

Introduction

- Scottish Smoke-free legislation came into effect in March 2006
- The legislation prohibited smoking in most indoor public places but did not include private homes
- Changes in Child Exposure to Environmental Tobacco Smoke (CHETS) study was commissioned to evaluate impact of the legislation on children
- CHETS found significant reduction (39%) the exposure to environmental tobacco smoke in non-smoking children after the ban¹.
- CHETS also found socioeconomic status effected a child's exposure to environmental tobacco smoke².
(↑ socioeconomic status, ↓ exposure and vice versa)

Aim

- to examine the impact of the Scottish smoke-free legislation on respiratory symptoms in children
- to identify the factors that effect the prevalence of respiratory symptoms

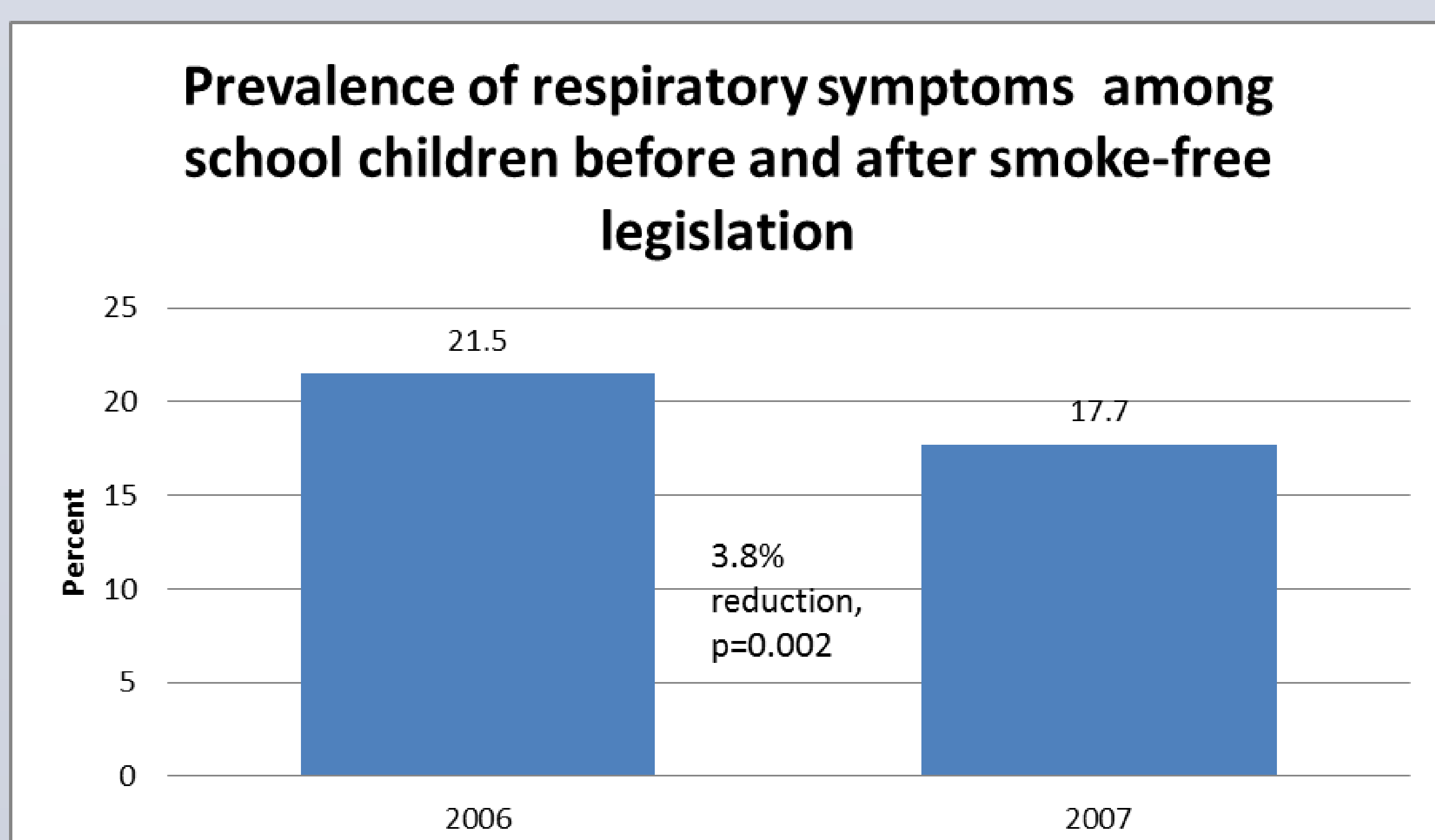
Methods

- Secondary data from the CHETS* study
- nationally representative sample
- cross-sectional, class-based Scottish school surveys
- Jan 2006 & Jan 2007 (pre and post legislation)
- school children in Primary 7, aged 11-12 years
- cotinine confirmed non-smokers[#] and with a known family structure, included in the data set.
- self reported questionnaire, and
- saliva sample for testing for cotinine

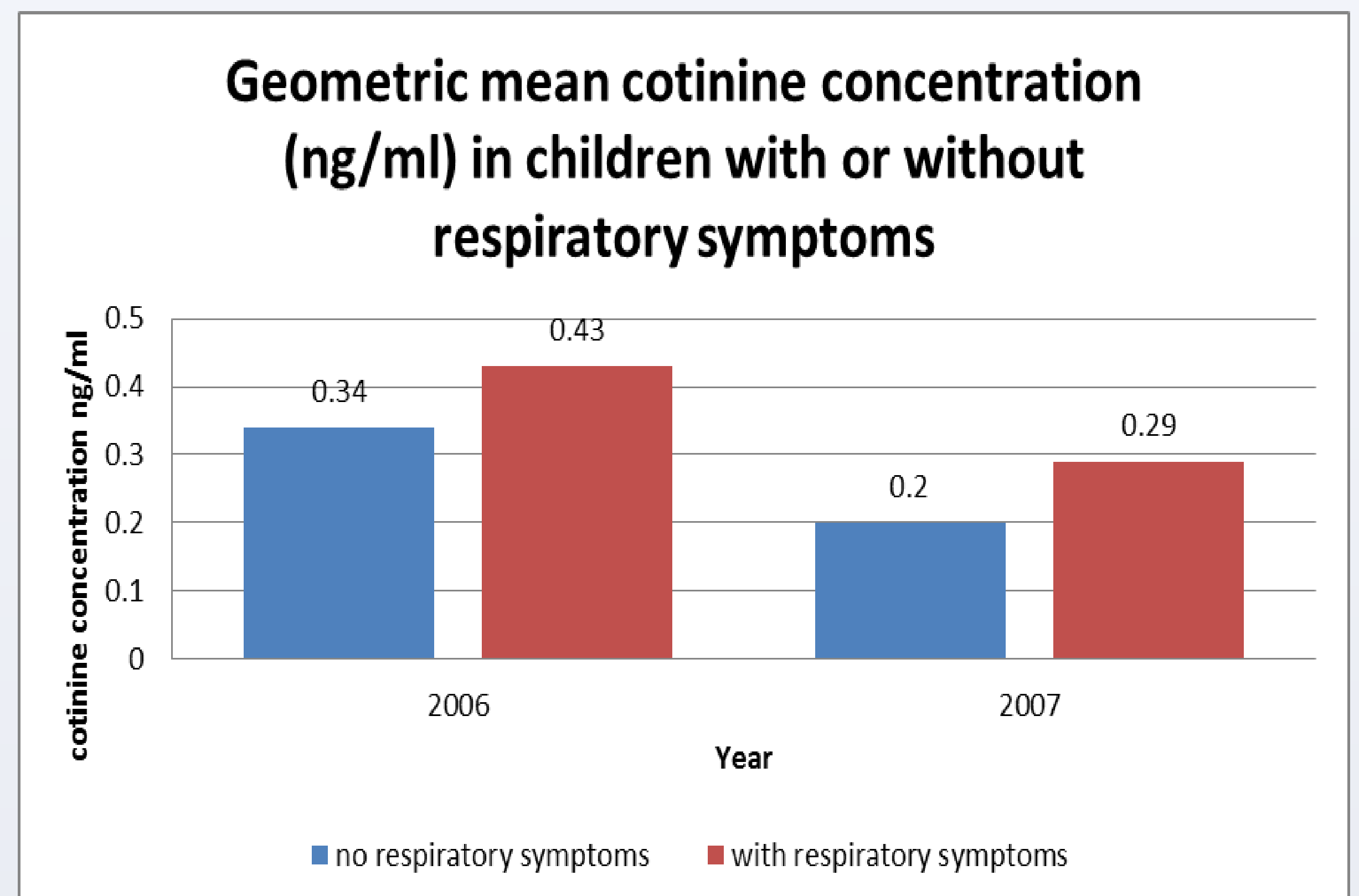
*CHETS = Changes in child exposure to environmental tobacco smoke
cotinine concentration of less than 15ng/ml

Results

Significant decrease in respiratory symptoms post legislation



Results (continued)



- The reduction in respiratory symptoms was shown to be linked to the reduction in environmental tobacco smoke exposure

Variables	B	S.E	df	Sig	Odds Ratio	95%CI
Survey year (2007)	-0.20	0.83	1	p= 0.005	0.79	0.67-1.93
Ref category (2006)	-	-	-	-	-	-
Parental smoking (PS)			3	p<0.001		
PS (father only)	0.39	0.13	1	p= 0.002	1.48	1.15-1.92
PS (mother only)	0.47	0.11	1	p<0.001	1.61	1.29-2.00
PS (both)	0.62	0.22	1	p<0.001	1.86	1.49-2.31
Ref category (neither parent smokes)	-	-	-	-	-	-
Urban-rural (rural)	-0.35	0.14	1	p=0.01	0.70	0.53-0.92
Ref category (urban)	-	-	-	-	-	-

- Logistic regression was carried out on data
- Survey year, parental smoking status and urban rural classification were found to be significant
- Children whose parents smoke more likely to have respiratory symptoms
- Children in urban areas more likely to have respiratory symptoms than children in rural areas
- Family affluence (FAS) was included in regression but was found to be not significant

Conclusion

- The Scottish smoke-free legislation which has been shown to lead to a reduction in environmental tobacco smoke exposure in children is also associated with a reduction in respiratory symptoms
- Parental smoking status and urban rural classification were found to have an effect on respiratory symptoms

References

1. Akhtar PC, Currie DB, Currie CE et al. *BMJ* 2007;335:545-9
2. Akhtar PC, Haw S, Levin KA et al. *J Epid Comm Health* 2010; 64:341-346