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Lung alert

Smoke-free legislation reduces exposure in children

Smoke-free legislation was introduced in Scotland in March 2006. The CHETS study investigated changes in children's exposure to second-hand smoke due to a change in legislation resulting in changes to parental smoking patterns.

In this cross-sectional study, surveys were performed by primary school children (mean age 11.4 years) in the same schools and class before (January 2006) and after (January 2007) legislation. The questionnaire assessed environmental exposure to smoke, and saliva was tested for cotinine. All children included were non-smokers themselves, with cotinine concentrations <15 ng/ml. In total, 2559 children in year 7 completed the questionnaire from 116 schools in 2006, and 2424 pupils from 111 schools in 2007.

The median cotinine concentration fell after legislation, with an increase in the proportion of students with a cotinine concentration below the limit of detection. There was no difference in second-hand smoke exposure at home or in cars after the legislation, but there was significantly reduced exposure in someone else's home, in cafes/restaurants or on public transport.

The study shows an important positive impact of non-smoking legislation. The authors conclude that the legislation has reduced exposure to second-hand smoke in children living in households with low levels of exposure, but not in children exposed to high levels at home where the mother or both parents smoke. However, there was no evidence of increased parental smoking at home.

- Akhtar PC, Currie DB, Currie CE, *et al.* Changes in child exposure to environmental tobacco smoke (CHETS) study after implementation of smoke-free legislation in Scotland: national cross sectional survey. *BMJ* 2007;**335**:545–9

Vandana Gupta

Correspondence to: V Gupta, Royal Albert Edward Infirmary, Wigan, UK; vandana Gupta@doctors.org.uk