To analyse each determinant’s unique contribution to booster seat use.

Methods Elementary public schools (n=16) were randomly selected in two cities in Israel. First and second grade classes were selected in each school. Parents (n=754) answered a self-administrated questionnaire in September 2010. Characteristics of neighbourhood of residence were obtained from census data for multilevel analysis. The outcome variable was dichotomised into ‘Always’ booster seat use and ‘Other’ for categories of misuse.

Results Booster seat use was reported by 57% of parents. Booster seat use was negatively associated with family size; it was positively associated with the driver’s belting usage, parents’ car safety knowledge and authoritative parenting (p<0.05). Intraclass Correlation Coefficient for booster seat use between neighbourhoods was 4.3% (p=0.004). The odds to booster seat use wasn’t significantly different between neighbourhoods in multilevel analysis of neighbourhood characteristics.

Conclusions Parent’s knowledge, behaviour, and family size are the most influencing determinants on booster seat use.