



Educational and health outcomes of children treated for asthma: Scotland-wide record linkage study of 683 716 children

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Asthmatic children experience significant disadvantage in addition to poor health. Adverse effects on other aspects of their life, such as education, need to be recognised and addressed. bit.ly/2W5K4Nib

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ABSTRACT

Background: The global prevalence of childhood asthma is increasing. The condition impacts physical and psychosocial morbidity; therefore, wide-ranging effects on health and education outcomes are plausible.

Methods: Linkage of eight Scotland-wide databases, covering dispensed prescriptions, hospital admissions, maternity records, death certificates, annual pupil census, examinations, school absences/exclusions and unemployment, provided data on 683 716 children attending Scottish schools between 2009 and 2013. We compared schoolchildren on medication for asthma with peers, adjusting for sociodemographic, maternity and comorbidity confounders, and explored effect modifiers and mediators.

Results: The 45 900 (6.0%) children treated for asthma had an increased risk of hospitalisation, particularly within the first year of treatment (incidence rate ratio 1.98, 95% CI 1.93–2.04), and increased mortality (HR 1.77, 95% CI 1.30–2.40). They were more likely to have special educational need for mental (OR 1.76, 95% CI 1.49–2.08) and physical (OR 2.76, 95% CI 2.57–2.95) health reasons, and performed worse in school exams (OR 1.11, 95% CI 1.06–1.16). Higher absenteeism (incidence rate ratio 1.25, 95% CI 1.24–1.26) partially explained their poorer attainment.

Conclusions: Children with treated asthma have poorer education and health outcomes than their peers. Educational interventions that mitigate the adverse effects of absenteeism should be considered.