



Protecting children from second-hand tobacco smoke: evidence of major progress but a final push is needed in the UK

Sean Semple,* Rachel O'Donnell and Ruairaidh Dobson

Institute for Social Marketing and Health, University of Stirling, Stirling FK9 4LA, Scotland

We welcome the findings of Tattan-Birch and Jarvis¹ in demonstrating a 90% reduction in objective measures of exposure to second-hand tobacco smoke [SHS] among children in England between 1998 and 2018. Their important study uses Health Survey of England [HSE] data on salivary cotinine, as a marker of nicotine intake and SHS exposure, to show that geometric mean values of cotinine reduced from 0.50 to 0.05 ng/ml. Their results additionally show that by 2018 over 93% of children in England were classified as living in a smoke-free home environment. Policymakers in Scotland have achieved similar improvements with a 2014 world-leading target to reduce the proportion of children exposed to SHS at home to under 6% by 2020.² The change in social norms relating to smoking around children has been significant and well documented³ over the past two decades and, coupled to reductions in adult smoking prevalence, now mean that the majority of children in England have no detectable cotinine in their saliva.

However, there is some disparity in the results that indicates that the journey towards protecting all children in the UK from SHS still has some way to go. In the Health Survey of England and the similar Scottish Health Survey, living in a smoke-free home is primarily assessed through parental self-report, but it is worth observing that despite the high levels of parents reporting smoke-free homes (93 and 94% in England and Scotland respectively), over one in three children (35%) had measurable levels of cotinine in their saliva, indicating exposure to SHS, in England in 2018. There are several potential reasons for this apparent disparity, including children being exposed to SHS outside the home, partial smoke-free rules being misreported, stigma associated with smoking in the home, and shared caring arrangement with children looked after in

more than one home. Nicotine intake from e-cigarettes (perhaps being used as a harm-reduction approach by parents who find it difficult to quit), and small amounts of dietary intake of nicotine from some vegetables including tomatoes and aubergines, may also potentially explain some non-zero values.

The longitudinal cross-sectional collection of salivary cotinine from children in England over the period spanned in this paper is globally unique, valuable data. It provides England with the opportunity to set a bold and ambitious national target to help drive down children's exposure to SHS. Reducing the percentage of children living in homes where people smoke inside to zero by 2030, with associated annual tracking of reductions in objective cotinine levels in children and non-smoking adults, should be a target for UK and devolved governments, alongside UK-wide ambitions for reducing smoking prevalence to <5%.⁴ Such an achievement would help protect the acute respiratory and long-term health of those children currently breathing SHS, and would send an important message to other countries on the need to tackle SHS exposure for the 40% of children estimated to be exposed to SHS at a global level.⁵

Declaration of interests

None of the authors have any potential conflicts of interests to declare.

Contributors

SS, RO and RD were all involved in conceptualisation of this correspondence. SS wrote the initial draft and all authors were involved in reviewing and editing the final version.

References

- 1 Tattan-Birch H, Jarvis M. Children's exposure to second-hand smoke 10 years on from smoke-free legislation in England: cotinine data from the Health Survey for England 1998-2018. *Lancet Reg Health Eur.* 2022;15: 100315. <https://doi.org/10.1016/j.lanepe.2022.100315>.
- 2 Scottish Government. Raising Scotland's tobacco-free generation: our tobacco control action plan 2018, 2018. Available: <https://www.gov.scot/publications/raising-scotlands-tobacco-free-generation-tobacco-control-action-plan-2018/>. Accessed 8 February 2022.
- 3 Passey ME, Longman JM, Robinson J, Wiggers J, Jones LL. Smoke-free homes: what are the barriers, motivators and enablers? A

DOI of original article: <http://dx.doi.org/10.1016/j.lanepe.2022.100315>,
<http://dx.doi.org/10.1016/j.lanepe.2022.100334>

*Corresponding author.

E-mail address: sean.semple@stir.ac.uk (S. Semple).

© 2022 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

The Lancet Regional Health - Europe
2022;15: 100348
Published online xxx
<https://doi.org/10.1016/j.lanepe.2022.100348>

- qualitative systematic review and thematic synthesis. *BMJ Open*. 2016;6(3): e010260. <https://doi.org/10.1136/bmjopen-2015-010260>. Mar 17 PMID: 26988351; PMCID: PMC4800143.
- 4 UK Government Department of Health & Social Care, 2019. Advancing our health: prevention in the 2020s – consultation document. <https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s/advancing-our-health-prevention-in-the-2020s-consultation-document>. Accessed 8 February 2022.
- 5 Oberg 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(9760):139–146. Jan 8.