

Priorities for tobacco control research in India

The enormity of the tobacco epidemic in India, which has a population greater than the United States and Europe combined, merits a huge scaling-up of research efforts that can inform, support and evaluate tobacco control. Research is needed to underpin all the World Health Organization's MPOWER recommendations. Prioritization and coordination of the research efforts are critical to success and ensuring value for money. Apart from the sheer size of the country and its population, its cultural and regional diversity present particular challenges.

India is the second most populous country in the world, with more than 1.2 billion inhabitants: more than Europe and the United States combined. According to the Global Adult Tobacco Survey (GATS), there are 275 million tobacco users in India, 35% of all adults. This figure is made up of 164 million smokeless tobacco users, 69 million smokers and 42 million people using both smoked and smokeless forms of tobacco [1]. The damage to health arising from this tobacco usage is vast, and presents one of the major public health challenges facing the country. The World Health Organization (WHO) had commenced its international negotiations on the Framework Convention for Tobacco Control in year 2000. Unfortunately, the Millennium Development Goals declared by United Nations in 2000 did not include tobacco control [2], despite clear evidence of a tobacco pandemic [3]; but evidence is available that it is in the low- and middle-income countries (LMIC) that the greatest toll of premature death and disease lies. With the case for tobacco control becoming stronger over the past decade [4], the United Nations (UN) called recently for a global effort to combat tobacco at the high-level meeting on Non-Communicable Diseases, the United Nations General Assembly Special Session (UNGASS) in September 2011 [5]. Now is a good time to take stock of what research is needed most urgently to support tobacco control in India.

Tobacco control research is required to underpin policy development and strengthen programmes to cut short the devastation brought by tobacco use [6]. This involves reducing uptake, promoting cessation and reducing the harm arising from tobacco use. The Framework Convention on Tobacco Control (FCTC) sets out the broad sweep of evidence-based tobacco control policies. WHO provided the roadmap for implementation of the FCTC under the acronym MPOWER (Monitoring tobacco use, Protecting people from tobacco smoke, Offering help to tobacco users to quit tobacco use, Warning on the

dangers of tobacco use, Enforcing bans on tobacco advertisement and promotion and Raising taxes on tobacco products) [4]. These provide a useful basis for examining research needs for India.

Monitoring tobacco use

India monitors tobacco consumption and smoking prevalence through the GATS [1] and the National Family Health Surveys. The Advocacy Forum for Tobacco Control monitors tobacco control legislation and tobacco industry activity [7]. The major policy-relevant gaps in knowledge relate to the production and use of different tobacco products and regional variation in this [8]. Of particular note are *bidis*: small cigarette-like products that are manufactured largely in small home-based units. These are extremely cheap to buy and largely untaxed. Research on the tobacco industry would be more complex, as it would need to study the economics and industry tactics involving several smoked and oral forms, including multiple small bidi and *gutka* manufacturers as well as the big cigarette manufacturing companies.

Protecting people from tobacco smoke

Smoking has been prohibited in all public places and work-places, enforced since 2008 as per Section 4 of COTPA (Cigarettes and Other Tobacco Products—Prohibition of Advertisement and regulation of trade, commerce, production, supply and distribution Act, 2003). Limited evidence suggests that the law is widely flouted, particularly in rural areas, requiring further research to assess the extent and to ascertain what underlies it.

Offering help with quitting tobacco use

Research has shown substantial benefit from support, which may involve brief advice to more extensive behavioural support and/or medication [9–11]. At present there are only 19 tobacco cessation clinics to help tobacco users quit in India [12]. The limited resources for the 275 million tobacco users make it unrealistic to provide the coverage of cessation support that is available in developed countries such as the free, universal National Health Service (NHS) Stop Smoking Services in the United Kingdom [13]. There is an urgent need to identify cost-effective and affordable forms of support that can be made available across the whole community. Promising avenues include: brief advice from health professionals delivered in a variety of settings, including health

centres and even involving outreach to people's homes [9]; and very low-cost medications, such as cytosine, which may be offered at less than the cost of smoking and so be affordable to all smokers [14].

Warning about the dangers of tobacco use

It is far from clear how far tobacco users in India are aware of the harm caused by this activity, the benefits of ceasing use or the best ways of achieving this. Nor is it known whether users of bidis or smokeless tobacco consider these products safer than cigarettes. This is essential information required for the mounting of educational campaigns. Cigarette packets and smokeless tobacco pouches now have to carry pictorial health warnings and, in the absence of resources to mount regular mass media campaigns, such warnings represent the main way in which smokers can be informed about and reminded of the damage caused by tobacco use. Research is needed urgently to determine the most effective messaging and use of graphics in these warnings. It is also vital to determine how far such warnings influence beliefs about the health effects of bidis and smokeless tobacco. Whereas school-based educational campaigns have not proved effective in western countries, there is some evidence that it may be useful in India [15], and it is important to mount and evaluate such campaigns.

Enforcing bans on tobacco promotion

Tobacco promotion through TV and radio is banned in India. However, there is still extensive point-of-sale advertising, and cigarette packets themselves are an important promotional device [16]. Moreover, there are numerous ways in which the tobacco industry can circumvent bans on promotion, for example through social media. Research is needed into the nature of multi-national tobacco corporations' activities for targeting women and best ways of counteracting them.

Raising taxes

Increasing the financial cost of smoking is a central plank of tobacco control policy, but it is not always effective [17]. It can lead to 'trading down' to cheaper products or reducing cigarette consumption while maintaining levels of smoke exposure through compensatory inhalation [18]. There can also be problems arising from the development of a market for illicit tobacco [19]. Research is needed to obtain a better understanding of how the complex Indian tax structure influences product choice and smoking behaviour, and this needs to inform future policies which then need to be evaluated.

Additionally, research for tobacco control in India has unique challenges in finding alternative crops for the

tobacco farmers in specific states and alternative livelihoods for the home-based bidi workers, comprised mainly of women in villages. In March 2012 the Government of India's Ministry of Health and Family Welfare wrote to both the Agriculture and Commerce ministries to promote alternative crops for tobacco farmers.

Cutting across these research themes is the enormous cultural and regional diversity that exists within the country, which considerably complicates the picture. The 35 regions (states/UTs) in India vary at least as much as countries within Europe in terms of wealth, infrastructure and values. Within each region and urban versus rural areas there is huge cultural diversity, access to resources and variation in living standards. Educational opportunities, values and ways of life differ widely between these types of community, and it cannot be assumed that intervention effects will be homogeneous among social and cultural groups across the country.

The challenge involved in undertaking nationally relevant research on tobacco in India is immense, but the importance of so doing is commensurate with this. When one considers the research effort that goes into informing tobacco control policy in countries such as the United States with 270 million inhabitants, the United Kingdom with 60 million and Australia with 20 million, a huge scaling-up of research in India would seem entirely appropriate. The Government of India would need to designate specific funds and pooled resources from the international research community would be required to take this research forward for addressing this major public health issue. Increased and uniform taxation of all tobacco products in India could potentially generate adequate revenue for tobacco control interventions overall, including research. Further, India can raise more funds through a mandatory annual registration and testing levy for each marketed brand on tobacco manufacturing companies, as was conducted by Brazil's National Health Surveillance Agency (ANVISA) in 2001 [20]. Such research will pay dividends for the economy of the country as well as the health and wellbeing of its inhabitants. National coordination of the research effort will be essential to determining priorities and maximizing value for money.

Declarations of interest

None.

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