Briefing Paper

Towards faster treatment: reducing attendance and waits at emergency departments

Key messages based on a literature review which investigated the organisational factors that influence attendance and waiting times in emergency departments (EDs):

- Fast tracking systems in the ED can reduce waits.
- Case management for chronic disease and high service users can reduce demand, as can home support and specialist nurses.
- Point-of-care testing is faster than centralised laboratory testing.
- Seniority of staffing reduces delays.
- Triaging out of the ED can reduce usage but its safety is not known.
- Primary care gatekeeping can reduce attendance numbers.
- Patient education is of unproven advantage in reducing attendances.
- The benefits of diverting cases away from EDs by the ambulance service are not proven.
- There is a lack of evidence about bed management and delayed discharges.
- Priority should be given to further research on the role of paramedics and on diverting some 999 calls to advice lines since the impact of these innovations on patient safety is uncertain.

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Access to *Care*
Towards faster treatment

Reducing waits in EDs: a cross-system issue

Surveys over the last few years show that many people feel they wait too long if they have had to go to an emergency department (ED) (a term now preferred to Accident and Emergency or A&E). Patient surveys have consistently shown that delays in EDs are the most important area of improvement. Emergency admissions also occupy 65% of staffed beds in the NHS with a continuing rise in this percentage.

The NHS Plan (DOH, 2000) has set ambitious targets for reducing the length of time patients have to wait for treatment. This applies to all stages of their journey through the ED, including:

- the wait before being seen by a clinician
- the time from seeing a clinician until a decision is made to admit or discharge
- the wait from decision to admit to arrival on the ward.

Ninety-eight per cent of all patients attending EDs in England are now spending less than 4 hours from arrival until they leave (either discharged, admitted to a ward or transferred elsewhere).

Attention often focuses on those factors within EDs associated with delays such as how they are staffed, resourced and run. Clearly, these are key to providing high quality timely care. But delays occurring elsewhere in the system, from the time someone first calls for help until they return home, can have a knock-on effect, making waits in the ED worse. Thus, changes in the wider system can also help to reduce waits for those being treated in the ED. Although some changes in ED processes will improve performance there, most changes are needed outside the ED.

What, then, is known about the evidence for changes that can reduce waits in emergency departments or the need for attendance, both directly and indirectly? And how can policy-makers, practitioners and decision-makers use this knowledge to influence and improve the emergency care patients get? This paper summarises a review of research evidence on this topic (Cooke *et al.*, 2005).

Practical *Findings*

A large number of studies has been published concerning the international problem of waits and delays in EDs. Most of these studies, however, describe the extent of, or people's opinions about, the causes of the problem. Most do not focus on innovations to reduce waits and attendances. However, it is important to remember that lack of evidence does not mean that the changes being implemented do not work or do not encourage innovation. But it is also important that innovations are analysed for their effectiveness and their impact on clinical care, cost and the care system as a whole. A related point is that where assessing innovations in EDs is concerned, applying methods used to evaluate other types of clinical treatment (e.g. randomised controlled trials) may not always be practicable or appropriate.

Findings of the review are divided into 9 sections as follows.

1. Out of hospital care

This includes ambulance dispatch and prioritisation, diverting 999 calls to advice lines and not taking patients to EDs. Evidence in this area is generally poor and most refers to the US system, where ambulance staff receive different training.

- It is possible to divert some 999 calls to advice lines but the safety of such systems is still being evaluated.
- The role of paramedics in either discharging patients from the scene or deciding on appropriate destinations has not been adequately studied to confirm its safety and effectiveness in the UK.

2. Primary care

Ambulance crews often bring patients to ED by default. Alternatives may include taking patients to the nearest appropriate source of healthcare, including primary care centres, walk-in centres and minor injury units.

- Primary care gatekeeping can reduce ED attendance but its safety is unknown.
- Walk-in centres and NHS Direct have not been demonstrated to reduce attendances at EDs.
- There is no evidence about the effects on waiting times of general practitioners working in EDs.

3. Emergency department

Findings here relate to clinical, structural and procedural changes that have been introduced in EDs.

- Triage (i.e. a brief clinical assessment that determines the time and sequence in which patients should be seen in the ED) is a risk management tool for busy periods. However, it may cause delays in care.
- Triaging out of the ED (whereby patients are redirected to an alternative source of care) can reduce numbers but more work is required to assess the safety of such systems.
- Co-payment systems (charging partial or full payment for non-urgent attendances at ED, and used in the USA) may reduce attendances but may equally reduce attendances by those requiring emergency care.
- Fast track systems for minor injuries have been proven to reduce waits. These systems work more effectively if they include senior staff.
- Attendance by the elderly, those with chronic disease and those who attend EDs on multiple occasions may be reduced by various interventions. Trials are needed in this area, including those evaluating the role of social workers.

4. Patient education

This includes education of patients, through awareness campaigns, leaflets, and so on, as to what types of condition are appropriate for the ED.

- Patient education is of unproven benefit in most areas except chronic disease management.
- Phoning for advice before going to the ED may reduce attendances.

5. Diagnostics

Waiting for results of tests is one of the commonest causes of patient delays.

- Point-of-care testing/satellite laboratories produces quicker results.
- Nurse ordering of X-rays may speed up processes where fast track (see 3 above) does not operate.
- ED staff undertaking ultrasounds may reduce delays for those having this procedure.
- Results delivery needs further investigation. There are suggestions that electronic reporting may delay results delivery.

6. Avoiding need for admission

Inappropriate or preventable admissions may account for 4.7-37% of hospital admissions, depending on the criteria used.

- Specialist nurse care in heart failure, chronic obstructive pulmonary disease (COPD) and deep vein thrombosis (DVT) can reduce hospital admissions.
- Home support (medical and social) can reduce hospital admissions.
- Observation wards may reduce length of stay and avoid admission.

7. Bed management

Good bed management in hospitals can help solve overcrowding in the ED. However, the review found no trials of different bed management strategies.

- There is thus a lack of evidence of innovations in bed management.
- Allowing ED staff to admit to wards will reduce delays.

8. Delayed discharge

Research in this area is hampered by the lack of an objective measure of 'inappropriate delay'.

- There is thus a lack of evidence about innovations to reduce delayed discharges from hospital.

- Most evidence looks at the causes of delays rather than solutions.

9. Staffing

Matching the number and skills of staff to cases arriving at the ED is key to ensuring that a queue does not form. There are very few studies looking at the impact of differing staffing levels, skill mix or systems of work. Work looking at increased use of senior medical staff suggests they may reduce admissions and decrease delay, particularly if they have the right to admit patients to wards.

- Teams of staff available for unpredicted surges in activity may reduce delays.
- Having a system that allocates patients to ED staff may be better at reducing waits than allowing ED staff to determine allocation.
- Availability of senior staff may reduce admissions and delays.
- Nurse practitioners are safe and effective but their effect on waits is unknown.
- The role of other health care professionals in ED care needs evaluation.

Innovations that work

Streaming to primary care

Patients attending one ED were assessed at the point of triage and a decision made as to whether their needs were most appropriately met by an ED medical practitioner or nurse or a member of the primary health care team. An experienced member of the nursing team helped patients to access services needed, provided nursing care or treatment, or directed patients to self-care. Audit showed that nurses were practising safely and making correct judgements. Waiting times for minor injuries rarely exceeded 2 hours and patients treated by nursing staff were seen within minutes rather than hours.

Eliminating triage

By eliminating triage one ED ensured that minor conditions were seen by the first available professional (nurse or doctor) within 15-30 minutes of arrival. The nurse and/or doctor would then treat the patient in line with own ability. This could include discharge, referral, assessment, ordering investigations (X-ray, bloods, etc.) or the administering of analgesia if required. Doctors were trained in basic dressings, dispensing medicines, applying slings, and so on. An extra nurse was allocated as a coordinator for improving patient flow and encouraging the new ways of working between 8am and 4pm.

Avoiding admissions

In one locality Clinical Decisions Units (CDUs) were introduced into two large EDs. CDUs were nurse-led and driven by protocols and their aims were rapid diagnosis, short-term treatment and/or observation of selected emergency patients. After their introduction there was a 17% reduction in unscheduled admissions. Patient satisfaction with the service was found to be excellent.

Source: Cooke *et al.* (2005)

Further *Research*
agendas for action

The review highlighted the extent to which evidence currently exists to support specific innovations in organisation and delivery. The review also identified gaps and weaknesses in the literature which could be addressed by further research, including in relation to innovations in EDs and patient safety. Taken together, these findings and observations can be used to build up agendas for further research and/or action as follows.

Research/action for policy makers

Initiatives not supported by good evidence of reducing attendances at EDs include:

- NHS Walk-in Centres
- NHS Direct
- patient education.

Absence of evidence does not, however, mean that these initiatives are not effective. They have also been shown to have other advantages and benefits to patient care and the NHS.

Good evidence exists to support the following policies:

- fast track systems for minor injury patients.
- chronic disease case management, home support and specialist nurse care to reduce emergency admissions.

Policy areas with a lack of evidence but supported by expert opinion include:

- bed management
- reducing delayed discharges
- reorganisation of emergency primary care.

Research/action for local decision makers

Initiatives that are appropriate for local development include:

- senior staff seeing patients in ED at an earlier stage
- ED staff having the right to admit to wards.

Research/action on innovations and patient safety

In some areas innovations are being undertaken where the safety has not been assessed. It is therefore vital that assessment is made before they are widely adopted. The first two listed below are being widely introduced in the UK and should be prioritised for safety assessment.

1. *The role of paramedics* in discharging patients from the scene or deciding on appropriate destinations. Some US studies suggest an unacceptably high critical incident rate but these studies are not directly applicable to the UK.
2. The safety of *diverting some 999 calls to advice lines*, such as NHS Direct, is still being evaluated.
3. Primary care gatekeeping.
4. Triaging out and co-payment systems.

About the *Study*

The *aim* of the literature review was to establish the evidence for innovations designed to reduce waiting times in and attendance at emergency departments to identify priorities for further research.

The review sought to answer the following questions:

- what initiatives in emergency departments have been demonstrated to reduce waiting times and attendances?
- what initiatives outside emergency departments have been shown to reduce waiting times and attendances?
- what evidence is there of the clinical and cost-effectiveness of such interventions?

The review was designed to meet the following *objectives*:

- to inform policy makers and health and social care providers of evidence-based initiatives
- to assist providers by providing vignettes of good practice and contact details
- to highlight areas where further research should be commissioned.

The review examined and summarised evidence from published and unpublished literature (both UK and international). Searches were made of key electronic databases and the internet. Other search strategies included hand searching and contacting key researchers in the field via adverts placed in journals and on internet mailing lists. The initial number of references generated in the searches was over 60,000. Following the initial sift, titles and abtracts of 3,178 were reviewed and of these 334 were fully reviewed. A total of 109 studies met the selection criteria.

The research team also benefited from the advice of members of an Expert Advisory Group, representing all organisations allied to emergency care.

References

Cooke. M., Fisher, J., Dale, J., McLeod, E., Szczepura, A., Walley, P. and Wilson, S. (2005) *Reducing Attendances and Waits in Emergency Departments: A systematic review of present innovations.* A report to the NHS Service Delivery and Organisation R&D Programme. SDO: London.

Department of Health (DOH) (2000) *The NHS Plan*. London: Stationery Office. Available at: www.nhsia.nhs.uk/nhsplan/

Further *Information*

The full report, this briefing paper and details of current SDO research in the field can be downloaded at: www.sdo.lshtm.ac.uk/access.htm.

The report and related material can also be accessed at the Emergency Care and Rehabilitation page on the University of Warwick website at: www2.warwick.ac.uk/fac/med/healthcom/emergencycare

For further information about the case studies included in the report contact Professor Matthew Cooke, Professor in Emergency Care, Warwick Medical School, University of Warwick and Co-Director, Warwick Emergency Care and Rehabilitation: m.w.cooke@warwick.ac.uk

About the SDO Programme

The SDO R&D Programme is a national research programme managed by the National Co-ordinating Centre for NHS Service Delivery and Organisation Research and Development (NCCSDO) under contract from the Department of Health's R&D Division.

For further information about the NCCSDO or the SDO Programme visit our website at www.sdo.lshtm.ac.uk or contact:

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Disclaimer

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Addendum

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The management of the Service Delivery and Organisation (SDO) programme has now transferred to the National Institute for Health Research Evaluations, Trials and Studies Coordinating Centre (NETSCC) based at the University of Southampton. Prior to April 2009, NETSCC had no involvement in the commissioning or production of this document and therefore we may not be able to comment on the background or technical detail of this document. Should you have any queries please contact sdo@southampton.ac.uk