied by training of teachers and additional teaching resources. Adequate infrastructure and support should be made available.

Assessment of knowledge, attitude and practice of tobacco cessation counselling among the health workers: A cross sectional study in Odisha

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Background: Tobacco is the foremost preventable cause of disease and death in the world today, killing half of the people who use it. Tobacco was responsible for 14 percent of all NCDs compared with 5 percent of all communicable disease related deaths. The health care providers' attitude and practice on tobacco cessation advice have a great impact on increase the tobacco quitter. The tobacco cessation behavioural intervention is the leading tobacco control strategies around the world.

Methods: Using a cross sectional study design this study aims to explore the level of knowledge, attitude and practice of tobacco cessation counselling persist among the health workers towards tobacco cessation intervention in five districts of Odisha, India with population (N=465). A structured questionnaire prepared from the Tobacco dependence Guideline was used as study tool and other demographic, knowledge, attitude, practice of tobacco cessation characteristics were collected through face to face interview.

Results: Attitude and practice of tobacco cessation intervention were identified with 5 point Likert scales ranging from strongly unaware to strongly aware and a sum score was calculated. Liner regression was performed to identify the association between the outcome and gender variables. The calculated sum score indicated that respondents from the positive attitude had better action on Tobacco cessation act.

Conclusion: In line with the Global Adult Tobacco Survey, this study results support the opinion that health care providers should focused on brief intervention counselling to increase the number of quitters by tobacco cessation intervention.

Mandatory tobacco Vendor licensing in Uttarakhand, India - Progress, challenges and way forward

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Background: The Global Adult Tobacco Survey (GATS) report shows around 26.5% of all Adults

either smoke tobacco and/or use smokeless tobacco in the State of Uttarakhand. Being a small State with a population of 11 million the prevalence is high. Although Uttarakhand has been working towards achieving substantial progress in implementing all components of MPOWER, which are mainly demand reduction. Tobacco Vendor licensing (TVL) is a powerful tobacco control tool to combat the public health problems associate.

Methods: To regulate the trade of tobacco products, state level order issued by the Department of Urban Development under the Uttarakhand Municipal Corporation Act 1959; Capacity building and Consultations held with 92 Municipal bodies across the State; 50 Group meetings held; various recommendations on policy guideline passed; Street vendors and Vending zones identified.

Results: The order prohibits the marketing, manufacturing, storage, packaging and processing of any tobacco products without a license. Licensed vendors have to comply with the provisions of Cigarettes and Other Tobacco Products Act (COTPA) 2003 and Juvenile Justice Act, 2015; protect more than 10 million people of Uttarakhand from the harms of tobacco and crucially reduce children's exposure to tobacco.

Conclusion: In covid ICU admitted patients 20.83% has malnutrition, 62.5% are at risk of Malnutrition. In patients admitted in covid wards 0% has malnutrition and 13.6% are at risk of malnutrition. The patients admitted in COVID ICU had more malnutrition.

An old pandemic meets the new: A review

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Background: Tobacco causes 8 million deaths every year from cardiovascular diseases, lung disorders, cancers, diabetes, and hypertension. It is also linked to a detrimental impact on oral health, such as increasing risk of periodontal diseases, peri-implantitis, implant failure. Smoking tobacco is also a known risk factor for severe disease and death from many respiratory infections. Evidence suggests that several mechanisms might increase the risk of respiratory tract infections in smokers.

Intervention: Smoking impairs the immune system and almost doubles the risk of tuberculosis infection (latent and active) due to impairment of immune function; specifically, smoking affects the macrophage and cytokine response and hence the ability to contain infection. Similarly, the risk for pneumococcal, legionella, and mycoplasma pneumonia infection is about 3–5-times higher in smokers. In the COVID-19 pandemic, questions have been asked about clinical outcomes for smokers, and whether they are equally susceptible to infection, and if nicotine has any biological effect on the SAR-CoV-2 virus (the virus that causes COVID-19).

Results: Users of tobacco have increased adherence of pneumococci and colonization, as a result of the upregulation of the pneumococcal receptor molecule (platelet activating receptor factor); smokers are also 5-times more likely to contract influenza than non-smokers.

Conclusion: This paper aims to review the mechanism of increase in susceptibility of tobacco users to respiratory tract infections, oral health risks, compromised immune system and to COVID-19.

Efforts done in Chhattisgarh to achieve "Multispectral convergence for tobacco-free India by 2030: Leading the way towards sustainable development goals"

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Background: The state has framed State level Coordination committee at the state level and District level coordination committee at the district level with members involved from various departments. The roles and responsibilities of various departments have been assigned accordingly and the follow up is being done by the state cell. The integration of the program with mental health and oral health programs is also being done at the district level. Tb-Tobacco inter relation has also been started.

Intervention: Various departments have been approached at the state and district level namely-Labour Department, Police department, Food and safety department, National rural livelihood mission, Railway department, Civil societies, Panchayats, Nagar Nigam, transport department, Hotel associations, Media (Jan sampark), Nehru Yuva Kendra, women and child department, Mitanins, revenue and tax department, Law department, agriculture department. Focused on educational institutions in the current quarter for tobacco free educational institutions. The COVID – 19 pandemic has definitely affected the tobacco control program but we have used it as an opportunity in restricting the sale and ban of SLT in coordination with spread of COVID infection (14 Orders issued from District collectors).

Results: For better involvement of various stakeholders regular inter departmental trainings and

orientations are being done at State and District level. Last year (19-20) a total of 185 interdepartmental trainings were conducted at district level where a total of 10361 officials were trained which will in turn train the staff down the line.

Conclusion: Jashpur nagar became the first smoke free city of Chhattisgarh because of the joint efforts of the other departments under the leadership of the district collector setting an example how important is the collective efforts of the other departments in better implementation of the program and COTPA.

Role of geomapping technology in tobacco control

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Background: Tobacco use causes approximately five million premature deaths worldwide each year, with the number estimated to climb to over eight million by 2030. Tobacco use is directly linked to the majority of chronic lung illnesses, malignancies, and cardiovascular problems. They are responsible for one out of every ten adult deaths worldwide. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution) Act (hereinafter).

Methods: The results of a research conducted by AIIMS, Rishikesh about the compliance of COTPA in the state of Utarakhand highlighted the importance of geo-mapping in Tobacco control.

Results: In accordance with the COTPA-2003, this study assists in determining people's behavior in various sectors such as public places, government offices, private offices, hospitals, educational institutions, bars and pubs, auditoriums, cinema halls, public transportation facilities, and so on. The level of compliance of the above-mentioned entities with various section of COTPA was determined in study.

Conclusion: Geo-mapping enabled ease of data collection and would help in ensuring compliance with COPTA so that law enforcement and public health organizations know where to focus their enforcement and public education efforts in order to achieve the status of "smoke-free and COTPA-compliant" district.

The tobacco industry: Analyzing marketing and PR strategies to attract masses

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Background: India has approximately 120 million cigarette smokers, which makes Indians stand second in the world after China, making it a lucrative market for tobacco producing companies. Despite the legal manacles on public ads, the tobacco manufacturing units have discovered scheming ways of evading laws by embracing the use of benefaction and PR programs.

Intervention: The key Tobacco players are Creating new brands and brand modifications, along with creativity and innovation in packaging and are an important way to communicate with customers, create brand loyalty and boost the sales of their products. Innovative ideas are developed by Tobacco companies like kiosk ads, statutory warnings, fund events and sponsor influencers to promote products.

Results: Globally though, fewer women smoke but they form the growth market for Tobacco Industry like Philip Morris International Inc. is interested in kiosk advertising, social events and seeks to provide Marlboro to every Indian smoker. The party-goers and young influencers are targeted carefully, who are swayed to share posts, stories and pics of their sponsored antics on social media forums.

Conclusion: There is a dire need to focus on these loopholes so that stringent laws can be made keeping into view these loopholes by the government.

Tobacco free school

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Background: Tobacco is a significant public health risk faced by youth in rural India. In rural India around 15% youths use tobacco. Tobacco use is commonly seen on school premises across the state. As per GATS data tobacco consumption rate is 26.6% in Maharashtra and we all are working together to make schools tobacco free.

Intervention: Since 2010 the Swa. Rukhmabai Pal Bahu-uddeshiya Sikshan Sanstha, Wardha began a tobacco-free schools initiative in Chandrapur district, Maharshtra state. Awareness meetings were held with the teachers, students, villagers and officers to build motivation to promote the tobacco-free schools programme. District-level workshops were held in partnership with Salaam Mumbai foundation. As a master trainers we counducted trainings for the teachers and health workers also. Even trained collage students and motivated them to be tobacco free.

Results: We trained 1,184 teachers and 8,237 villagers successfully from Chandrapur districts and made 152 schools from Nagbhid block tobacco free. In order to integrate anti tobacco messages in festival we also conducted multiple activities with 4,96,290 children.

Conclusion: Using the existing infrastructure, rural teacher training programme has been a successful and efficient strategy for increasing compliance with tobacco-free schools criteria. As part of the programme Social justice ministry of Maharashtra has recognized my work and gave Mahatma Gandhi Vyasanmukti Award. I also honoured by Salaaam Mumbai foundation for my work at graassroot level.

Cease your life from your peccadillo - The bad just got worse

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Background: Tobacco smoking is one of the cause of preventable death across globe, and is associated with incidence, severity and natural history of number of illness. Smoking has been shown to affect a wide range of host defence mechanisms and it can exacerbate respiratory disease like colds, flu, pneumonia, and tuberculosis.

Intervention: Quitting smoking has immediate as well as long-term benefits, reducing risks for disease caused by smoking and improving health in general. Research has shown that for persons who stopped smoking, the health benefits experienced as measured both by relative risk of mortality in comparison with non-smokers increased in proportion to the number of years since cessation. Smoke directly compromises the integrity of this physical barrier, increases the permeability of the respiratory epithelium and impairs host defence through which virus will propagate and cause massive destruction of the affected tissues, especially in organs that have high ACE2 expression, like the lungs which has been identified as the receptor for the SARS-CoV-2 on host cells with greater affinity than previous SARS-CoV.

Results: Thus quitting smoking have substantially lower incidence of COVID-19. Although there are limited data available, studies from the surgical literature suggest that even 4 weeks of smoking cessation may decrease the risk of adverse outcomes and intubation associated with COVID-19. Indeed, the mounting evidence that smoking is related to severity of COVID-19 illness could provide greater motivation f.

Conclusion: This review paper highlights the physical and biological changes due to smoking which can favour the invasion of the COVID-19 on smokers and the general population, and why quitting now is befitting.

Smokeless tobacco and corona: Time to address legislations on smokeless tobacco in India

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Background: The pandemic of corona has brought to surface the consumption and associated health implications of Smokeless Tobacco (SLT) use in India. As SLT is the most commonly consumed tobacco product in India, its use comes with an urge to spit, which is related with the spread of corona.

Interventions: However, the lack of implementation of anti-spitting laws present in India before the pandemic spread, has raised questions on their enforcement. Also, the use of SLT is spread along various age groups and gender, which are important determinants of many public health programs in India.

Results: As India entered the unlock phase, the guidelines issued by the Ministry of Home Affairs and Ministry of Health and Family Welfare are strongly associated with the anti-spitting measures and provisions to fine the offenders.

Conclusion: These measures should be used as a guiding force for stricter legislations on SLT, which have been in place earlier but did not see strict enforcement.