NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

SCOPE

1 Guideline title

Service delivery and organisation for acute medical emergencies.

1.1 Short title

Service delivery and organisation for acute medical emergencies.

2 The remit

The Department of Health has asked NICE to consider the following topic areas:

- Urgent and emergency care.
- Out-of-hours care.
- 7-day working.
- Consultant review within 12 hours of admission.
- Acute medical admissions within the first 48 hours.
- Discharge planning to reduce readmissions.

3 Need for the guideline

3.1 Epidemiology

a) As the population continues to grow and age, there will be increasing demand for acute services for life-threatening emergencies, acute exacerbation of chronic illnesses and routine health problems that need prompt action.

b) A medical emergency can arise in anyone, for example, in people:

- without a previously diagnosed medical condition
- with an acute exacerbation of underlying chronic illness

- after surgery
- after trauma.

c) Data show that the demand on the NHS is substantial and increasing across the whole system, as follows:

- Rising numbers of GP consultations per patient per year. Some patients have found it more difficult to access their GP quickly, increasing the demand for urgent or emergency care services.
- 8.49 million calls to emergency 999 services in 2011/12.
- 4.4 million calls to NHS Direct in 2011/12.
- 2.7 million calls to NHS 111 in 2012/13.
- 8.6 million calls to GP out-of-hours services in 2007/08.
- 6.71 million emergency ambulance journeys in 2011/12.
- 21.7 million attendances at emergency departments, minor injury units and urgent care centres in 2012/13. These attendances increased by 32% since 2003/04. The increase was found to be particularly high in minor emergency department attendances (for example, urgent care centres, minor injury units and walk-in centres). Attendances at major emergency departments increased at a lower rate (13% between 2003/04 and 2012/13) in line with what would be expected from population ageing and growth.
- 5.2 million emergency admissions to England's hospitals in 2012/13. Emergency admissions, which include short-stay and zero length-of-stay admissions (a patient admitted and discharged on the same day) have increased by 40% between 2003/04 and 2010/11. In 2009, emergency admissions cost the NHS about £11 billion, and between 2004 and 2009 they were increasing at a cost of about £83 million per annum.
- Nearly 5% of all admitted patients in England are readmitted as emergency cases within 30 days. Nearly half of readmitted patients return to a hospital within 7 days of their initial discharge. The readmission rate for people aged 16-74

increased from around 7% in 1998/9 to 9% in 2006/7. The equivalent figures for people aged 75 and over are 10% and 14% respectively.

3.2 Current services

a) Urgent and emergency care

For the purposes of this guideline, people needing urgent health care have a health problem that needs immediate attention but their life is not at risk. People needing emergency health care have a health problem that occurs suddenly, needs immediate attention and may be life-threatening. This guideline will cover service organisation and delivery for acute medical emergencies across the NHS but will not provide guidance on the clinical management of specific acute medical emergencies.

b) Out-of-hours care

Out-of-hours services provide primary care to patients who need to be seen quickly when their GP practice is closed. Since 2004 GP practices have been able to opt out of providing out-of-hours care, and responsibility for commissioning these services has been transferred to local commissioning organisations. These organisations operate independently of local GP (in-hours) services and are often orientated around large walk-in centres, where face-to-face care can be provided centrally. A 2010 Department of Health study found that most GP out-of-hours services in England were good, but it also showed that there was an unacceptable degree of variation in standards. The Primary Care Foundation benchmarking audit in 2010 found that in at least 4 local areas, providers were only able to see 60% of patients within 1 hour.

c) 7-day working

The 2011 Hospital guide published by Dr Foster suggested that there was an association between the number of available senior

staff and the weekend admission mortality rate. The Keogh 2013 Review into the quality of care and treatment provided by 14 hospital trusts in England (July 2014) reported that most surplus mortality risk was related to emergency admissions, particularly at weekends. Evidence from the Medical Royal Colleges and the National Confidential Enquiry into Patient Outcome and Death, demonstrated that patients admitted at the weekend have a significantly greater risk of dying within 30 days of admission than those admitted on a weekday. An analysis of health outcomes for the UK and USA shows that weekend admission is associated with a 16% higher mortality. The higher mortality rate is likely to be a consequence of variability in the provision of:

- weekend hospital staffing
- senior decision makers of consultant level skill and experience
- specialist services, such as weekend diagnostic and scientific services
- specialist community and primary care services, which might otherwise support patients on an end-of-life care pathway to die at home.

d) Consultant review within 12 hours of admission

There is evidence that improved patient outcomes are associated with timely consultant input. Professional bodies consistently recommend working patterns that enable rapid consultant assessment for all patients yet variation exists between hospitals and between weekdays and weekends. In 2012 the Academy of Medical Royal Colleges published a report on the Benefits of consultant-delivered care across all services. Currently standards set out by the Society for Acute Medicine and NHS England, 7-days a week state that 'All emergency admissions must be seen and have a thorough clinical assessment by a suitable consultant as soon as possible'.

e) Acute medical admissions within the first 48 hours

Acute internal medicine in the UK has developed over the last 15 years in response to the increasing number of medical admissions, concerns over the quality of acute care, and other external pressures, including the European Working Time Directive. Acute internal medicine is a specialty of medicine concerned with the immediate and early specialist management of adults with a wide range of medical conditions admitted to hospitals for unplanned urgent or emergency care. The care is usually provided by a multidisciplinary team led by acute physicians in the acute medical unit (AMU) for a designated period (typically between 24 and 72 hours) before discharge from the hospital or transfer to medical wards. A survey from the Society for Acute Medicine shows that more than 90% of acute hospitals have such a unit. Acute medical unit (AMU) is the preferred term for these units; however they have many different names which can cause confusion, for example, medical assessment and planning unit (MAPU), rapid assessment medical unit (RAMU) and emergency assessment unit (EAU) (see also appendix A).

f) Discharge planning to reduce readmissions

Discharge planning is a process that aims to improve the coordination of services after discharge from hospital by considering the patient's needs in the community. The process varies and is not entirely evidence based. Handover to the community and primary care is often neglected.

g) Acute medical care services are facing profound pressures; often the capacity of the service is overwhelmed and the delivery of quality care can be compromised. Many of the necessary components of the healthcare system are in place but are not well-integrated. Navigating the current acute medical emergency service is a challenge. There are also fundamental misconceptions among

the public and patients regarding the types of services offered, which can lead to patients accessing a higher level service than required. Lack of standardisation along the acute medical emergency pathway contributes to user dissatisfaction and adverse patient outcomes. Variations in communication between services, opening hours, clinical expertise, access to diagnostic services and terminology may lead to confusion and unnecessary repetition of investigations, history taking and/or assessments. The result is an inefficient system unable to meet increasing demand.

3.3 Policy, regulation and commissioning

3.3.1 Policy

NHS England is currently undertaking a major review of emergency care services to determine how best to reduce the demand for emergency care in hospital and increase the delivery of acute care in the community. Published policies include:

- Department of Health (2001) Reforming emergency care: first steps to a new approach.
- Alberti G (2004) Transforming emergency care in England. Department of Health.
- Department of Health (2005) Improving emergency care in England. House of Commons Committee of Public Accounts.
- Strategic Health Authorities (2009) Good practice in delivering emergency care: a guide for local health communities. Emergency services review.
- Blunt I, Bardsley M, Dixon J (2010) Trends in emergency admissions in England 2004–2009. Kings Fund.
- NHS London Health Programmes (2013) Quality and Safety Programme Emergency Departments: Case for change.
- NHS Improving Quality (2013) NHS services open seven days a week: every day counts.
- NHS England (2013) High quality care for all, now and for future generations: transforming urgent and emergency care services in England.
- NHS England (2013) Transforming urgent and emergency care services in England: urgent and emergency care review. End of phase 1 report.
- The Health Foundation and the Nuffield Trust (2013) Focus on emergency admissions. Quality Watch.
- The Health Foundation and the Nuffield Trust (2014) Focus on A&E attendances. Quality Watch.

3.3.2 Legislation, regulation and guidance

Best practice guidance is produced by the Medical Royal Colleges. Standards for emergency departments have been developed by the College of Emergency Medicine in collaboration with other professional bodies.

- Royal College of Physicians, College of Emergency Medicine, Society of Acute Medicine and NHS Confederation (2013) Urgent and emergency care: a prescription for the future.
- The College of Emergency Medicine (2013) The drive for quality: how to achieve safe, sustainable care in our emergency departments.
- UK Ambulance Services (2013) Clinical practice guidelines
- College of Emergency Medicine (2014) Acute and emergency care: prescribing the remedy.

3.3.3 Commissioning

Funding emergency care is a major preoccupation of health services worldwide. In England the move to commissioned healthcare places the onus on clinical commissioning groups to commission emergency care services from secondary care and other providers. Current fiscal constraints combined with increased emergency department attendances and admissions have created significant challenges for funders. The tariff system in operation at least until 2015 reimburses hospitals at 30% of tariff for admissions above contracted volumes. The development of the Better Care Fund is intended to improve the situation by diverting resources from secondary care to the community with the aim of reducing emergency department attendances.

- Fernandes A (2011) Guidance for commissioning integrated urgent and emergency care: a 'whole system' approach. RCGP Centre for Commissioning.
- Better Care Fund (2013) Support and resources pack for integrated care. NHS England.
- Royal College of Physicians, College of Emergency Medicine, Society of Acute Medicine and NHS Confederation (2013) Urgent and emergency care: a prescription for the future.

- Monitor and NHS England (2014) 2015/16 National Tariff Payment System: Tariff engagement documents overview.
- Foundation Trust Network (2014) Foundation Trust Network response to engagement on 2015/16 national tariff payment system.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

a) Adults (18 years and over) and young people (16–17 years) who seek, or are referred for, emergency NHS care for a suspected or confirmed acute medical emergency. Specific consideration will be given to:

- frail elderly people and
- people with mental health comorbidity.

4.1.2 Groups that will not be covered

The groups listed below are those that may also access the services provided for the target population for this scope (as defined in 4.1.1). They may be indirectly affected by the recommendations of this guidance in some instances. However, it is not the intention of this guidance to review the evidence or formulate recommendations on the service needs for these groups:

a) Children.

b) People with acute obstetric emergencies.

c) People with acute mental health emergencies, once a diagnosis has been made.

d) People with acute surgical emergencies, once a diagnosis has been made.

e) People who have experienced major trauma, complex or non-complex fractures or spinal injury.

f) People in hospital who are not there for an acute medical emergency (i.e. elective admissions) and do not develop an acute medical emergency during their stay.

g) People already in hospital with acute deterioration.

h) People with chronic conditions who are being managed as outpatients but who require an elective admission for treatment from specialists who may be involved in the acute care pathway.

4.2 Setting

a) All settings in which NHS care is received for suspected or confirmed acute medical emergencies, including settings in which people present, are managed during acute admission and from which they are transferred or discharged. These settings include

- primary care and community services
- emergency departments
- acute medical units
- ambulance services
- telephone triage services.

4.3 Service delivery and organisation

4.3.1 Issues that will be covered

a) Timely access to services (including services available 24-hours a day, 7-days a week).

b) Timely access to staff with a given competency or skill.

c) Capacity of services.

d) Location of services.

e) Staffing, skills and competencies in pre-hospital and hospital settings.

f) Integration of services, including continuity of information, handover and discharge.

g) Alternatives to acute care in hospital.

h) Standardisation of services.

i) First point of contact with urgent care services, including initial triage.

4.3.2 Issues that will not be covered

a) Acute clinical management of specific medical conditions requiring urgent or emergency care.

b) Specific on-going management of a condition.

c) Non-emergency patient transport.

d) Resuscitation.

e) Nurse staffing in accident and emergency departments and on wards (which will be covered in other NICE guidance).

f) Emergency planning and resilience.

g) Readmissions to intensive care units within 48 hours.

4.4 Main outcomes

Given the breadth of the scope, the literature is likely to reveal a wide range of quantitative and qualitative outcome measures. These may include:

a) Mortality: case mix-adjusted.

b) Safety: reliability, error rates and adverse events.

c) Quality of life: functional outcomes.

d) Experience: patient and staff satisfaction; service demand.

e) Volume: admissions, discharges, transfers and readmissions.

f) Process: waits, delays, cancellations.

g) Resource use and costs: length of hospital stay, number of active consultant hours.

4.5 Review topics

Review topics guide a systematic review of the literature. They address only the issues covered in the scope, and usually relate to interventions, diagnosis, prognosis, service configuration, service delivery or patient experience.
Please note that these review topics are preliminary versions and inclusion in the final guideline will be dependent on resources and subject to discussion with the GDG.

4.5.1 Timely access to services (including services available 24 hours a day, 7 days a week)

a) Provision of services throughout the patient pathway (including social, community and primary care) 7 days a week, and where appropriate, 24 hours a day.

b) 24-hour access to investigations, diagnostics and interventions in emergency departments and acute medical units.

c) 24-hour access to emergency departments compared with restricted hours access.

4.5.2 Timely access to staff with a given competency or skill

a) Timely access to specialists throughout the patient journey (including tele-healthcare).

b) Time interval between patient admission and specialist review.

c) Time interval between specialist reviews on the ward.

d) Paramedics' access to live clinical advice (for example, mobile telemedicine system).

e) Timely access to an outreach acute care team within hospitals.

4.5.3 Capacity of services

a) Escalation measures for surges in demand.

b) Impact of hospital capacity on patient outcomes.

4.5.4 Location of services

a) Co-location of emergency departments and acute medical units.

b) Co-location of general practice and emergency departments.

c) Hospital networks.

d) Role of minor injury units and walk-in centres.

4.5.5 Staffing, skills and competencies in pre-hospital and hospital settings

a) Ability and availability of paramedics to deliver higher-level acute care in the community.

b) The appropriate skill-mix in wards including pharmacist support.

c) Doctor-to-patient ratios throughout the emergency care pathway.

d) Competencies for healthcare staff in acute care risk assessment and risk management.

e) Impact of specialist-led, generalist-led and mixed model care on patient outcomes.

f) Role of physician extenders (for example, physician assistants, emergency nurse practitioners).

4.5.6 Integration of services, including continuity of information, handover and discharge

a) Managing information across the whole patient pathway.

b) Integration of social, community, mental health, primary and secondary care.

c) Patient follow-up by primary or secondary care after discharge.

d) Structured patient care handovers.

e) Timely planning of the patient pathway from admission to discharge and return to the community.

f) Ward round structures and processes.

g) Enhanced primary care access to diagnostics.

4.5.7 Alternatives to acute care in hospital

a) Provision of community-based healthcare services (for example, community-based rehabilitation services, palliative care, community hospitals, and intermediate facilities).

b) 'Hospital at home' services.

c) 'Virtual wards' between primary and secondary care.

d) Leadership of community-based services, including community matrons.

4.5.8 Standardisation of services

a) Means and value of standardisation, in particular criteria for:

- admission
- monitoring and alert (for example, National Early Warning Score, NEWS)
- discharge
- transfers of care between hospitals.

4.5.9 First point of contact with urgent care services, including initial triage

a) Single compared with multiple points of patient first contact with acute and emergency care (such as NHS 111 or 999 emergency telephone services, GP services and emergency departments).

b) A consistent and reproducible graded triage system following an emergency call.

c) Use of a graded response to emergency calls by call handlers for NHS 111 and/or 999.

4.6 Economic aspects

We will take into account opportunity costs and cost effectiveness when making recommendations involving a choice between alternative activities, interventions or services. Any analysis should typically use an NHS and personal social services perspective.

Further detail on the methods can be found in The guidelines manual and the Interim methods guide for developing service guidance.

4.7 Status

4.7.1 Scope

This is the final scope.

4.7.2 Timing

The development of the guideline recommendations will begin in February 2015.

5 Related NICE publications

5.1 Published guidance and commissioning products

- Support for commissioning for intravenous fluid therapy in adults in hospital (2014) NICE support for commissioning 66.
- Safe staffing for nursing in adult inpatient wards in acute hospitals (2014) NICE guideline SG1.
- Neutropenic sepsis: prevention and management of neutropenic sepsis in cancer patients (2012) NICE guideline CG151.
- Guide for commissioners on end of life care for adults (2011) NICE commissioning guide 42.
- Acutely ill patients in hospital (2007) NICE guideline CG50.
- Improving supportive and palliative care for adults with cancer (2004) NICE cancer service guideline.

Many other pieces of NICE guidance are relevant to 'Service delivery and organisation of acute medical emergencies', including clinical guidelines on specific acute conditions (see the NICE website for further details). Examples include:

- Head injury (2014) NICE guideline CG176.
- Acute kidney injury (2013) NICE guideline CG169.
- Myocardial infarction with ST-segment elevation (2013) NICE guideline CG167.

5.2 Guidance under development

NICE is currently developing the following related guidance (details available from the NICE website):

- Safe staffing for nursing in accident and emergency departments. NICE guideline. Publication expected May 2015.

- Home care. NICE guideline. Publication expected July 2015.
- Social care of older people with multiple long-term conditions. NICE guideline. Publication expected October 2015.
- Transition between inpatient hospital settings and community or care home settings for adults with social care needs. NICE guideline. Publication expected November 2015.
- Older People – independence and mental wellbeing. NICE guideline. Publication expected November 2015.
- Disability, dementia and frailty in later life - mid-life approaches to prevention. NICE guideline. Publication expected March 2015.
- Major trauma services: service delivery for major trauma. NICE guideline. Publication expected February 2016.
- Transition from children's to adult services. NICE guideline. Publication expected February 2016.
- Multimorbidity: clinical assessment and management. NICE guideline. Publication expected September 2016
- Care of the dying adult. NICE guideline. Publication date to be confirmed.
- Safe staffing for community nursing care settings. NICE guideline. Publication date to be confirmed.
- Safe staffing for mental health community settings. NICE guideline. Publication date to be confirmed.
- Safe staffing for mental health in-patient settings. NICE guideline. Publication date to be confirmed.

Many other pieces of NICE guidance are relevant to ‘Service delivery and organisation for acute medical emergencies’, including clinical guidelines on specific acute conditions (see the NICE website for further details), for example:

- Sepsis. NICE guideline. Publication expected July 2016.

6 Further information

Information on the guideline development process is provided in the following documents, available from the NICE website:

- How NICE clinical guidelines are developed: an overview for stakeholders the public and the NHS: 5th edition
- Interim methods guide for developing service guidance
- The guidelines manual.

Information on the progress of the guideline will also be available from the NICE website.

7 Appendix A

Other terms used to refer to an acute medical unit (the preferred term used in the document) include:

Acute Medical Assessment Unit (AMAU)

Acute Assessment Unit (AAU)

Medical Assessment and Planning Units (MAPU)

Acute Assessment Unit (AAU)

Acute Medical Wards (AMW)

Medical Assessment Ward (MAW)

Medical Assessment Unit (MAU)

Emergency Assessment Unit (UAU)

Acute Planning Units (APU)

Rapid Assessment Medical Units (RAMU)

Early Assessment Medical Units (EAMU)