EXPANDING SMOKING CESSATION WORLD-WIDE

Smoking cessation is the only practicable way to avoid a substantial proportion of tobacco deaths world-wide during the next few decades. Expanding cessation requires higher taxes and non-price interventions, but also much better monitoring of smoking cessation at the clinical and population level.

Based on current smoking patterns, with approximately half of young men and one in 10 young women world-wide becoming smokers in early adult life, and most not stopping, annual tobacco deaths will rise from approximately 5 million in 2010 to more than 10 million a few decades from now [1–3], as the young smokers of today reach middle and old age. If current smoking patterns persist, tobacco will kill approximately 1 billion people this century, most in low- or middle-income countries (LMICs). In contrast, there were approximately 100 million deaths from tobacco in the 20th century, most of which were in developed countries [1,2].

The United Nations has endorsed the call for all countries to achieve a 30% reduction in the age-standardized death rates from non-communicable disease between ages 30 and 70 years between 2010 and 2030 [4]. Widespread cessation of smoking is the most important way to help achieve this goal, as continuing to smoke throughout adult life increases mortality from several major non-communicable diseases (and from tuberculosis) substantially [1–3,5].

Compared to the relatively slow increase in smoking-attributable mortality following the uptake of smoking, the effects of cessation emerge reasonably rapidly. Those who begin smoking in early adult life but stop before age 40 avoid more than 90% of the excess risk during their next few decades of life compared to those who continue to smoke. Even those who stop at age 50 avoid more than half the risk, although some risks persist [6–9].

The prevalence of ex-smoking in middle age is a useful measure of the success of tobacco control. In the European Union and the United States, there are now at least as many former as current smokers between the ages of 45 and 64 [3,10]. Between 1990 and 2005, France tripled its inflation-adjusted cigarette prices by raising excise taxes substantially, and in so doing halved cigarette consumption [1]. Today, the ratio of former smokers to current smokers in France is greater than the European average [10]. In contrast, in most LMICs (with the notable exception of Brazil) there are far fewer former than current smokers (Table 1) [3].

Tobacco cessation in LMICs has not been well studied. An analysis of the Global Adult Tobacco Surveys [11] found that cessation was associated with common tobacco control tools, namely price and non-price interventions [12]. Higher rates of exposure to work-site smoking bans, exposure to anti-smoking media messaging, warning labels and higher cigarette or bidi (in South Asia) prices were also associated with higher odds of recent quit attempts [11]. Throughout the world, most former smokers manage to quit unaided, but physician support or telephone-based or internet-based counseling and support can increase the likelihood of success. In motivated individuals, pharmacological treatments can also increase quit rates [3,12].

Skinner and colleagues [13] propose a minimal data set that can be used to guide and monitor cessation programs in clinical populations at the national level. Their proposal applies mainly to populations accessing clinical-based guidance and cessation programs. As such, it is more relevant to cessation support in high- or middle-income countries, where clinical services are better organized than in lower-income countries. Their minimal data set is a useful contribution to considering how to standardize cessation monitoring.

In addition to improve monitoring of cessation among clinical patients, complementary efforts to build population-level metrics for cessation are required. Better population-based monitoring would include more effective reporting of ex-smoking prevalence in middle age, including by levels of education or income [14]. The reduction in diseases from cessation can also help to accelerate demand for cessation services. However, cessation remains relatively uncommon in most LMICs, and it is therefore difficult to estimate the benefits of reducing specific diseases

Table 1 Numbers (millions) of former smokers at ages 45–64 years, 2008–12: selected regions or countries.

	Age 45–64 years		
Region or country	*Current*	*Former*	*% who stopped smoking*[a]
High-income regions/countries			
European Union	37	36	49
United States	18	22	55
Japan	9	5	36
Low- and middle-income countries			
China	115	21	15
India	46	7	13
Indonesia	17	2	11
Russia	15	4	19
Brazil	9	10	53
Bangladesh	7	2	22

Author calculations; [a]the percentage of people who have stopped smoking is calculated as former smokers divided by the sum of current smokers and former smokers.

in these settings. Hence, the current quantified benefits of cessation are quantified mainly in high-income countries [6–9]. As cessation rates rise in LMICs, epidemiological studies will be required to quantify their benefits [5].

Cessation is the only practicable way to avoid a substantial proportion of tobacco deaths before 2050, as a substantial reduction by 2025 in uptake by adolescents will have its main effect on mortality rates after 2050 [1–3,12]. Thus, efforts to expand the monitoring of smoking cessation at the clinical and population levels should be considered global health priorities.

Declaration of interests

None.

Keywords Cessation, clinical patients, global health, LMICs, population-based, taxation, tobacco.

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RECOMMENDATIONS FOR LINKING CLIENT DATA WITH CLINIC SERVICES TO IMPROVE OUR ABILITY TO MAKE INFERENCES

Skinner et al.'s proposed minimum data set for global stop-smoking services is an essential tool for improving tobacco dependence treatment. Additional items on treatment cost and cessation aids, including e-cigarettes, plus items linking program- and individual-level data, would enable stronger inferences about the effectiveness of specific services and cessation aids.

Skinner *et al.*'s proposed minimum data set for global stop-smoking services is an essential resource if our field is to improve the delivery and effectiveness of tobacco dependence treatment in the future [1]. Below, we suggest adapting and inserting items to link the proposed minimum data set on program-level services more effectively with individual-level data to allow for stronger inferences about the effectiveness of specific services, cessation aids and nicotine products often used as cessation aids (e.g. e-cigarettes).

Treatment information items proposed by Skinner *et al.* (Table 1) include detailed information on the service setting and treatments offered, with a focus on behavioral treatment. While two of their items solicit information on advice about stop smoking medication, the minimum data set does not address one key question: does the service provide pharmacological and/or nicotine replacement therapy directly, and if so, at what cost? Access to free cessation medication has been shown to