The University Of Sheffield.

Implementing interventions to reduce preventable hospital admissions

Exploring factors that affect implementation of interventions to reduce preventable admissions for cardiac or respiratory conditions

- This research sought to provide an in-depth understanding of how interventions that have been shown to **reduce hospital admissions for cardiovascular and respiratory conditions** may work, with a view to supporting their effective implementation in practice

- We performed a mapping review of evidence on **interventions used in the NHS** (e.g. self-management, case management, cardiac or pulmonary rehabilitation and specialist clinics) and a realist synthesis of implementation evidence related to these interventions

- We found that interventions with strong evidence of effectiveness overall had **not necessarily demonstrated effectiveness** in UK settings

- **Effective implementation** was associated with availability and promotion of services, support from patients and carers and support for workforce roles that promote **continuity of care** and co-ordination between services

What is the problem?

Admissions to hospital increasingly contribute to pressure on health system resources internationally. In the UK NHS, changes to commissioning arrangements have increased the focus on reducing hospital admissions. Despite this, overall emergency admissions continue to increase each year.

In 2012, a series of systematic reviews summarised the evidence regarding interventions that had exhibited success in reducing unplanned hospital admissions. Although the pattern of findings was mixed, the research revealed a consistent picture of reduction across different interventions targeting two particular types of condition, namely cardiovascular and respiratory conditions.

The aim of this research was to fill a gap in the evidence base around successful implementation of admission reduction programmes relevant to the UK NHS by focusing on understanding what works for who, why it works and in what contexts.

What did we do?

We first investigated interventions that are currently used in the NHS to manage cardiovascular or respiratory conditions using a **systematic mapping approach**. We then used a **realist approach** to identify and explain factors that contribute to successful implementation of interventions to reduce preventable hospital admissions. **Full details of methods can be found in the published report (Chambers et al 2020)**.

What did we find out?

A total of 569 publications were included in the mapping review. Unsurprisingly, the interventions identified as having the best evidence of effectiveness (or no effect) were well represented in the map. The largest group of studies originated from the USA. The included studies from the UK showed a similar distribution to that of the map as a whole, but there was evidence of some country-specific features, such as the prominence of studies of telehealth.

In the realist synthesis, it was found that **interventions with strong evidence of effectiveness overall had not necessarily demonstrated effectiveness in UK settings**. This could be a barrier to their use in the NHS. Facilitation of the implementation of interventions was often not reported or inadequately reported. Many of the **interventions were diverse in the ways in which they were delivered** and there was **considerable overlap** in the content of interventions described by different names.

We identified **five programme theories to explain why interventions might work** to reduce avoidable hospital admissions. These were supported to varying degrees by empirical literature, but all provided valuable insights.

What are the implications?

Overall, implementation appears to be favoured by:

- support for self-management by patients and their families/carers,
- support for services that signpost patients to consider alternatives to seeing their general practitioner
- recognition of possible reasons why patients seek admission
- support for health-care professionals to diagnose and refer patients appropriately
- support for workforce roles that promote continuity of care and co-ordination between services.

Future research should focus on understanding discrepancies between national and international evidence; the design and evaluation of theory-informed implementation strategies; and qualitative research on decision-making around hospital referrals and admissions.