

Smoking ban in cars protects children, but is vaping 'The Elephant in the Car'?

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In March 2006, smoking in public places was banned in Scotland. The following year a similar ban was introduced in England—the last of the UK home nations to adopt this policy. At the time, some suggested that the ban might paradoxically increase children's exposure to environmental tobacco smoke (ETS) in the home. Parents who were unable to smoke in public places, such as pubs or restaurants, might instead smoke at home, thereby increase their children's exposure to ETS. This was termed the 'displacement hypothesis'.¹ However, a systematic review of studies analysing the effects, on children's ETS exposure, of banning smoking in public places concluded that exposure is considerably reduced.² This included data from children in Scotland, where ETS exposure was confirmed using salivary cotinine.³

However, banning smoking in public places does not protect children in cars, who may be exposed to particularly high levels of ETS.⁴ Smoking in cars carrying children was banned in England in 2015 and in Scotland in 2016. Like the earlier ban on smoking in public places, the ban on smoking in cars met with criticism—denounced as the work of the 'nanny state' and criticised as unenforceable. So has the ban on smoking in cars with children reduced their exposure to ETS? In this month's *Thorax* (p_{xxx}), Laverty and colleagues⁵ provide evidence that

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children's ETS exposure has indeed gone down. They present self-report survey data (provided by children aged 13–15 years old) for the years before and after the ban was introduced in England and Scotland. These data show that 'regular exposure' was reduced from 3.4% to 1.3% in Scotland and from 6.3% to 1.6% in England, following introduction of the ban.

This analysis has some shortcomings. The most vulnerable group for ETS exposure are preschool children, and data on exposure for this age group are not reported in the current study. A survey would require proxy reporting by the parents, on behalf of their preschool children, which would be affected by social desirability bias. Furthermore, the current study does not report cotinine-confirmed ETS exposure. However, Laverty and colleagues⁵ paper describes the effect of a smoking ban in cars introduced at different times in different two countries, and in both there is a strong temporal association with reduced exposure of children to ETS.

In the UK, it is not illegal to use e-cigarettes in cars with children, unless this distracts the driver or the vapour obscures their view of the road. Data from the USA suggest just over half of parents who vape also allow vaping in the car when children are present.⁶ It should now be a research priority to investigate children's nicotine exposure through vaping—particularly in cars—to inform future policy changes to protect children.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

Data availability statement Data sharing not applicable as no data sets generated and/or analysed for this study. No data are available. Commentary therefore contains no data.

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To cite Ng C, Smyth AR. *Thorax* 2020;**75**:297.

Received 17 February 2020

Accepted 17 February 2020



► <http://dx.doi.org/10.1136/thoraxjnl-2019-213998>

Thorax 2020;**75**:297.

doi:10.1136/thoraxjnl-2020-214660

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