NICE National Institute for Health and Care Excellence

NICE guideline

Emergency and acute medical care in over 16s: service delivery and organisation

NICE guideline
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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline is the basis of QS174 and QS210.

Overview

This guideline covers organising and delivering emergency and acute medical care for people aged over 16 in the community and in hospital. It aims to reduce the need for hospital admissions by giving advanced training to paramedics and providing community alternatives to hospital care. It also promotes good-quality care in hospital and joint working between health and social services.

Who is it for?

- Commissioners and providers of health and social care
- Health and social care practitioners
- People with or at risk of a medical emergency or acute illness, and their families and carers

Implementation statement

We recognise that implementing this guideline will take time, with additional infrastructure and training needed in some areas. Service providers should note where the recommendations are consistent with other national initiatives, especially NHS England's seven day services clinical standards. See putting this guideline into practice.

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Emergency and acute medical care in the community

Recommendations for commissioners and providers of health and social care in the community

Providing emergency and acute medical care in the community can reduce the need for hospital admissions. The recommendations in this section cover the first points of contact with healthcare services, and services that provide alternatives to hospital care or permit earlier discharge back to the community.

First points of contact with healthcare services

1.1.1 Provide specialist and advanced paramedic practitioners who have extended training in assessing and treating people with medical emergencies.

1.1.2 Provide point-of-care C-reactive protein testing for people with suspected lower respiratory tract infections.

1.1.3 For people who are at increased risk of developing a medical emergency:

- provide advanced community pharmacy-based services

- consider providing advanced pharmacist services in general practices.

1.1.4 For people at risk of an acute medical emergency, do not commission pharmacists to conduct medication reviews in the home unless needed for logistical or clinical reasons.

Full details of the evidence and the committee's discussion are in:

- evidence review 3: paramedics with enhanced competencies
- evidence review 7: GP access to laboratory investigations
- evidence review 10: community-based pharmacists.

Alternatives to hospital care

1.1.5 Provide nurse-led support in the community for people at increased risk of hospital admission or readmission. The nursing team should work with the team providing specialist care.

1.1.6 Provide multidisciplinary intermediate care as an alternative to hospital care to prevent admission and promote earlier discharge. Ensure that the benefits and risks of the various types of intermediate care are discussed with the person and their family or carer.

NICE has published guidelines on transition between inpatient hospital settings and community or care home settings for adults with social care needs and intermediate care including reablement

1.1.7 Provide a multidisciplinary community-based rehabilitation service for people who have had a medical emergency.

1.1.8 Provide specialist multidisciplinary community-based palliative care as an option for people in the terminal phase of an illness.

1.1.9 Offer advance care planning to people in the community and in hospital who are approaching the end of life and are at risk of a medical emergency. Ensure that there is close collaboration between the person, their families and carers, and the professionals involved in their care.

See also the NICE guideline on end of life care for adults: service delivery.

Full details of the evidence and the committee's discussion are in:

- evidence review 9: community nursing
- evidence review 12: alternatives to hospital care
- evidence review 13: community rehabilitation
- evidence review 14: community palliative care
- evidence review 15: advance care planning.

Recommendations for research

The guideline committee made recommendations for research in the following areas:

- clinical call handlers
- remote decision-support technologies for paramedics
- extended access to GP services
- primary care-led assessment models for suspected medical emergencies
- GP access to same-day plain X-ray radiology or ultrasound
- extended access to community nursing
- extended access to social care services.

For the full list of research recommendations see recommendations for research.

1.2 Emergency and acute medical care in hospital

Recommendations for commissioners, providers and healthcare professionals in secondary care

Optimising the quality of care in hospitals can improve the flow of patients from admission to discharge. The recommendations in this section address hospital services for emergency and acute care.

Managing hospital admissions

1.2.1 Use validated risk stratification tools to inform clinical decisions about hospital admission for people with medical emergencies.

1.2.2 Assess and treat people who are admitted with undifferentiated medical emergencies in an acute medical unit.

1.2.3 Provide access to liaison psychiatry services for people with medical emergencies who have mental health problems.

1.2.4 Start discharge planning at the time of admission for a medical emergency.

Full details of the evidence and the committee's discussion are in:

- evidence review 21: standardised criteria for hospital admission
- evidence review 23: liaison psychiatry
- evidence review 24: assessment through acute medical units
- evidence review 35: discharge planning.

Timing and frequency of consultant reviews

1.2.5 For people admitted to hospital with a medical emergency, consider providing the

following, accompanied by local evaluation that takes into account current staffing models, case mix and severity of illness:

- consultant assessment within 14 hours of admission to determine the person's care pathway
- daily consultant review, including weekends and bank holidays
- more frequent (for example, twice daily) consultant review based on clinical need.

Full details of the evidence and the committee's discussion are in:

- evidence review 19: early versus late consultant review
- evidence review 26: frequency of consultant review.

Providing services within the hospital

1.2.6 Provide coordinated multidisciplinary care for people admitted to hospital with a medical emergency.

1.2.7 Include ward-based pharmacists in the multidisciplinary care of people admitted to hospital with a medical emergency.

NICE's guideline on medicines optimisation includes recommendations on medicines-related communication systems when patients move from one care setting to another, medicines reconciliation, clinical decision support, and medicines-related models of organisational and cross-sector working.

1.2.8 Provide access to physiotherapy and occupational therapy 7 days a week for people admitted to hospital with a medical emergency.

1.2.9 Consider providing access to critical care outreach teams (CCOTs) for people in hospital who have, or are at risk of, acute deterioration, accompanied by local evaluation of the CCOT service.

Full details of the evidence and the committee's discussion are in:

- evidence review 27 critical care outreach teams
- evidence review 29: multidisciplinary team meetings
- evidence review 30: pharmacist support
- evidence review 31: enhanced inpatient access to physiotherapy and occupational therapy.

Organising ward rounds, handovers and transfers

1.2.10 Use standardised and structured approaches to ward rounds, for example with checklists or other clinical decision support tools.

NICE's guideline on medicines optimisation includes recommendations on medicines-related communication systems when patients move from one care setting to another, medicines reconciliation, clinical decision support, and medicines-related models of organisational and cross-sector working.

1.2.11 Use structured handovers during transitions of care and follow the recommendations on transferring patients in the NICE guideline on acutely ill adults in hospital.

NICE's guideline on medicines optimisation includes recommendations on medicines-related communication systems when patients move from one care setting to another, medicines reconciliation, clinical decision support, and medicines-related models of organisational and cross-sector working.

1.2.12 Use standardised systems of care (including checklists, staffing and equipment) when transferring critically ill patients within or between hospitals.

NICE's guideline on medicines optimisation includes recommendations on medicines-related communication systems when patients move from one care setting to another, medicines reconciliation, clinical decision support, and

medicines-related models of organisational and cross-sector working.

Full details of the evidence and the committee's discussion are in:

- evidence review 28: structured ward rounds
- evidence review 32: structured patient handovers
- evidence review 34: standardised systems of care for intra- and inter-hospital transfers.

Recommendations for research

The guideline committee made recommendations for research in the following areas:

- emergency department opening hours
- GPs located in or near emergency departments
- minor injury units, urgent care centres and walk-in centres
- hospital diagnostic radiology services
- specialised units for older people
- the role of 'physician extenders'
- integrated patient information systems
- standardised criteria for hospital discharge
- post-discharge early follow-up clinics.

For the full list of research recommendations see recommendations for research.

1.3 Planning emergency and acute care services

Recommendations for commissioners and providers of health and social care

The recommendations in this section cover hospital bed capacity and escalation policies, and the development of integrated care models.

1.3.1 Healthcare providers should:

- monitor total acute hospital bed occupancy, capacity, flow and outcomes in real time, taking account of changes in a 24-hour period and the occupancy levels and needs of specific wards and units
- plan capacity to minimise the risks associated with occupancy rates exceeding 90%.

1.3.2 Health and social care systems should develop and evaluate integrated care pathways.

Full details of the evidence and the committee's discussion are in:

- evidence review 38: integrated care
- evidence review 39: bed occupancy.

Recommendation for research

The guideline committee made a recommendation for research on hospital escalation policies. For the full list of research recommendations see recommendations for research.

Putting this guideline into practice

Phased implementation and relation to other national initiatives

This guideline has a wide scope and covers a large number of points in the emergency and acute care pathway. Putting the recommendations into practice will take time, with additional infrastructure and training needed in some areas. In the meantime, services should implement what they can of the guideline, using currently available infrastructure and taking account of local priorities such as those identified by the sustainability and transformation partnerships (STPs) between the NHS and local councils, and relevant national initiatives such as NHS England's seven day services clinical standards.

For more advice and information on implementation see:

- NICE's into practice pages for general advice
- NICE tools and resources to help you put this guideline into practice
- NHS England's work to improve urgent and emergency care
- NHS Improvement's support to improve emergency care in accident and emergency departments
- the NHS seven day services clinical standards (updated September 2017).

Recommendations for research

The guideline committee made the following recommendations for research. The evidence reviews contain the methods and evidence that were used to develop these recommendations, and a summary of the guideline committee's reasoning for making the recommendations. Each recommendation includes a link to the relevant evidence review on the NICE website.

Key recommendations for research

1 Extended access to GP services

Is extended access to GP services, for example during early mornings, evenings and weekends, more clinically and cost effective than standard access?

Why this is important

Continuity of care improves patient experience, aids clinical decision-making and could reduce hospital admissions. GPs' knowledge of patients enhances trust and promotes patient-centred care, especially when dealing with complex conditions. Currently, outside of standard GP hours (Monday to Friday, 08:00 to 18:30), people who need urgent primary care are triaged and treated by an out-of-hours GP provider and will usually be seen by a primary care clinician who is not familiar with them or their history, and who might not have access to their complete clinical records. Extended weekday and weekend access to their usual primary care team might reduce people's unscheduled use of secondary care emergency services. It might also increase opportunities to prevent exacerbations of chronic disease and thus reduce emergency hospital admissions. There is also likely to be less movement to secondary care if there is greater access to usual primary care because GP surgeries are often more conveniently located than more distant out-of-hours centres. Many extended access schemes currently in operation for general practice are for prebooked appointments only and do not provide emergency care. The focus of this research recommendation is on extending opening hours of practices for the full spectrum of GPs' clinical work.

Full details of the evidence and the committee's discussion are in evidence review 5: GP extended hours.

2 Extended access to social care services

What is the clinical and cost effectiveness of providing extended access to social care services, for example during early mornings and evenings, and 7 days a week?

Why this is important

A person with social care needs is defined as someone needing personal care and other practical assistance because of their age, illness, disability, dependence on alcohol or drugs, or any other similar circumstances. This is based on the definition of social care in section 65 of the Health and Social Care Act 2012.

At present access to social care differs throughout the country. Some areas have access to all social care services whereas others have very limited access. When social care services are substantially reduced, such as during weekends, collaboration and multidisciplinary planning between hospital, community health services and social care is difficult to achieve. This increases the number of avoidable hospital admissions and readmissions, and delays discharges.

NHS England has stated that community care services in hospitals, primary care, community care and mental healthcare must be available 7 days a week. This will support people to stay in the community and allow those in hospital to leave earlier. Extended access to community care has a direct impact on bed occupancy rates. Current figures suggest that 22% of hospital patients are waiting for a social care assessment so that they can be discharged. Extended access to social care would play an important role in alleviating this problem, particularly for the frail elderly.

Full details of the evidence and the committee's discussion are in evidence review 11: social care extended access.

3 GPs located in or near emergency departments

What is the clinical and cost effectiveness of having GPs within or adjoining emergency departments?

Why this is important

Royal College of Emergency Medicine survey data suggest that around 20% of people who attend emergency departments could be treated by GPs. Extended access to GPs in their surgeries is a requirement of current health policy, but the impact of such provision on reducing emergency department attendances of people with acute illnesses is unknown. An alternative approach, proposed in a joint report from the Royal College of Emergency Medicine, Royal College of Paediatrics and Child Health, Royal College of Physicians, and Royal College of Surgeons, is that every emergency department should include a primary care out-of-hours facility. This approach deserves systematic research evaluation focused on the specific impact of GPs on secondary care and the wider urgent and emergency care system.

Full details of the evidence and the committee's discussion are in evidence review 17: GPs within or on the same site as emergency departments.

4 Specialised units for older people

What is the most clinically and cost effective way to configure services to assess frail older people who present to hospital with a medical emergency?

Why this is important

Older people are more likely to be admitted for medical emergencies, and to stay longer in hospital, than younger people. This is because there is more multimorbidity, frailty and polypharmacy in older people. Hospital services have adapted to the growing population of older patients by introducing liaison services such as Frail Older Persons' Assessment and Liaison (FOPAL) services. These are now widespread, and share characteristics such as medication reviews and the use of comprehensive geriatric assessments.

However, it is not clear whether there are additional benefits from admitting older people with multimorbidity and frailty to a specialised elderly care assessment unit or an acute

frailty unit. Theoretical advantages could include better planning of investigation and diagnosis, multidisciplinary working, dedicated discharge teams, and direct links with community and social care. The question is important because of the potential for large reductions in length of hospital stays and readmissions, and improved quality of care. New units with varying designs are emerging throughout the NHS but there is currently no strong evidence for their effectiveness.

Full details of the evidence and the committee's discussion are in evidence review 25: admission through elderly care assessment units.

5 Integrated patient information systems

What is the clinical and cost effectiveness of different methods for integrating patient information throughout the emergency medical care pathway?

Why this is important

Good clinical decision-making depends on the provision of accurate information at the point of care delivery. Paper-based information systems cannot adequately serve the complex needs of people with frailty or multimorbidity. However, the experience of the NHS National Programme for IT has shown the need for an evolutionary and evidence-based approach to developing electronic systems with the capacity for clinical decision support. Examples of where such an approach could be used include managing cognitive impairment, polypharmacy, caring for people with multidisciplinary or complex care needs, and recognising a person's preferred place of death in palliative care. In many locations around the country, web-based patient information systems integrated between primary and secondary care are currently being set up. This research recommendation aims to ensure that where information systems are developed they undergo systematic parallel research evaluation.

Full details of the evidence and the committee's discussion are in evidence review 33: integrated patient information systems.

Other recommendations for research

6 Clinical call handlers

What is the most clinically and cost-effective use of clinical call handlers in a telephone advisory service in terms of i) the ratio of clinical to non-clinical call handlers and ii) point of access to clinical call handlers in a telephone advisory service pathway?

7 Remote decision-support technologies

Are paramedic remote decision-support technologies clinically and cost effective?

8 Primary care-led assessment models

Which primary care-led models of assessment of people with a suspected medical emergency in the community, such as GP home visits, are most clinically and cost effective?

9 Same-day plain X-ray radiology or ultrasound

What is the clinical and cost effectiveness of providing GPs with access to plain X-ray radiology or ultrasound with same-day results?

10 Extended access to community nursing

What is the clinical and cost effectiveness of providing extended access to community nursing, for example during evenings and weekends?

11 Limiting emergency department opening hours

What is the clinical and cost effectiveness of limiting emergency department opening hours, and what effect does this have on local healthcare provision and outcomes for people with medical emergencies?

12 Minor injury units, urgent care centres and walk-in centres

Is a minor injury unit, urgent care or walk-in centre clinically and cost effective i) as a stand-alone unit and ii) when located on the same site as an emergency department?

13 Hospital diagnostic radiology services

What is the optimal configuration in terms of clinical and cost effectiveness of hospital diagnostic radiology services to support 7-day care of people presenting with medical emergencies?

14 Standardised criteria for hospital discharge

Are standardised criteria for hospital discharge clinically and cost effective in specific medical emergencies?

15 'Physician extenders'

What is the clinical and cost effectiveness of providing 'physician extenders' such as advanced nurse practitioners, 'physician associates' and advanced clinical practitioners in secondary care?

16 Post-discharge early follow-up clinics

What is the clinical and cost effectiveness of post-discharge early follow-up clinics for people who have had a medical emergency and are at risk of unscheduled hospital readmission?

17 Hospital escalation policies

Which components of a hospital escalation policy to deal with surges in demand are the most clinically and cost effective?

Full details of the evidence and the committee's discussion are in:

- evidence review 2: non-emergency telephone access and call handlers
- evidence review 4: paramedic remote support
- evidence review 6: GP-led home visits
- evidence review 8: GP access to radiology
- evidence review 9: community nursing
- evidence review 16: emergency department opening hours
- evidence review 18: minor injury unit, urgent care centre or walk-in centre
- evidence review 20: physician extenders
- evidence review 22: 7-day diagnostic radiology
- evidence review 36: standardised discharge criteria
- evidence review 37: post-discharge early follow-up clinics
- evidence review 40: escalation measures.

Context

NICE's service guidance on emergency and acute medical care supports the next steps in the NHS five year forward view. It presents a survey of the best available evidence on a range of questions across the emergency and acute care pathway, which reaffirms key aspects of care articulated in the NHS seven day services clinical standards, including the role of early consultant review after admission to hospital, daily consultant review in hospital, multidisciplinary care, structured handovers and liaison mental health services.

This guideline covers service organisation and delivery in the following topic areas referred to NICE by the Department of Health in 2012:

- urgent and emergency care
- out-of-hours care
- 7-day services
- consultant review within 12 hours of admission
- acute medical admissions within the first 48 hours
- discharge planning to reduce readmissions.

Hospitals have found it increasingly challenging to maintain the flow of patients through from admission to discharge. The guideline committee considered interventions that avoid hospital admission and facilitate earlier discharge, when this can be achieved safely and without an increase in readmissions.

A comprehensive review of the evidence was conducted on sometimes complex interventions within this field. The guideline committee also took account of national initiatives such as the Keogh urgent and emergency care review that began in January 2013.

The guideline contains recommendations for practice and for research. Commissioners of services should take note of both types of recommendation when planning services.

Commissioners are encouraged to read the evidence reviews, particularly the sections headed 'Recommendations and link to evidence', for more details about the interventions,

references to other national initiatives and the committee's deliberations. A link to the relevant evidence review is at the end of each recommendation.

The guideline committee did not include detail in the recommendations about how they should be implemented (such as how many staff are needed or the exact content of an intervention) because the most cost-effective solution is likely to vary depending on local systems.

The recommendations for practice are grouped into 3 sections covering services in the community, services in hospital and service planning.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on acute and critical care.

For full details of the evidence and the guideline committee's discussions, see the evidence reviews. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

Minor changes since publication

February 2019: A minor wording change was made to recommendation 1.2.2 to clarify which admission settings it applies to.

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