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Increasing the uptake of guidelines in rural emergency departments

Evidence-practice gap

- Asthma affects 14-16% of children and 10-12% of adults in Australia. This is among the highest prevalences in the world. Both children and adults with asthma present often at hospital emergency departments for treatment.
- Although there are evidence-based clinical practice guidelines for both adult and childhood asthma, and these have been disseminated to hospitals (including to emergency departments), use of the guidelines in day-to-day clinical practice is low.
- There is growing evidence on how best to implement guidelines and persuade clinicians to change what they do. However, this evidence base is seldom used, although it is known that widely used strategies such as mail-outs of guidelines and wall charts have little effect.
- Most studies that have aimed to translate research evidence into clinical practice provide no rationale for the methods used, no proof that any changes were due to their intervention, and insufficient detail to enable others to recreate their methodology.
- In this project, carried out in the emergency departments of hospitals in the Hunter New England Health region of NSW, we aimed to increase the use of evidence-based guidelines on childhood and adult asthma. We based our approach on the evidence of what works, tailored to the unique characteristics of each hospital environment.

Key findings

- Our intervention substantially improved the use of the asthma guidelines in emergency care, both in a large regional hospital and in smaller, general-practice run rural district hospitals. Positive changes in practice happened immediately and were still in place 12 months later.
- The literature reports changes in the order of 10% resulting from attempts to increase compliance with guidelines. The gains we achieved were much larger than this.
- At a large regional referral hospital, compliance with the guidelines improved from 38% to 79% (adult asthma) and from 47% to 79% (childhood asthma). This overall improvement included significant gains in six of the seven clinical indicators we identified – documentation of asthma severity, use of spirometry, use of spacers to deliver medication, use of written short-term asthma management plans, reduction in use of ipratropium in mild asthma, and (for adult asthma) reduction in antibiotic use in asthmatics presenting without a fever.
- In smaller, GP-staffed rural district hospitals, compliance with the guidelines improved from 36% to 62%. This overall improvement included significant gains in three of the six clinical indicators we identified – documentation of asthma severity, use of spirometry, and use of written short-term asthma management plans.

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- There was no improvement in compliance in the control hospitals, which had received the guidelines but not our evidence-based intervention.

Implications for clinical practice

- Guidelines do not implement themselves. Simply distributing them with no follow up has a limited impact, whereas – as this study has demonstrated – an implementation strategy based on the evidence of what works can change clinicians' behaviour for the better, and significantly increase compliance with guidelines. The result is better patient care.
- Use the available literature on what works and what doesn't work to develop an evidence-based implementation plan, and tailor this to meet local needs, building on strengths and addressing barriers. Our intervention was designed specifically for the emergency departments in the hospitals targeted.
- Present the guidelines simply, in a user-friendly format. We presented them as an A4 sheet, which was incorporated into the medical record at triage.
- Focus more on departmental processes and organization than individual clinicians. Targeting individuals alone is of limited value in a complex environment such as a busy emergency department. Changing the prevailing culture within a department is essential.
- Gain the support of senior staff as opinion leaders and drivers for a sustainable department-wide approach that can cope with rotation of junior medical staff and frequent locums.
- If clinicians are to change what they do, they need to believe in the evidence for and the value of the change. Be prepared to discuss evidence-based medicine and to know its strengths and limitations. Guidelines are more likely to be taken up if they are in line with clinicians' existing beliefs, if they reduce (or do not increase) workload, if they are well validated and from a respected source, and if they require few new skills.
- Knowledge brokering (i.e. acting as a link between decision makers and researchers) is important. During the study, we visited sites, discussed evidence and the guidelines, and advocated compliance. In doing so, we became part of the implementation process as a link between the research evidence and clinical practice.
- Reminders and education, especially outreach education, are among the most successful strategies for change. Our study confirmed this.
- In small hospitals, because of the range of conditions seen and the small numbers of each, fewer clinical pathways are in use and it is more difficult to establish a 'culture' of guideline use.
- The rural GPs reported a number of barriers to using evidence based medicine, including remoteness and professional isolation, workload, and lack of evidence 'at hand'. Solutions they suggested were better access to guidelines, medical detailing, and 'travelling road shows', all of which were included in this intervention.

Method

- We developed an evidence-based implementation (EBI) strategy to study implementation of asthma guidelines in the emergency departments of rural hospitals in the Hunter-New England Health Region of NSW. We compared this to control hospitals, where the guidelines and wall charts had been distributed but nothing further done to implement the guidelines.
- The study had three arms:
 - We compared use of the National Asthma Council guidelines for adult asthma at two large rural referral hospitals, one using our EBI strategy and one control.
 - We compared use of the same guidelines at eight small GP-staffed rural district hospitals, four using our EBI strategy and four controls.
 - We studied use of NSW Health guidelines for childhood asthma at a large rural referral hospital, comparing the results of our EBI with management of asthma in children at the same hospital in the previous year.
- In line with the evidence on 'what works' in implementation:

- We identified specific evidence-practice gaps and used these as clinical indicators for the study.
- We consulted at each hospital to identify barriers to change – at the levels of patient, individual clinician, emergency department team, and emergency department processes – and addressed these barriers in our strategy.
- We reformatting the guidelines into a simple, usable A4 format, which was incorporated as a reminder into the patient's medical record.
- We used other reminders – eg by senior staff, during formal education sessions, notices in the department.
- We posted feedback on progress regularly in the tea room, held education sessions for staff, and provided other informal updates on the project.
- We gained the support of senior staff as opinion leaders and drivers of the project.
- We collected data on use of the guidelines at each hospital before the intervention, immediately after it, and 12 months later.