Emergency department attendance: a critical appraisal of the literature  
New Zealand Health Technology Assessment Clearing House

Record Status
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Citation

Authors' objectives
This report aims to examine the key literature that has assessed the appropriateness of attendance at the emergency department.

Authors' conclusions
Conclusions about inappropriate ED use:

While studies that have described the inappropriate use of the ED were relatively plentiful, remarkably few studies have evaluated the health outcomes associated with alternatives to ED-based care.

ED attendance is not included in the National Minimum Dataset and consequently no published national data exists that describes the trends in ED attendance in New Zealand.

Although published data is not available, consistent opinion suggests that ED attendances have been increasing in New Zealand.

No valid and reliable method exists to define inappropriate care at an ED. Clinicians, administrators and consumers have markedly heterogeneous definitions of appropriate attendance at the ED.

A medical viewpoint of appropriateness has usually been presented in the literature. That is, patients presenting for non-urgent care that could be provided by a primary care physician are often designated as inappropriate ED attenders.

Attendance at an emergency department by patients seeking medical care for non-urgent conditions has been labelled fiscally imprudent, as it is considered to be more expensive for health funders as well as medically undesirable due to the discontinuous and uncoordinated care that is provided. No conclusive evidence exists for either of these assertions.

A large number of studies have examined the appropriateness of ED-based care in a number of settings and have produced a wide variation in their estimates of the percentage of attendances that were designated as being appropriate (this review identified that between 3% and 59% of ED attendances have been deemed to be inappropriate in the literature).

Conclusions about the effectiveness of interventions to reduce inappropriate ED use:

Without a valid and reliable measure of inappropriate ED attendance, the absolute effectiveness of interventions to reduce these attendances cannot be accurately assessed.

The evidence for the relative effectiveness of alternatives to ED-based care was found to be patchy in coverage and quality. Relatively little research has been undertaken to evaluate major new developments in primary or secondary care that have an important bearing on the interface between these levels of care. These new developments include: new deputising arrangements for out-of-hours GP care, and the provision of minor injury units located in a variety of settings and staffed by a range of different professionals.
Most of the research that has evaluated the effectiveness of new organisational arrangements for inappropriate ED attenders has used a quasi-experimental study design rather than a randomised controlled trial methodology. Only four randomised controlled trials of interventions to reduce inappropriate ED use were identified by this review.

Despite the general limitations of the research, some evidence was available for the effectiveness of restricted ED access and expanded access to primary care and the efficacy of cost-sharing which have consistently been found to be effective methods to restrict ED use (although the reduction may apply to all types of users and not just inappropriate users). Less robust evidence exists for the effectiveness of social workers in the ED or certain specific medical interventions.

Available (although generally poor quality) evidence suggests that the following interventions are ineffective at reducing the number of inappropriate ED attendance: triage, patient education and changes in the characteristics of GP services. Several major changes in service delivery such as the provision of out-of-hours GP clinics and the development of hospital-based minor injuries clinics have somewhat remarkably not been evaluated in regard to their effect on ED usage.

Interventions to reduce non-urgent visits to the ED need to be multi-faceted to account for the wide range of determinants that lead patients to seek care at that venue. Single interventions are unlikely to be successful whereas those that involve multiple strategies that include the patient, physician and system changes are more likely to be successful.

A notable problem with the literature is that most of the research has been based on the provision of primary care to people in the US where an emphasis has traditionally been on specialist-based services. It is possible that the marginal gains for the provision of primary care-based interventions in the US setting may be substantially greater than could be achieved in the UK, Australian or New Zealand setting where primary care is already well established.

Finally, it should be remembered that interventions to change ED utilisation have been driven by an increase in demand and are sponsored by supply side organisations (hospitals and the funders of ED and hospitals). It should therefore be remembered that new interventions must still provide a satisfactory service to patients. In addition, alternatives to ED-based services have no guarantee of producing overall savings in resources because it is possible that these services (for example, minor injury units) may actually service patient problems that previously would not have been presented to the health system. A crucial issue, therefore, when managing demand for primary and secondary care services is the need to furnish additional support for patients to appropriately manage their own minor health problems and appreciate when assistance may be needed.

An alternative to focusing on the inappropriate use of the ED and developing interventions to reduce this use of the department, is to accept that many patients choose to attend the department and therefore the imperative is to expand the scope of the ED to meet the demand for non-urgent care. This could be done, for example, by allowing primary care workers (practice nurses and GPs) to staff EDs or by developing the ED as a primary care centre.

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