

## Staying focused on protecting young people from the harms of tobacco smoke



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When it comes to reducing the adverse effects of smoking, we have made tremendous progress. It is also clear that we still have a long way to go.

The harms posed to young people by exposure to tobacco smoke are severe and undeniable. They include sudden infant death syndrome, otitis media, lower respiratory tract infections, and asthma.<sup>1</sup> Growing evidence also points to an association of secondhand tobacco smoke exposure with suicide attempts.<sup>2</sup> Although much of the attention has focused on adults, an estimated 28% of deaths and 61% of disability-adjusted life-years lost due to secondhand smoke occur in children.<sup>3</sup>

In *The Lancet Global Health*, Chuanwei Ma and colleagues<sup>4</sup> report findings from the Global Youth Tobacco Survey (GYTS) on the prevalence of self-reported exposure to secondhand smoke among young people aged 12–16 years, as well as trends in exposure from 1999 to 2018. 62.9% (95% CI 61.7–64.1) of young people reported secondhand smoke exposure in the past week, with 32.5% (31.5–33.6) reporting daily exposure. Exposure in the past week was more common in public places (57.6%; 95% CI 56.4–58.8) than at home (33.1%; 32.1–34.1). Moreover, although exposure to secondhand smoke in the home decreased in 86 (65.6%) of the 131 countries surveyed, exposure in public locations either increased or did not change among young people in 65.6% of participating countries. Thus, although reductions in secondhand smoke exposure in the home are encouraging, the absence of progress globally in protecting young people from the harms of secondhand smoke in public places should serve as a wake-up call.

Young people residing in the western Pacific and European regions reported the highest prevalence of secondhand smoke exposure as well as the smallest declines in exposure over time. The prevalence of secondhand smoke exposure was lowest in upper-middle-income countries but greatest in high-income countries. This pattern is generally consistent with findings indicating relatively low implementation of comprehensive smoke-free bans in high-income countries.<sup>5,6</sup>

This study represents the first truly global report of secondhand smoke exposure in young people using GYTS data more recent than 2013. The GYTS is

arguably the best tool available for monitoring trends in tobacco use and exposure among young people across the world and for evaluating the impact of tobacco control efforts in this group. Although not all countries participated in this survey, the results provide among the most comprehensive data to date about exposure to tobacco smoke in young people worldwide. Although the reliance on self-reported data is a limitation, this method has been shown to be valid among adolescents. If anything, it probably represents an underestimate relative to actual exposure.<sup>7</sup> Finally, although results highlight public places outside the home as key sources of secondhand tobacco smoke, the results were not broken down according to specific locations (eg, school, stores, and vehicles). Such information is important for targeting interventions and enforcement efforts.

The WHO Framework Convention on Tobacco Control (FCTC) has contributed substantially to global progress in reducing tobacco-related morbidity and mortality. The FCTC covers issues important to addressing the epidemic of tobacco use, including measures to provide protection from exposure to tobacco smoke in public locations. Ratification of the FCTC has been shown to be associated with increased adoption of several evidence-based tobacco control strategies, including smoke-free policies.<sup>5</sup> The findings by Ma and colleagues<sup>4</sup> suggest that these efforts are having the intended effect, with young people in countries that have ratified the FCTC reporting lower levels of exposure and greater reductions over time than countries that have not ratified the FCTC.

In 2008, WHO released MPOWER, a collection of six measures designed to provide guidance on implementing evidence-based tobacco control strategies. At present, 75% of countries across the world—representing approximately 5.3 billion people—are covered by at least one MPOWER tobacco control measure adopted at the highest level.<sup>6</sup> Nevertheless, only 34% of countries, comprising 24% of the global population, are protected by complete smoking bans,<sup>6</sup> whereas 37% have implemented partial bans. Considering that no level of exposure to tobacco smoke is safe,<sup>1</sup> bans must be comprehensive to provide adequate protection.

The opportunity to breathe air free from tobacco smoke should be considered a fundamental right of children.<sup>8</sup> As our most vulnerable citizens, young people deserve the strongest protections from tobacco smoke. Arguably, the best way to ensure this protection is through comprehensive smoking bans, which effectively protect young people from the harms of tobacco smoke.<sup>9</sup> Crucially, most policies do not address secondhand smoke exposure in private locations, but instead rely upon individuals to voluntarily refrain from smoking in these contexts when young people are present. Expanding policies to include homes and private vehicles containing children and adolescents is likely to confer additional protections, and such policies have been implemented in a few countries.

Passage of clean air laws is crucial to protecting non-smokers but is not sufficient. To have meaningful impact, policies also must be effectively enforced. The findings by Ma and colleagues<sup>4</sup> suggest that enforcement is falling short. Although substantial variability exists at both the national and local levels, compliance with smoke-free laws remains suboptimal overall and largely unchanged in recent years, even as the number of locations enacting such laws has increased.<sup>10</sup>

We can do better. For the sake of the world's young people, we must do better.

I declare no competing interests.

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- 1 US Office on Smoking and Health, US Department of Health and Human Services. The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General. Atlanta, GA: Centers for Disease Control and Prevention, 2006.
- 2 Lange S, Koyanagi A, Rehm J, Roerecke M, Carvalho AF. Association of tobacco use and exposure to secondhand smoke with suicide attempts among adolescents: findings from 33 countries. *Nicotine Tob Res* 2020; **22**: 1322–29.
- 3 Öberg M, Jaakkola MS, Woodward A, Peruga A, Prüss-Ustün A. Worldwide burden of disease from exposure to second-hand smoke: a retrospective analysis of data from 192 countries. *Lancet* 2011; **377**: 139–46.
- 4 Ma C, Heiland EG, Li Z, Zhao M, Liang Y, Xi B. Global trends in the prevalence of secondhand smoke exposure among adolescents aged 12–16 years from 1999 to 2018: an analysis of repeated cross-sectional surveys. *Lancet Glob Health* 2021; **9**: e1667–78.
- 5 Uang R, Hiilamo H, Glantz SA. Accelerated adoption of smoke-free laws after ratification of the World Health Organization Framework Convention on Tobacco Control. *Am J Public Health* 2016; **106**: 166–71.
- 6 WHO. WHO report on the global tobacco epidemic 2021: addressing new and emerging products. Geneva: World Health Organization, 2021.
- 7 Johnson-Kozlow M, Wahlgren DR, Hovell MF, et al. Adolescents validly report their exposure to secondhand smoke. *J Clin Epidemiol* 2010; **63**: 914–19.
- 8 Toebes B, Gispén ME, Been JV, Sheikh A. A missing voice: the human rights of children to a tobacco-free environment. *Tob Control* 2018; **27**: 3–5.
- 9 Faber T, Kumar A, Mackenbach JP, et al. Effect of tobacco control policies on perinatal and child health: a systematic review and meta-analysis. *Lancet Public Health* 2017; **2**: 420–37.
- 10 Anderson CL, Mons U, Winkler V. Global progress in tobacco control: the question of policy compliance. *Glob Health Action* 2020; **13**: 1844977.