

Interventions to reduce acute paediatric hospital admissions: a systematic review

What did we find?

- There is little good quality published evidence to inform the most appropriate method for reducing the number of children and young people that are admitted to hospital through emergency departments.
- There is some evidence that short-stay units may reduce hospital admissions.
- We found no evidence that the use of guidelines or algorithms, involvement of a paediatric consultant in the decision-making process, telephone triage by a paediatric consultant or next-day emergency paediatric clinics helped to reduce admissions.
- There was a lack of detail in the reporting of the methods used in the studies and in the description of the interventions which makes interpretation difficult.



Why did we do this review?

The number of children and young people admitted to hospital through emergency departments has been rising year on year for the last decade. The reasons for this are not fully understood and there are likely to be many contributing factors.

A range of initiatives to decrease hospital admission rates for children have been attempted both in the UK and beyond. These include acute assessment units, consultant-level telephone triage services, the provision of rapid access outpatient appointments, an increased emphasis on consultant-led care in acute settings and the introduction of evidence based guidelines and algorithms to guide the management of common symptoms (e.g. sickness and diarrhoea). However, there is no clear consensus on the best way.

How did we do this review?

The research was a systematic review. This brings together all existing research on a particular question. To find studies that might help us to answer the question we searched the relevant academic literature.

We found seven studies conducted in the UK, the US, Spain, France and Canada. Four of the papers looked at the effects of the introduction of a short-stay facility on admission rates. In the remaining three papers the effects of using guidelines to manage diarrhoea, gastroenteritis, seizures and asthma were studied.

Quality of the research and cautionary notes

Although we undertook a comprehensive search, we were unable to find any good quality evidence to answer our research question. All of the included studies are open to significant bias and the reports lack the necessary detail to fully understand how the research was conducted or what they did.

What next?

Changes in the definition of a 'hospital admission' over time mean that it is difficult measure whether an intervention has worked or not. Definitions may differ between countries and may also be driven by different funding mechanisms. More useful ways to measure hospital admission might be 'length of stay', 'rate of re-admission' or 'resource use'.

There is a need for high quality, well conducted research in which more appropriate outcome measures are reported to enable informed service change.



Contact details and further information about the published paper:

The PenCLAHRC EST is part of Evidence Synthesis and Modelling for Health Improvement (ESMI), at the University of Exeter Medical School. Further information about this research is available on the University of Exeter Medical School website: <http://medicine.exeter.ac.uk/esmi/workstreams/>

The full version of the systematic review of these findings is published in Archive of Disease in Childhood. You can access the paper here: <http://adc.bmj.com/content/97/4/304.full.pdf+html>

If you would like copies, please email the Evidence Synthesis Team on: evidsynthteam@exeter.ac.uk



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