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Education and health outcomes of children treated for chronic conditions

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Background with rationale

This retrospective cohort study linked Scotland-wide education data to national health data to explore associations between childhood chronic conditions and subsequent educational and health outcomes.

Main aim

Conditions studied were diabetes, asthma, epilepsy, attention deficit hyperactivity disorder (ADHD) and depression. We also explored neurodevelopmental multimorbidity (comorbid autism, learning disability, ADHD or depression). Educational outcomes were school absenteeism and exclusion, special educational need, academic attainment and subsequent unemployment. Health outcomes were hospital admissions and all-cause mortality.

Methods/Approach

Pupil census data and associated education records for all children attending primary and secondary schools in Scotland between 2009 and 2013 were linked to national prescribing data, acute and psychiatric hospital admissions, death records and retrospective maternity records enabling conditions to be studied whilst adjusting for sociodemographic and maternity factors and comorbid conditions. Conditions were ascertained from prescribing data and school records.

Results

All conditions were associated with increased school absenteeism, special educational need, and hospitalisation. All, excluding diabetes, were associated with poorer academic attainment and all, excluding ADHD were associated with increased mortality. ADHD and depression were associated with increased exclusion from school whilst epilepsy, ADHD and depression were associated with subsequent unemployment.

Children experiencing neurodevelopmental multimorbidity had poorer outcomes across all educational domains. Depression was the biggest driver of absenteeism and ADHD was the biggest driver of exclusion.

Conclusions

In addition to poorer health outcomes, schoolchildren with these chronic conditions appear to experience significant educational disadvantage compared to their peers. Therefore interventions and further understanding of the intricate relationships between health and education among children with these conditions is required.

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