DEVELOPING A HEALTHY LIFESTYLE INDEX FOR RECRUITMENT STRATEGIES AND LESSONS FROM THE J Epidemiol Community Health category. The association between the HLI and risk of asthma, rhinoconjunctivitis and eczema was evaluated using multilevel mixed-effects logistic regression models. To estimate the proportion of cases in the entire study population that could be prevented had all children been following four or all five healthy lifestyle factors (i.e. lowest-risk exposure group), we derived centre-specific population-attributable risk fractions.

Results Data of 70795 children from 37 centres in 19 countries were analysed. Each additional healthy lifestyle factor was associated with a reduced risk of current wheeze (OR=0.87, 95% CI 0.84–0.89), asthma ever (OR=0.89, 95% CI 0.87–0.92), current symptoms of rhinoconjunctivitis (OR=0.95, 95% CI 0.92–0.97), and current symptoms of eczema (OR=0.92, 95% CI 0.92–0.98). Theoretically, if associations were causal, a combination of four or five healthy lifestyle factors would result into a reduction up to 16% of asthma cases (ranging from 2.7 to 26.3% according to region of the world).

Conclusion These findings should be interpreted with caution given the limitations to infer causality from cross-sectional observational data. Efficacy of interventions to improve multiple modifiable lifestyle factors to reduce the burden asthma and allergy in childhood should be assessed.