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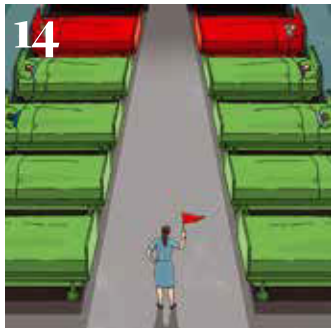

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editorial

How to enhance your nursing practice despite ED pressures

The ongoing challenges facing emergency nurses are set to peak once again this winter period. Insufficient hospital and community bed capacity results in emergency departments (EDs) being full of patients awaiting admission into the hospital.

By Cliff Evans,
consultant editor,
Emergency Nurse

Many EDs have already been delaying ambulance handovers due to overcrowding, meaning that areas undesignated for care, such as corridors, were also full.

In addition to the indignity and frustration for patients spending hours, even days, stranded on a trolley in hospital corridors, they are also at risk because undesignated care areas are not taken into account when nursing ratios are set each year.

The result is a cycle of intolerable working conditions, burnt-out staff and increasing sickness as nurses are forced to deliver care that does not reflect their professional values.

While we wait for national investment and policy change to prevent such unacceptable conditions, people who have contributed to the NHS all their working lives deserve better.

One way that nurses can make a difference is through early identification of frailty and our Expert advice on page 11 discusses best practice.

With an estimated 55% increase in people aged over 85 by 2037, understanding how to identify frailty and ensure a robust pathway to specialist input should be a priority in all hospitals.

We also need to optimise end of life care in EDs and enhance nursing practice in the care of dying patients.

As winter pressures intensify it is paramount that we support each other, ensure civility in our working environments and work together to provide our patients with the best care possible within the constraints of the ongoing healthcare crisis.

‘As pressures intensify it is paramount that we support each other and ensure civility’

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Who is in charge of patient care when the wards are full?

With one in three patients having overlong waits for beds after referral, should emergency nurses be left to provide care in the interim?

Nick Evans is a health journalist

Overcrowding in emergency departments (EDs) is increasingly common. Part of the problem is what is called 'exit block', where patients who need to be admitted have been referred to a specialist team, but a place on a ward cannot be found so they remain in the ED. Such situations can cause confusion over who has responsibility for these patients.

New guidance from the Royal College of Emergency Medicine (RCEM) aims to bring greater clarity to the issue.

Patients who come to the ED will usually be assessed soon after arrival. If a referral to a specialty team is needed, staff will do that and the patient should be seen within 30 minutes by the specialty team.

Where appropriate, a bed on a ward should be found. Waits of more than four hours to get a bed on the ward are considered unacceptable.

Over the past year, one in three patients who needed to be admitted to hospital experienced delays of more than four hours while waiting for a bed on a ward – an increase from one in six before the pandemic.

New patients

Royal College of Nursing emergency care forum member Sara Morgan says the scale of the problems is making working life difficult for ED nurses.

'Nurses will have new patients arriving all the time and having patients put into temporary areas, side rooms, clinical decision units (CDUs) and medical assessment units (MAUs) just adds to the workload.

'It is not uncommon for patients to spend more than 24 hours waiting to get on a specialist ward.

'ED nurses are highly skilled and can provide care to many different patients, but they won't have the specialist knowledge and access to all the tests and investigations that a patient may require. That patient may miss out on other support, such as from dietitians, occupational therapists and physiotherapists, that they would otherwise get. With winter approaching the fear is it is only going to get worse.'

Position statement

The RCEM position statement, which was updated in October 2023, makes recommendations about what should happen once a referral is made by the ED.

It says while waiting for a specialist team to respond, the patient remains the responsibility of the ED team. That includes ordering any tests that are needed and monitoring and responding to deterioration. But the statement makes it clear that once a patient has been seen by a specialty team they then become the responsibility of that team – even if that patient remains in the ED or in linked areas such as CDUs and MAUs.

There should be a clear and accurately documented handover between teams in real time, it says. The ED should have IT systems that document who is clinically responsible for each patient, whether that is the ED team or a specialty team.

Referrals should not be declined by the specialty team, the RCEM says. If the team feels the patient should be treated elsewhere, it is their responsibility to make that referral.

To aid clarity, every hospital should have published internal professional standards, set by the medical director, that outline these principles in detail, the RCEM says.

ED nurse and RCEM advanced care practitioner

forum chair Ashleigh Lowther says there is much variation in how hospitals manage this, with not all having clear standards in place.

'Even when there is clarity, ED staff still face challenges,' she says. 'For some patients it may not be clear which specialty they need to be referred to. Patients with complex conditions could fall under a number of specialties. And in smaller hospitals there may not be a specialist ward for a certain patient – some may need to be transferred to another hospital.'

Another problem ED staff face, says Ms Lowther, is that it can be difficult to refer to specialties without having results from certain tests. 'This can add to the delay for a patient in the ED.'

Junior doctor strikes

She contrasts those delays with how things are managed during exceptional events, such as the junior doctor strikes. With reduced numbers of junior doctors, consultants from other wards had to make final decisions on patients – something that was made possible by postponing large amounts of routine work while the strikes took place. 'This meant that decisions were made quickly and the patient got to the right place quicker,' says Ms Lowther.

Despite the guidance, there remains the problem of what happens should a patient's condition deteriorate.

The guidance says there should be policies in place to alert and escalate to the specialist team once they have clinical responsibility for the patient. But Ms Morgan says: 'After a decision to admit to a specialty team it can be difficult to contact the relevant on-call team – particularly out of hours – and it can take them time to respond.

'The specialist teams may have a ward on-call team and an admission on-call team and nurses can find themselves bounced between the two. It is making things difficult for ED teams.'

This means it is still ED nurses who have to respond, says Ms Lowther. 'ED nurses are overwhelmed and while the debate is happening with clinicians over who should be clinically responsible for these patients, it's the ED nursing team that will be looking after the patient's nursing needs regardless.

'The harm of having unassessed patients in ambulances is greater than the harm of boarding patients who have been assessed by a specialty team'

'Even when a specialist team has seen a patient, if the patient is still in the ED care often falls to the ED nurse, unless the specialty team responds quickly.'

When there is overcrowding in the ED, boarding or continuous flow should be considered, says the RCEM. This means sending patients to specialty wards even if there is not a bed available. Depending on the ward, patients may wait in side rooms or corridors outside the wards.

The RCEM says this should be a 'time-limited' policy to relieve pressure, but it points out that the harm of having unassessed patients in ambulances is greater than the harm of boarding patients who have been assessed by a specialty team.

Patients who are selected to board on wards should be stable, orientated and not require intensive treatment or monitoring. Ms Lowther says: 'I am a fan of boarding in the right context. It shares the risk of having too many patients across the organisation rather than putting it all on the ED.

'I can see why wards do not like it, they might look at ED and see that we have lots of nurses and they may only have two, but you have to consider just how many patients are in ED and how many are waiting outside in ambulances. We need to look more at nurse per patient ratios.

'Different trusts have different policies on boarding and sometimes it comes down to who is on shift – the matron or senior managers may have the final call. ED nurses have very little say in this.'

Further information

Royal College of Emergency Medicine (2023) RCEM Position Statement: Clinical Responsibility for Patients within the Emergency Department. **tinyurl.com/RCEM-ed-patients-statement**

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Who is responsible for patients in the emergency department?

- Once a patient in the emergency department (ED) is seen by a specialty team, the patient is their responsibility
- While waiting for specialty teams to respond to a referral, the patient remains the responsibility of the ED team, who should continue to react to changes in the patient's clinical condition and results
- For patients under the care of specialty teams that continue to reside in the ED, concerns about clinical management should be escalated to a senior doctor in that specialty. If concerns persist they should be discussed with the senior ED doctor on duty
- If a specialty team feels it is inappropriate to look after that patient, it is their responsibility to refer to a more appropriate team
- Specialty patients placed on observation wards due to capacity issues should remain under the care of that specialty team
- The ED team may be expected to coordinate care in specific circumstances, such as trauma calls

Source: RCEM (2023)

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Claire Porter
implementation lead, Bedfordshire Community Health Services

How outside partners can help to improve services

Working with ambulance and fire services can support nurses in responding to patient falls in a timely way

Further information

NICE (2013) Falls in Older People: Assessing Risk and Prevention. **www.nice.org.uk/guidance/cg161**

NHS England (2022) Going Further for Winter: Community-based Falls Response. **tinyurl.com/NHSE-community-based-response**

NHE England (2021) Community Health Services Two-hour Urgent Community Response Standard Guidance. **tinyurl.com/NHSE-community-response-guide**

NHS England and e-learning for Healthcare: Preventing Falls in Hospital. **tinyurl.com/NHSE-preventing-falls-hospital**

Office for Health Improvement & Disparities (2022) Falls: Applying All Our Health. **tinyurl.com/OHID-falls**

Falling is a cause of distress, pain, injury, loss of confidence, loss of independence and mortality – negatively affecting patients, families and carers – and is estimated to cost the NHS more than £2.3 billion a year. The challenges for health and social care services posed by falls, fractures and frailty are inevitably exacerbated by a growing, ageing population.

People aged 65 and older have the highest risk of falling and are also more at risk of harm if involved in a fire. Around one third of people aged 65 and over – and around half of people aged 80 and over – fall at least once a year.

From July 2021, new guidance has required community services providers to provide a two-hour urgent response to patients in crisis in the community. This includes responding to falls, which was not something our community nursing teams had previously responded to, and, initially, this new requirement caused a great deal of anxiety for our nurses.

Up until this time, the ambulance service had responded to falls in the Bedfordshire area, meaning that our nursing teams were not trained to respond to this group of patients.

The Bedfordshire falls assessment team

Despite providing our community nurses with new training on falls, staff still felt worried about harm coming to the patient following an assessment. At the same time, our nursing teams gained access to a local ambulance service portal allowing us to review patients who had called 999 and may be appropriate for a community services response. This included a large number of patients who had fallen, and during winter these patients were potentially going to have to wait a significant time for an ambulance.

Once this portal was being used it became clear that there were more patients who had fallen requiring a response than our community nursing teams could respond to (with other crisis response calls being part of their workload).

Therefore we needed to consider alternative provision for patients who had fallen to ensure we were able to respond in a timely manner. I had heard about a falls response service being run as a partnership between our local ambulance and fire and rescue service. However, this service was not running every day due to staffing constraints so I approached the ambulance, and fire and rescue, teams to discuss a collaboration that included nurses. Happily, they agreed. Following a period of planning, we began a new integrated response service in March 2023.

Holistic health assessments

This new service is able to send out a registered nurse from a group of nurses who provide this response in our community team, and a community well-being officer from the fire and rescue service, to go out to those patients who have fallen but not sustained a significant injury.

The fire and rescue service and our community nurse work out of one base, co-located at the community fire station. We have a van with all the equipment we need and the fire service responds alongside the nurse, with both attending in this vehicle.

The patient receives a holistic physical health assessment from the nurse, and a home fire safety check from the fire service officer to ensure their smoke alarms are operational and they feel confident in how to escape their home in the event of a fire. These assessments are supported by the ambulance service and teams can call clinical teams for support if required or if the patient requires admission to hospital, making our teams feel more confident in responding to these patients.

While we knew our new service would provide more capacity to respond to these patients, we have seen some unexpected benefits, including a 50% reduction in the use of ambulance resources.

Where, previously, an ambulance would have been sent out to deliver first aid, such as wound dressings or equipment provision – such as commodes, pressure-relieving equipment or equipment to help with moving and handling or walking – this can now be provided by the nurse or wider community health services teams such as therapy teams.

Keeping patients safely at home

Between March and August 2023, the service attended 91 calls with an average response time of about an hour. Having a nurse available to respond to these falls has been hugely beneficial as they also have a good awareness of the other kinds of care support available in the community to help keep the patient safely at home in future. Our community nursing and fire and rescue service teams feel well supported by each other, and are learning from each other's experience in the service. Feedback from patients has been positive.

One carer told us: 'I was happy with the service we received. We were told that the ambulance would take six hours, and the community services and fire and rescue service team were there much quicker than that. They did everything a paramedic would have done in the situation.'

My advice to others working in the healthcare profession, with the often limited resources that we have at our disposal, would be to consider looking outside your organisation for partnership opportunities even when this is not the usual way of working.

There have been some challenges in the project, including building trust across the organisations involved. However, the benefits for staff and patients hugely outweigh these challenges.

Tips on how to build successful external relationships

- **Be open** to sharing ideas to build trust between providers
- **Have regular meetings** to discuss how things are working and be open about the challenges your provider is facing
- **Take time to understand** each other's services and aims for the project (each provider may have a different motivation for being involved and different processes, especially when the provider is not healthcare focused)
- **Agree how to** safely handle sensitive or shared data
- **Keep teams working on delivering the service,** their feedback is crucial to making pathways smoother for staff and patients day-to-day

EXPERT ADVICE

Managing frailty in the emergency department

Nurses can use screening tools to identify frailty and improve patient outcomes with early detection

By Adrian O'Dowd
health journalist

This is an abridged version of an article at **rcni.com/managing-frailty-ed**

Frailty is a common issue in the emergency department (ED) and handling it well is crucial to good patient care. For many people, their journey with frailty begins in the ED. Emergency nurses have the opportunity to promptly identify frailty and make referrals, improving outcomes for people living with frailty.

What is frailty and how common is it?

Frailty is a state of health where a person lacks the physiological reserve to deal with a minor illness or injury. People living with frailty have higher vulnerability to illness, poorer quality of life and poorer health outcomes, and do not recover as quickly after a minor illness or injury.

Data collected before the COVID-19 pandemic suggested that 5-10% of people attending EDs and 30% of patients in acute medical units were older and living with frailty. NHS England estimates there are more than 4,000 daily admissions of people with frailty across England, caused by falls, minor infections and reactions to medications, while over 75s with frailty occupy about 20% of all bed days.

Somerset NHS Foundation Trust consultant nurse in community urgent care services Mike Paynter believes the estimates should be higher: 'We know

that older people living with frailty attending an ED will have, by definition of their age, significant comorbidities – primarily cardiovascular and respiratory.

'Older patients are also likely to have mobility issues, slower reflexes, deteriorating eyesight and be at risk of falls. Osteoarthritis and osteoporosis put older people at a greater risk of fragility fractures.'

What are the signs and symptoms of frailty?

According to NHS Fife nurse consultant in medicine of the elderly and frailty Joy Reid, typical signs and symptoms of frailty can include falls, immobility, functional decline, incontinence, delirium, cognitive impairment and dementia.

Symptoms can also include weakness, weight loss and a decreased ability to cope with illness and adapt to life challenges.

In moderate to severe cases of frailty, people may have weak muscles and other conditions such as arthritis or problems with their sight, hearing or memory. People with frailty will walk slowly, get tired easily and find certain movements difficult, such as going upstairs or getting out of a chair.

Who typically experiences frailty and can younger people have frailty?

Frailty is often associated with older people, but younger people can also be affected as a result of chronic health conditions and living in areas of deprivation.

Mr Paynter says: 'There is a small percentage of younger people that I would consider frail due to other physical long-term conditions such as cystic fibrosis, likewise people with learning difficulties have poorer health outcomes.

'Fragility or frailty is a broad term and within that there will be some patients who share the common features of lack of mobility, lack of cognition or lack of eyesight. These patients often manage on their own at home for quite long periods, but it can take only a small event or incident – such as a trip on the stairs – to scupper their health and well-being.'

Why should emergency nurses have the knowledge and skills to recognise and manage frailty?

The NHS Long Term Plan, which was published in 2019, states that healthcare professionals should support people to age well and, as the population increasingly lives longer, frailty will become a more prevalent condition.

The plan also says that all hospitals with a 24-hour ED should provide an acute frailty service for at least 70 hours a week, with the aim to complete a clinical frailty assessment within 30 minutes of a patient's arrival in the ED or same-day emergency care unit.

In addition, the most recent NHS Commissioning for Quality and Innovation framework includes a requirement relating to identifying and responding to frailty in the ED. It recommends that patients in EDs with grades of six or above on the Clinical Frailty Scale should receive a comprehensive geriatric assessment and referral or follow-up where needed.

Why is early detection of frailty so important?

Early detection helps patients as quickly as possible and helps to prevent other consequent problems. Ms Reid explains: 'Outcomes for patients who are identified at the front door of the hospital as having frailty can significantly improve. Their length of stay will be reduced and patients may be able to be supported with alternative specialist teams in a different environment rather than staying in the acute hospital, for example at home with Hospital at Home service.'

What questions should nurses ask relatives about patients living with frailty?

Ms Reid recommends speaking to the patient themselves initially to gather information about their usual health, function, mobility, and presenting complaint, but she adds: 'Gathering information from relatives can be helpful when the patient is unable to articulate this information for themselves.

'If relatives are present and the patient consents, gather information such as the patient's current level of function, cognition, mobility and support as well as any recent changes in these levels.

'This can help to determine whether the patient is coping at home with their current level of support or if they require further supportive interventions.'

Further information

Age UK (2020) Understanding Frailty. **tinyurl.com/AUK-understanding-frailty**

British Geriatrics Society (2014) Identifying Frailty and Its Outcomes. **tinyurl.com/BGS-identifying-frailty**

British Geriatrics Society (2018) Frailty: What's it All About? **tinyurl.com/BGS-blog-frailty**

NHS England (2023) Commissioning for Quality and Innovation (CQUIN): 2023/24. **tinyurl.com/NHSE-cquin-guidance**

NHS England and NHS Improvement (2019) Same-day Acute Frailty Services. **tinyurl.com/NHSE-frailty-services**

Types of frailty screening tools available

Screening tools are available to help emergency department nurses assess whether or not patients are displaying signs of frailty. These include:

- **Rockwood Frailty Scale** – this scores frailty in people ranging from '1 very fit' to '9 terminally ill'. It is also known as the Clinical Frailty Scale and is recommended by NHS England
- **Edmonton Frail Scale** – this is an index used to measure alterations related to frailty. It assesses nine subscales: cognition, general health status, functional independence, social support, medication use, nutrition, mood, continence and functional performance
- **NHS RightCare Frailty Toolkit** – this was developed to support the delivery of the NHS Long Term Plan for frailty, the toolkit suggests systems to understand the priorities in frailty care and what actions to take


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Tips to reduce your chance of getting a winter virus

Avoid common viruses by taking extra infection control measures at work and ditching poor hygiene habits

By Pavan Amara
nurse, midwife and health journalist

Winter has arrived and with it comes an increase in cases of viruses such as flu, COVID-19, norovirus and respiratory infections – and a corresponding rise in sickness absence among NHS staff. Data show that during the colder months, staff absence increases by nearly one third compared with the summer.

Yet not all those who are unwell with a common winter virus will take days off work. Often, nurses continue to work due to staffing shortages and workplace pressures, but nevertheless risk spreading contagious viruses to colleagues and patients.

By paying particular attention to environmental hygiene, hand hygiene and proper use of personal protective equipment (PPE), and ditching common habits that may be spreading infection, you can help to keep yourself, colleagues and patients safe.

Gloves, sanitiser or hand washing: which is best for infection prevention and control?

RCN professional lead infection prevention and control (IPC) Rose Gallagher says that alcohol-based hand sanitisers are effective against most viruses. However, only traditional handwashing with soap and water will kill norovirus.

She adds that gloves should only be used in certain circumstances. 'Unless you need to wear gloves because you're in contact with respiratory secretions, blood or other body fluids, then they are not required,' she says. 'A contaminated glove can be just as responsible for transmitting viruses as a contaminated hand.'

RCN guidance says that most NHS trusts and other workplaces will have local policies on when to wear gloves and what type – for example, sterile or standard gloves, depending on the procedure being completed – but gloves should only be used where they prevent the transmission of microorganisms and minimise infection risk.

How effective are face masks for infection control?

University of Dundee lecturer in nursing Patricia Kydd leads master's degree courses in IPC and has worked in the field for two decades. Mask efficacy 'depends on what type of mask you're wearing', she says. 'If you're wearing a cloth mask with diamantés on, then it's not going to be as effective as a fit-tested FFP3 mask. The effectiveness also depends on the wearer, because if the mask is not covering your nose it's not as effective.'

While there is no publicly available national guidance on wearing face masks in clinical areas following the COVID-19 pandemic, most healthcare employers have local policies on this, says Ms Kydd.

The World Health Organization advises that wearing masks diminishes the risk of spreading respiratory viruses, as this reduces the number of inhaled and exhaled infectious particles.

Ms Kydd agrees and adds that when nurses or patients have viruses such as the common cold, surgical face masks should be worn. 'But where there's lots of coughing or sneezing you may want to don eye protection or visors and they would be

How to avoid picking up winter bugs

- **Improve your diet** Getting a healthy balance of food groups and plenty of fruit and vegetables will boost immunity and help fight off infections
- **Limit drinking** Alcohol can suppress immune responses so consume it in moderation, and if you have contracted a virus cut drinking out altogether, as it can slow recovery time
- **Get a good night's rest** Sleep strengthens the immune system and improves resistance to viruses. At least seven hours a night is recommended
- **Stay zen** Stress affects hormones such as cortisol, which can affect immune function, so taking steps to reduce it – for example, by exercising or using breathing techniques – can be beneficial
- **Get vaccinated** Remember to get flu and COVID-19 vaccinations in winter – they will not prevent all infection, but will prevent viruses from spreading and causing disease

Sources: Rose Gallagher, RCN professional lead infection prevention and control, and Patricia Kydd, University of Dundee lecturer in nursing

used in combination with a fluid-resistant mask like an FFP2 or FFP3.'

In June 2022, NHS England advised local trusts to carry out their own risk assessments regarding the use of face masks. As a result, says Ms Kydd, health settings vary in their approach. 'It really does depend on where you are and the clinical area in which you work,' she says.

Which 'bad habits' or hygiene lapses increase the risk of infection spread?

A study published in August 2023 says that health workers who pick their nose are more likely to contract COVID-19, yet those who bite their nails are no more likely to test positive for COVID-19 – possibly due to the protective effects of saliva.

Ms Gallagher says that other habits contribute to viral spread. 'With norovirus, anecdotally there is a higher rate of infection when outbreaks occur in health professionals who are smokers,' she says. 'That is down to the hand-to-mouth contact. This can be counteracted with hand hygiene.'

The spread of respiratory viruses can be reduced by adhering to the motto 'Catch it. Bin it. Kill it', she says. This means using tissues to catch viruses, disposing of these in the bin, and killing the virus by washing your hands afterwards.

'You don't want to do things like put tissues up your sleeve or use hankies that stay in your pocket,' Ms Gallagher says. 'Throw the virus out as soon as possible.'

How long do viruses survive on surfaces and how can nurses keep their environment hygienic?

Viruses have different life spans. Norovirus lives on hands and surfaces for up to 12 hours, the common cold and flu for up to 24 hours. COVID-19 can survive from a few hours to several days, depending on the viral strain.

'Generally, viruses will last longer on hard, non-porous surfaces, such as plastic or steel,' says Ms Kydd. 'So equipment, such as drip stands, should be regularly cleaned. You need daily environmental decontamination everywhere, but it needs to be more frequent for surfaces that are touched a lot. If you have a patient with an identified organism then increase the frequency of the cleaning and use the appropriate disinfectant, according to what it is and local policies.'

Government guidance warns that virus particles can build when there is no fresh air in a room. Although opening a window or introducing an air vent cannot stop anyone contracting a virus, it can reduce viral build-up.

'It's great if you can open a window and your patient isn't too cold,' says Ms Kydd. 'But try to avoid using a fan, because that just blows the organisms all over the place.'

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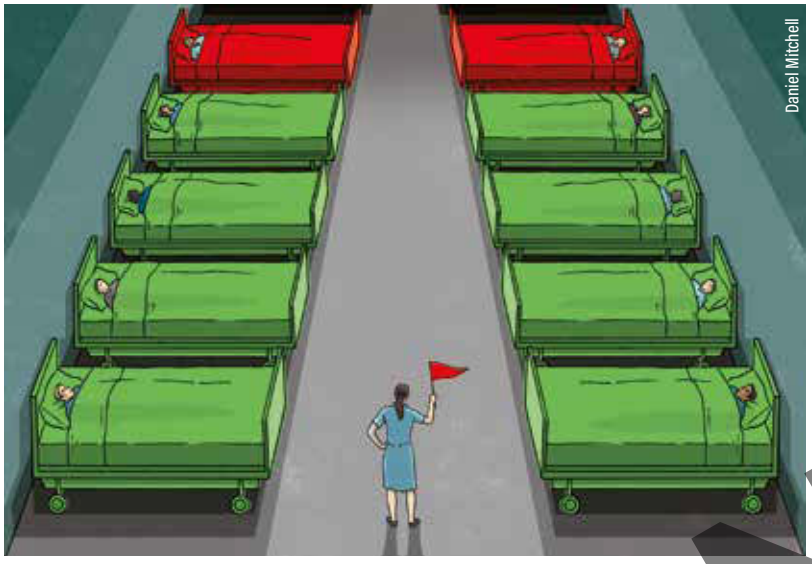

Safe staffing: how nurses can report concerns

How and in what circumstances to use 'red flags', whether you are a ward manager or leader, or a staff nurse

By Pippa Clark,
lead nurse for safe staffing
at University Hospitals
Leicester NHS Trust

Feeling safe to raise concerns in the knowledge that any issues will be listened to and acted on is essential to our well-being at work. Whether about patient safety or staffing levels, we must have the courage to raise and escalate our concerns using the tools and support available, such as a red flag system.

In 2014, the National Institute for Health and Care Excellence (NICE) published guidance on safe staffing levels on hospital wards.

'A red flag system improves communication, teamwork and nurses' problem-solving skills, and ensures staff are listened to when they raise concerns'

This followed the 2013 publications of the Francis Inquiry report into poor care at Mid Staffordshire NHS Foundation Trust and the Berwick report on patient safety – both of which identified that inadequate staffing levels contributed to poor quality care.

The NICE guidance recommended the use of 'red flags' for safe staffing – a system that warns the nurse in charge that there may not be enough nursing staff to meet the needs of patients on that shift, so that immediate action can be taken.

Nurses' responsibilities

From students and support workers to the most senior nurses in an organisation, everybody has a role in raising concerns about safe staffing.

The level of responsibility for acting on these concerns depends on your role and level of experience, but if you have any concerns about staffing levels as a nursing student, healthcare support worker or newly registered nurse, raise these with the nurse in charge of the shift as soon as you can.

Nurses at band 5 should also raise any concerns with the nurse in charge. For example, if there is only one registered nurse on the ward who can administer intravenous (IV) medications and the majority of patients require IVs, raise this with the nurse in charge so they can help.

The responsibilities of those at band 6 include assessing staffing, discussing it with the nurse in

Nurse staffing red flags

The core nursing red flags in the NICE guidance are:

- Planned medicine administration is missed
- More than 30 minutes' delay in providing someone with pain relief
- Failure to record or assess a patient's vital signs in line with the person's care plan
- Delayed or missed regular checks on patients to ensure fundamental care needs are being met, such as pain assessment, meeting hydration needs, ensuring patients are comfortable and assessment and monitoring of pressure ulcer risk
- Fewer than two registered nurses being present on a ward during a shift
- A shortfall of more than eight hours, or 25% (whichever is reached first) in the registered nurse time available, compared with the actual requirement for the shift. For example, if a shift requires 40 hours of registered nurse time, a red flag event would occur if fewer than 32 hours of registered nurse time was available for that shift

The NICE guidance says red flags can also be agreed locally – not having enough staff to provide continuous patient observation, for example, could be an additional red flag.

charge and supporting them in coming up with solutions or mitigations.

The nurse in charge is responsible for assessing staffing against bed occupancy and patient acuity and dependency, so listening to colleagues' concerns is vital.

Many factors can affect safe staffing levels during a shift, such as increases in patient acuity or someone going home sick.

Red flag systems enable real-time monitoring during the course of a shift, giving senior nurses continuous oversight of staffing levels and patient acuity, allowing them to determine whether the staffing level is safe enough to meet patient demand. Either the nurse in charge or the ward manager should raise a red flag. This ensures continuity and eliminates the risk of power struggles between colleagues.

The nurse in charge of any shift should have access to software for raising a red flag. At University Hospitals of Leicester NHS Trust, red flags are raised electronically using Allocate SafeCare, which provides live visibility of staffing levels in relation to patient demand.

Automated escalation

Technology is key to safe staffing. Although red flags can be raised in person – at staff meetings, for example, or if the ward manager or nurse in charge speaks directly to the matron – an automated escalation system enables senior colleagues to respond quickly as soon as a red flag is raised, so that a timely solution can be found.

Organisational oversight of staffing is essential for senior nurses' daily operational management. SafeCare uses a traffic light system, with red, amber or green status allocated depending on the staff required versus the staffing hours actually available.

The system also highlights areas where red flags have been raised, allowing the data to be analysed so any themes or patterns can be identified. For example, if the data show most of the red flags for one area or specialty are being raised on a Monday long day shift, senior nursing staff can examine what is happening during that shift and how can they respond.

The monitoring and analysis of trends is critical to enabling continuous improvement of services and response to patient need.

A triangulated approach

It is essential red flags are not neglected or disregarded, with safe staffing guidance from the National Quality Board highlighting the importance of a 'triangulated approach' to safe staffing.

This combines patient outcomes, evidence-based tools and professional judgement to ensure we have the right staff with the right skills in the right place at the right time.

As well as enabling staffing concerns to be identified and acted on quickly, a red flag system improves communication, team work and nurses' problem solving skills, and ensures staff are listened to when they raise concerns.

Safe staffing is everybody's business and should be monitored from ward to board. This promotes a transparent culture and positive working relationships that make it possible to deliver high-quality patient care.

Raising a red flag – the cycle of communication

This cycle of communication is essential when raising, reviewing and resolving red flags. It reassures staff that any concerns raised are being listened to and acted on promptly, improving staff well-being while ensuring patient safety.

- The nurse in charge assesses staffing levels for the day at the earliest opportunity – ideally during or immediately after handover – then compares their findings to the types of red flags set out by the organisation
- If the assessment of staffing triggers a red flag, the nurse in charge creates a red flag via the system used by the organisation. This triggers an auto-alert to senior nursing colleagues – usually nurses at band 8a and above, such as matrons – to respond to the alert
- Senior nurse reviews the red flag at the earliest opportunity during the same shift period, looking at staffing levels and implementing mitigations where possible and appropriate. An example is weighing whether a staff member can be redeployed to another area for part of the shift, to avoid the use of bank or agency staff
- The decision-making process and resolution of the red flag is then documented, with the senior nurse providing feedback on actions taken to the nurse in charge


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Communication is essential to reassure staff that their concerns are being listened to

Further information

NICE (2014) Safe Staffing for Nursing in Adult Inpatient Wards in Acute Hospitals. **www.nice.org.uk/guidance/sg1**

National Quality Board (2016) Supporting NHS Providers to Deliver the Right Staff, with the Right skills, in the Right Place at the Right Time. **tinyurl.com/NQB-safe-staffing**

What can nurses learn from patient feedback in the ED?

Feedback on emergency department services can be used by nurses to improve patient-centred care, but be aware of the possibility of compassion fatigue

By Jessica Bradley
health journalist

Ever-increasing stresses placed on emergency departments (EDs) can make it hard for nurses to dedicate the time and attention to each patient that they might want – especially when winter pressures kick in.

However, listening to patients about their experiences can offer insight on what visitors to the ED value and provide tips for nurses to incorporate into their practice.

Catherine Welsh, whose name has been changed, has a number of roles representing the interests of patients, including as a lay representative on a national healthcare body and in her day job working in patient participation in local primary care. She was also recently a patient in an ED, where, she says, she felt more like a number than a person.

'There was a tick box approach,' she says. 'They were not actively listening to the patient's narrative because they were so busy concentrating on filling in forms.'

Shared decision-making

Ms Welsh says no one explained the process she would be going through: 'I worried about going to get a drink or food because they might have thought I had left. The process of shared decision-making is important, but this didn't happen. There were poor listening skills throughout the whole process.'

Although she said she came away feeling that in general she had not been at the centre of the care she received, one nurse stood out to Ms Welsh for giving her personalised care. 'She shared something about herself and was able to engage in conversation and made me feel like I was viewed as an equal,' she says.

Most complaints from patients relate to a lack of communication from staff according to Helen Francis-Wenger, University of Plymouth lecturer in advanced clinical practice and advanced clinical practitioner in emergency medicine.

'It comes down to patients not being prepared for what the process will entail. We give them so much attention at the start of their time in the ED with a rapid assessment, so they may think that everything will happen quickly,' she says.

Patient feedback is at the core of understanding what nurses can improve, she adds.

'It is intrinsic to us as human beings to understand how the world sees us,' she says. 'We should welcome advice and comments from patients and use it for our own personal development.

'One reason it is important to properly consider patient feedback is because attitudes are constantly evolving and practitioners are so busy that they can lose sense of the patient's perspective over time.'

> **'We need a wider systems review that holds the experience of the patient involved at its centre'**
> *Julia Gamston, emergency and urgent care consultant nurse*

Ms Francis-Wenger acknowledges feedback can sometimes be given in a negative fashion, which makes it more difficult to take on board. But it is important nonetheless to try to use it in a productive way.

'We should use feedback to influence our peers, rather than seeing it as a punitive measure.'

While patient feedback may be useful to nurses in their own personal practice, it can

Tips for a more positive patient emergency department experience

Nurses should be mindful that, while it is another day at work for them, it is potentially the worst day of a patient's life, University of Plymouth lecturer in advanced clinical practice Ms Francis-Wenger says.

'We should have greater compassion towards patients and what has brought them to the hospital that day; it is easy to forget this sometimes when stressed and stretched.'

She also advises nurses to be aware of the possibility that they may have compassion fatigue. This could be caused by simple things such as being hungry, arriving late to work or being tired. Or it may require some self-care, she adds, by having some time out if and when this is possible.

When patients are triaged, many would appreciate being in a private space where other patients cannot overhear them, says Isobel Knight who has multiple health problems and is a frequent patient in the emergency department.

Patients who go in by themselves would benefit from more support from nurses, she says.

'It can be scary,' she adds. 'Nurses were around me a lot, it would be nice if they had checked in more.'

Ms Welsh advises nurses to be aware of the principles of working in partnership with patients. 'In my experience there was no shared decision-making process,' she says.


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also inform service design and improvements.

Involving patients and their carers can lead to huge improvements in service delivery, says Imperial College Healthcare NHS Trust emergency and urgent care consultant nurse Julia Gamston.

To that end, a fundamental change to how we learn from adverse events in healthcare is being introduced across the UK.

'The Patient Safety Incident Response Framework will replace the current clinical incident reporting process and will include patients and relatives from the outset,' she says.

Focusing on errors

'We tend to focus on individuals and errors. Once these have been identified, an action plan is put in place to prevent the same thing happening again. But unfortunately, it often does.

'There is a recognition in healthcare, as well as other safety-critical industries, that we need a wider systems review when things go wrong that holds the experience of the patient involved at its centre.'

EDs can be particularly challenging, Ms Gamston says, and the first step is accepting that there are many factors that influence the quality of care. This approach will also engage nurses in a more meaningful way, she adds.

'Healthcare practitioners feel awful after a negative event and it can be really damaging. We work in an incredibly difficult environment and do such a good job for such a big proportion of the day to mitigate risks,' Ms Gamston says. 'But we tend to only remember when things go wrong, which is compounded by our current process.'

The new framework, Ms Gamston adds, will involve timely face-to-face conversations with practitioners when something has gone wrong to hear their account and details about the context with a suitably qualified senior staff member in safety investigations.

Further information

NHS England (2023) Patient Safety Incident Response Framework. **tinyurl.com/NHSE-safety-framework**

The framework will involve more gathering of detailed information that looks at the incident with a systems-wide approach, she adds.

'Rather than a simple statement of facts, such as timings, events and interactions, there will be a deeper understanding of the circumstances and the impact of these on the practitioner, with the goal of real learning,' Ms Gamston says.

It is important for ED nurses to engage with the reporting process and, although sometimes time-consuming, to complete incident reports as required, Ms Gamston adds. These reports are shared at higher levels in the organisation and aid understanding of the daily challenges in the ED.

Pressure on nurses

While it is crucial that lessons are learnt from feedback and errors, it is also important for patients to consider the pressures that ED nurses are under, Ms Francis-Wenger says.

With EDs stretched, nurses may not get to spend as much time with each patient as they would want, but there are also societal reasons that may contribute towards patients feeling like they are not being listened to, according to Ms Francis-Wenger. 'Patients' expectations have changed over the past 20 years with the rise of immediacy, we can get information fast so they can have greater expectations.'

Sometimes those demands may be just too great.

'I have heard of staff pretending to be on the phone so no one will interrupt them for a moment – just finding tricks to protect themselves,' Ms Francis-Wenger says.

'Patients do also hold some responsibility for their behaviours and conduct while in the department. This feedback should work both ways,' she says.

SKILLS

Write an abstract that grabs your reader's attention

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If you are writing an article for the peer-reviewed section of an RCNi journal, you'll need an abstract – essentially a summary of your article.

Writing for publication is all about the reader and, as an author, you want the reader to journey through your article from start to finish with as few obstacles, forks in the road and dead ends as possible. Think of the abstract as a guide to this journey.

Highlight what you think is important

An abstract explains what lies ahead, it highlights important features or findings and it describes the end point.

A well written abstract can make the difference between readers reading your article and reflecting or acting on it, and their abandoning the journey before it has begun.

Write the article before the abstract

You cannot summarise what you have not yet written. Stick to the guidelines. Abstracts in RCNi journals have between 80 and 150 words. Anything longer is likely to be cut so make every word count.

Follow the same order of topics in the abstract as you do in the article. But write the abstract separately rather than cutting and pasting chunks of text from the article.

Not too much detail

Describe your article's main arguments and findings broadly. The detail should be in the article itself.

All abstracts should be followed by a list of five or six keywords. These will help online searchers to find your article once it is published.

When choosing keywords, think about the article's subject matter, the setting, the target group of patients or clients, the healthcare professionals involved, the techniques described and so on. For example, a typical set of keywords is: 'depression', 'nursing homes', 'older people', 'community mental health nurses', 'cognitive behaviour therapy'.

What matters?

When writing the abstract, think about the article's purpose. Be clear about the issue you are trying to address. What does it add to the sum of existing nursing knowledge? How is it likely to influence nursing practice? The abstract should give readers a reason to read on. Avoid jargon and unexplained acronyms. This applies to the main text as well as the abstract, but the abstract should 'sell' the article to readers so it is important not to litter it with words and phrases that confuse and discourage.

*For a comprehensive range of free author resources go to **rcni.com/publish-article-with-rcni***

Also in this issue

LOWER-LIMB TRAUMA

Risk assessment and thromboprophylaxis in adult patients with lower-limb immobilisation

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CONTINUING PROFESSIONAL DEVELOPMENT

Overcoming the barriers to optimal end of life care in the emergency department

p34

This article has been subject to external double-blind peer review and checked for plagiarism using automated software

PRACTICE QUESTION

How can triage nurses spot a patient with posterior stroke?

Posterior stroke can be difficult to spot, but nurses can use the BEFAST acronym to save lives

About 20% of ischaemic strokes in the UK affect the posterior circulation, however it can be more difficult to recognise compared to other stroke types and if not identified, a delayed or misdiagnosis could result in preventable death or disability (Merwick and Werring 2014).

By understanding key signs and symptoms to look out for, nurses in emergency departments (EDs) can play a pivotal role in rapidly identifying patients presenting with signs suggestive of a posterior circulation stroke to help save lives.

Signs and symptoms of a posterior circulation stroke include vertigo and gait disturbance, nausea and vomiting, diplopia, visual field defects, unilateral limb weakness, ataxia, dysarthria and swallowing difficulties.

The vertebral, basilar and posterior cerebral arteries with the vertebral arteries in the neck form the brain's posterior circulation. Posterior stroke occurs when blood flow in one of the vessels of the posterior circulation is interrupted and is mainly caused by atherosclerosis but can also be caused by embolism or dissection (Nouh et al 2014).

The posterior circulation supplies key areas of the brain, such as the brainstem, cerebellum and occipital regions, and circulation to the inner ear. Symptoms can include dizziness, double vision, defects with visual fields, speech and swallowing difficulties, and ataxic gait.

Think BEFAST

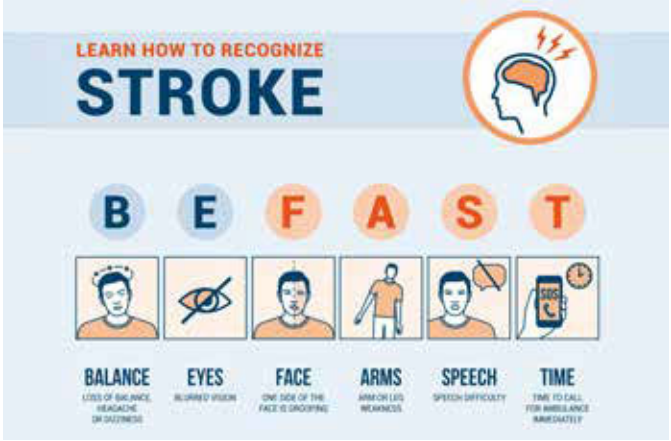
Patients often present with dizziness, nausea and vomiting and this can appear similar to non-life-threatening conditions affecting the inner ear such as vestibular neuritis, labyrinthitis or benign paroxysmal positional vertigo.

Delays in recognition and diagnosis of posterior circulation strokes in EDs can occur as symptoms vary due to the posterior circulation supplying several different regions of the brain and vast amounts of brain tissue (Hoyer and Szabo 2021). This means not all patients with posterior strokes present with the classic 'Face Arm Speech Time Test' (FAST). Recent studies have shown that FAST identified 69% to 90% of strokes but missed up to 40% of those with posterior circulation events (Aroor et al 2017).

Emergency nurses will be familiar with the acronym FAST. However, by also being familiar with BEFAST, nurses could consider balance and eyesight in addition to FAST to help identify posterior strokes (Kuybu et al 2022).

Balance – is there a sudden loss of coordination? Eyesight – is there visual disturbance such as double vision, blurred vision or loss of visual fields? If so, your patient may have signs of stroke, and this is a medical emergency.

The phrase 'time equals brain' remains relevant and relates to the fact that the longer treatment for stroke is delayed, the worse the outcomes for the patient can be, so prompt recognition is required (National Institute for Health and Care Excellence 2019). If stroke symptoms are suspected, arrange urgent medical review.



What nurses should do if posterior circulation stroke is suspected:

- Assess mental status and level of consciousness – assess Glasgow Coma Scale.
- Perform vital sign observations and accurately calculate NEWS2.
- Perform ECG.
- Gain IV access and obtain blood tests for haematology and biochemistry as per local guidelines.
- Check blood sugar.
- Assess functions such as speech, memory and cognition.
- Maintain patient safety.
- Ensure appropriate urgent review by a senior clinician who can assess and manage patients with signs of stroke.

Neal Scott Aplin, advanced clinical practitioner, Great Western Hospitals NHS Foundation Trust, Swindon, England

Further information

Aroor S, Singh R, Goldstein L (2017) BE-FAST (balance, eyes, face, arm, speech, time): reducing the proportion of strokes missed using the FAST mnemonic. Stroke. 48, 2, 479-481. (Last accessed: 6 October 2023.)

Hoyer C, Szabo K (2021) Pitfalls in the diagnosis of posterior circulation stroke in the emergency setting. Frontiers in Neurology. 12, 682827. doi: 10.3389/fneur.2021.682827

Kuybu O, Tadi P, Dossani RH (2022) Posterior Cerebral Artery Stroke. StatPearls Publishing, Treasure Island FL. (Last accessed: 6 October 2023.)

Merwick A, Werring D (2014) Posterior circulation ischaemic stroke. BMJ. 348, g3175. doi: 10.1136/bmj.g3175

National Institute for Health and Care Excellence (2019) Stroke and Transient Ischaemic Attack in Over 16s: Diagnosis and Initial Management. www.nice.org.uk/guidance/ng128 (Last accessed: 6 October 2023.)

Nouh A, Remke J, Ruland S (2014) Ischemic posterior circulation stroke: a review of anatomy, clinical presentations, diagnosis, and current management. Frontiers in Neurology. 5, 30. doi: 10.3389/fneur.2014.00030

PEER-REVIEWED

Why you should read this article:

- To recognise the need for emergency nurses to receive high-quality triage training
- To be aware that lectures, simulations and workshops can be effective training interventions for improving triage practice
- To appreciate there is a need for further research to ensure that the evidence base for triage training is effective for application to practice

Training nurses to triage: a scoping review

Hugh Gorick and Aditi Sabrina Rai

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Abstract

Triage accuracy is important to ensure effective treatment and management of patients in the emergency department, however this requires nurses to receive high-quality triage training. This article reports the results of a scoping review that aimed to establish what research on triage training exists and what research is required to improve such training. Sixty eight studies that used a range of training interventions and outcome measurements were reviewed. The authors conclude that the heterogeneity of these studies makes comparison challenging and that this, combined with low methodological quality, requires caution when applying the results in practice. The authors recommend establishing a gold standard for measuring triage training outcomes.

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Keywords

education, educational methods, emergency care, literature review, methodology, professional, research, training, triage

Background

Triage is an important interaction for patients in emergency departments (EDs), representing an assessment of their acuity and setting the course for their journey through the hospital (Gorick 2022). Accurate triage ensures that patients receive the treatment they need in the time frame in which they need it, thus preventing patient harm and ensuring effective flow through the ED (Farrohknia et al 2011, Yurkova and Wolf 2011).

A systematic review of triage performance in emergency medicine found that errors occur at unacceptably high levels and identified the need to improve interrater reliability and triage performance in terms of identifying patients at risk of adverse outcomes (Hinson et al 2019). Research that explored whether postgraduate qualifications make a difference to triage accuracy found no significant effect (Ekins and Morphet 2015, Jordi et al 2015), while Tam et al (2018), in a review of triage accuracy, recommended that staff should receive monthly refresher training to increase accuracy and improve patient outcomes.

Triage training is vital to ensure triage accuracy, but it is important to understand what research is available regarding training interventions and what further research is required. Undertaking a scoping review of a topic enables assessment of current knowledge and can help to direct future developments (Pham et al 2014). However, a search undertaken by the authors before the one described in this article identified only one scoping review of nurse triage training (Hardy and Calleja 2019) and no systematic reviews. The authors therefore conducted a scoping review to assess current knowledge of triage training.

Aim

The aim of this scoping review was to establish what research exists and what future research is required to improve nurse triage training.

Method

The scoping review followed the six-stage format outlined by Arksey and O'Malley (2005): specify the research question; identify relevant literature; select studies; map out the data; summarise, synthesise and report the results; and include expert consultation (optional). In this review the optional sixth stage was not included.

Research question and identification of relevant literature

The research question was: 'What is the available research about training interventions for triage in the ED?'. Relevant studies were identified using the search terms shown in Table 1.

Searches were not restricted by date or geography to capture all available research. Although this meant studies that might not be considered current were included, it reduced the risk of excluding relevant research. Initially language was not restricted, but studies in languages other than English where a high-quality translation could not be obtained were excluded for practical reasons.

Searches for relevant studies were made on Ovid MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Cochrane and the British Nursing Index using targeted search strategies up to 27 September 2022. Relevant conference proceedings and organisations were also searched, including: OpenGrey; EThOS; the King's Fund; the World Health Organization; the National Institutes of Health; the National Institute for Health and Care Excellence; Manchester Triage Group; the Australasian College for Emergency Medicine; and the Emergency Nurses Association. Citations in studies were checked for relevance.

Study selection

Citations for all studies were exported to EndNote 20 reference management tool for duplicate removal and organisation before transfer to Rayyan software for screening. Full texts were obtained where possible through the authors' university library; where these were not available, intra-library loans were obtained and the lead authors were contacted for manuscripts.

Inclusion and exclusion criteria (Box 1) were developed to screen included citations. Primary and secondary research on triage training was included except for studies that surveyed levels of training, as they did not describe the training. Where data were reported in multiple sources, for example in a thesis and a publication, the most complete set of data was used.

Screening took place using Rayyan, with initial title and abstract screening followed by full-text screening using the criteria in Box 1.

The authors screened each study blinded to each other's decisions, compared results and discussed any disagreements until both agreed. Kappa for title and abstract screening was 0.82 (95% confidence interval (CI) 0.79-0.85) and for full-text screening was 0.84 (95% CI 0.75-0.94).

Mapping the data

Data were extracted from included studies for analysis using a standardised form in a spreadsheet programme. Both authors initially extracted from the same ten studies then checked agreement (Kappa 0.85 95% CI 0.58-1.12). As there was almost perfect agreement, the rest of the studies were charted individually.

Methodological analysis was undertaken using critical appraisal tools from the Joanna Briggs Institute (https://jbi.global/critical-appraisal-tools) relevant to the study type. Appraisal was undertaken by both authors while blinded to each other's decisions, then compared, with differences discussed and resolved (Kappa 0.8 95% CI 0.76-0.85). Overall methodological quality of studies was rated using a five-point scale – very high, high, moderate, low, very low.

Summary, synthesis and reporting of results

Results were analysed following the methods proposed by Arksey and O'Malley (2005), first by quantitative analysis of the extent, nature and distribution of the studies using descriptive statistics and second by narrative analysis of the content to gauge the extent of the research.

Key points

- Triage training is vital to ensure triage accuracy
- To improve triage requires an understanding of what research of training interventions is available
- Lectures, simulations and workshops appear to be effective in improving triage practice and may provide direction for development of future training programmes
- Future training programmes should undergo rigorous validation with comparisons against controls to demonstrate their effectiveness
- Establishing a gold standard for measuring triage training outcomes would focus future research

Table 1. Search terms

Nurse	Emergency department	Triage	Teaching
Nurs*	Emergenc* ADJ2 Department*	Triag*	Teac*
Nurse (MeSH)	Accident* ADJ2 Emergenc*	Acuit*	Trai*
	A&E	Sever* adj3 ill*	Educat*
	'A & E'	Triage (MeSH)	Lesso*
	Emergency department (MeSH)	Patient acuity (MeSH)	Improv*
			Education (MeSH)

Search terms were grouped by root words (top line). The terms in each column were searched with OR then the results of each column search were combined with AND

Online archive
For related information, visit **emergencynurse.co.uk** and search using the keywords

Results

Database searches yielded 6,929 records, which was reduced to 3,667 following duplicate removal. Title and abstract screening resulted in 115 reports being moved to full-text review. Full texts could not be retrieved for nine reports, six were not available in English and 34 were not about triage training and were therefore excluded, leaving 66 studies. Three records from websites, 20 from organisations and five from citation searches were added, resulting in 28 reports for full-text screening of which 26 were excluded as they were not about triage training, leaving two studies. A total of 68 studies was included in the review.

Study characteristics

General characteristics of the studies reviewed are presented in Table 2.

Study methodologies and quality

A summary of the methodologies used in the studies reviewed, and methodological quality, is shown in Table 3. Overall, methodological quality was low, with only 25 (37%) studies rated as high or very high quality.

Figure 1 shows a graphical representation of the disposition of the studies stratified by training intervention, outcome measurement and methodological quality.

Study design and training intervention type

The design in most of the studies reviewed was interventional (*n*=54, 79%), with 42 (62%) studies using a quasi-experimental design. Of these 42 studies, 38 (90%) used pre-/post-testing, but only eight (19%) used comparison groups, controls or both (supporting data are available from the corresponding author). In 14 (33%) of the 42 quasi-experimental studies, study follow up was not completed or was not adequately analysed, in 16 (38%) outcomes were not measured in reliable ways and in 13 (31%) there was a lack of appropriate statistical analysis.

Only six (9%) of the 68 studies reviewed were randomised controlled trials (RCTs), none of which used blinding. Of these six RCTs, two (33%) did not measure outcomes in reliable ways and two (33%) did not describe the characteristics of the treatment groups sufficiently to be able to assess similarity at baseline. Of the remaining 62 studies, four (6%) were cross-sectional, one (2%) was a case series and one (2%) was a cost analysis. Of the 14 non-interventional studies, four (29%) used a qualitative design, two (14%) were literature reviews and eight (57%) used no specific design.

A total of 13 (19%) studies used a combination of training interventions, but only 11 (16%) compared interventions, of which six (55%) were RCTs.

Box 1. Inclusion and exclusion criteria

Inclusion criteria:
Studies that focused on the emergency department
Studies concerned with face-to-face triage practices
Studies that focused on improving triage through training

Exclusion criteria:
Studies that surveyed nurses' levels of training

Table 2. General characteristics of the studies reviewed (*n*=68)

Characteristic		*n*	*%
Publication year	<2002	3	4
	2002-06	7	10
	2007-11	11	16
	2012-16	14	21
	2017-September 2022	33	49
Type of triage studied	Overall process of triage	51	75
	Triage of specific illness	17	25
Clinical specialty	Adult	55	81
	Paediatrics	10	15
	Mental health	2	3
	Maternity	1	1
Place of publication	UK	3	4
	North America	31	46
	South America	3	4
	Europe	9	13
	Asia	7	10
	Middle East	8	12
	Africa	2	3
	Oceania	4	6
	Caribbean	1	1
Publication source	Journal	63	93
	Conference	3	4
	Thesis	2	3

*Percentages rounded up or down so may not total 100

Outcome measurement

A total of 29 (43%) of the studies reviewed used multiple outcome measurements, 35 (51%) used one and four (6%) did not use any. Of the 58 studies that used quantifiable outcome measurements, eight (14%) showed no statistically significant outcomes. However, when only those with high or very high methodological quality were examined (*n*=25) this figure reduced to four (16%). When this group was limited further to those that used a comparison between interventions (*n*=9), only one (11%) showed no significant differences.

However, the outcome measurements used to represent triage accuracy were often abstracted versions of participants' ability to triage using tested and self-reported knowledge of triage, ED key performance indexes (KPIs) and self-reported confidence in triage ability. Although most of the outcome measurements were validated for use in research, using only these tools to represent triage ability risks providing incorrect measurements (Coster 2013). This is because rather than direct measurements of triage ability, they measure factors that influence nurses' ability to accurately undertake triage. Furthermore, some studies only measured participants' perceptions of interventions or mandatory training compliance rather than triage ability which, while useful, provided no indication of the effectiveness of the interventions.

Only 32 (55%) of the 58 studies that used quantifiable outcome measurements directly assessed triage accuracy, but not all of them assessed this in clinical practice, with 17 (53%) having measured triage accuracy in simulation contexts. Of the 25 studies rated as high or very high quality, 13 (52%) directly measured triage accuracy, six (46%) of which were measured in simulation scenarios and seven (54%) measured in clinical practice. Of these 13 studies, only six (46%) used a comparison and three (23%) (one of which used a comparison) had non-significant outcomes.

Only five studies (Kriengsoontornkij et al 2010, Delnavaz et al 2018, Hoseini et al 2018, Recznik 2018, Ghazali et al 2019) were rated as high or very high quality, used a comparison between interventions and/or a control, measured outcomes through assessment of triage accuracy in simulation or clinical practice and had statistically significant outcomes.

Table 3. Summary of methodologies used in the studies reviewed (*n*=68) and methodological quality

Characteristic		*n*	*%
Study design	Quasi-experimental	42	62
	Randomised controlled trials	6	9
	Cross-sectional	4	6
	Case series	1	1
	Cost analysis	1	1
	Qualitative	4	6
	Literature review	2	3
	No specific design	8	12
Training intervention type (24 studies used a combination or comparison of interventions)	Lectures	29	43
	Simulation	19	28
	Online courses	6	9
	Peer shadowing	4	6
	Workshops	18	26
	Specific intervention	6	9
	Combination of interventions	13	19
	Comparison of interventions	11	16
Outcome measurement (multiple outcome measurement tools were used in some studies)	Tested levels of knowledge	17	25
	Self-reported levels of knowledge	8	12
	Accuracy in simulated triage	17	25
	Accuracy in actual triage	15	22
	Emergency department key performance indexes	10	15
	Evaluation of training	18	26
	Self-reported confidence	11	16
	Cost analysis	1	1
	Training compliance	1	1
	Qualitative analysis	6	9
	No outcome measurement	4	6
Methodological quality	Very high	5	7
	High	20	29
	Moderate	19	28
	Low	19	28
	Very low	5	7

*Percentages rounded up or down so may not total 100

Discussion

Some studies included in this scoping review used qualitative methodologies (*n*=4, 6%) or

literature reviews (*n*=2, 3%). The studies that applied qualitative methodologies used these to assess the training interventions which, although useful, provides no information on the efficacy of the intervention. One literature review (Doherty 2016) considered peer shadowing but lacked measurable outcomes, while the other literature review (Recznik and Simko 2018) described different methods of interventions for paediatric triage education.

Each of the interventions used in the studies reviewed are discussed below to establish a comprehensive overview of the findings.

Lectures

Lectures were the most used interventions (*n*=29, 43%) and ranged from one-off sessions to regular weekly or monthly sessions, lasting from 20 minutes to several hours. Lectures were found to be effective, with most studies showing statistically significant increases in triage ability following the intervention, although Arroabarren et al (2018) was the only high-quality study that featured solely lectures that were not aimed at a specific illness. Grossmann et al (2014) found no significant differences in triage ability following lectures; Olsson et al (2022) also found no significant differences, even after combining lectures with simulations.

Simulation

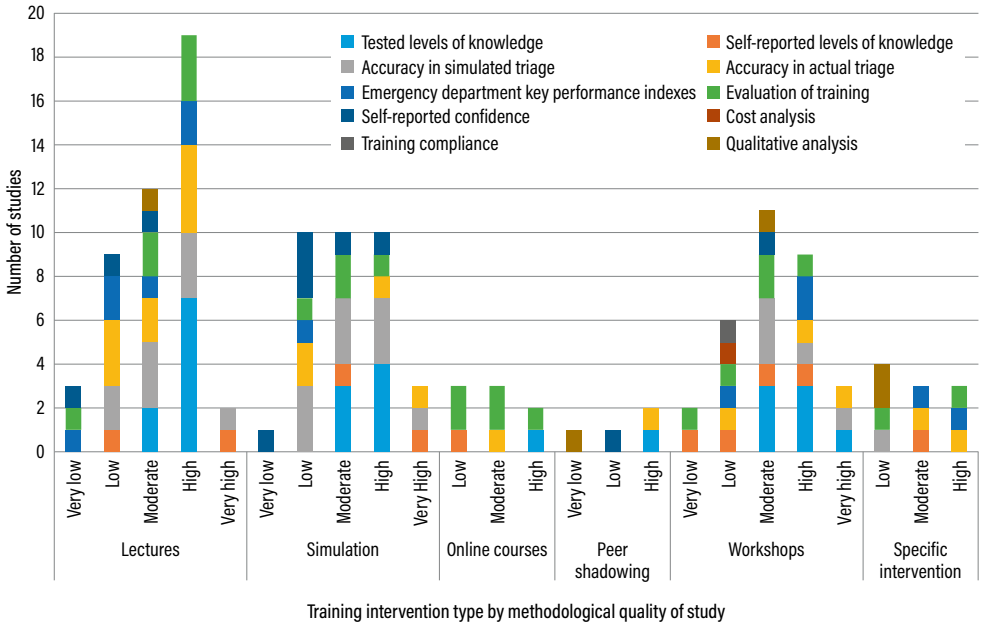
Simulation was used in 19 (28%) studies and ranged from low fidelity, for example role-playing and paper cases, to very high fidelity, for example using training manikins, multiple disaster simulation or virtual reality. Efficacy of the simulations was shown to be very high, with most studies reporting significant improvements following the intervention. Studies that used higher fidelity simulations demonstrated greater improvement in participants' triage ability compared with those that used lower fidelity simulations. Only two studies that explored simulations with no comparisons were rated as high quality – Jang et al (2020), who reported a statistically significant increase in triage ability, and Campbell et al (2022), who noted no significant improvements.

Delnavaz et al (2018) and Hu et al (2021) compared simulations with lectures and reported improved outcomes in both types of intervention, although there was greater improvement in outcomes with the simulation interventions. Recznik (2018) assessed two methods of simulation in cross-over trials and found that participants' triage accuracy significantly increased in both methods.

Workshops

Of the studies reviewed, 18 (26%) used workshops as the intervention, although it should be noted that the authors used a broad definition to label the interventions. Workshops consisted of mixed education methods, including group discussion, role-play, skills sessions and educational aids;

Figure 1. Disposition of the studies, stratified by training intervention, outcome measurement and methodological quality



however, several studies that used the term 'workshops' gave no description of what the intervention involved. Three studies that used controls reported significant levels of improvement following a workshop intervention (Hoseini et al 2018, Ghazali et al 2019, Kaiafas and Bennett 2021).

Smith et al (2013) compared lectures with simulations and a combination of simulations and workshops, and reported that all groups showed increased tested triage knowledge. Only one study that explored the use of workshops reported a lack of significant positive outcomes (French et al 2021).

Online courses

Six (9%) of the studies used online courses, which were generally in-person, face-to-face courses that were delivered online rather than designed for online delivery. One study (Greci et al 2013) used an online interaction to simulate a patient surge, which presented a novel method of teaching triage; however, the quality of the study was low and it measured self-reported knowledge.

Outcome measurements for online interventions mostly assessed user acceptability – with good levels of acceptance – but lacked evaluation of the effectiveness of the intervention. Only four studies examined the effectiveness of online interventions. Two of these, Atack et al (2005) and Rankin et al (2013), assessed triage accuracy; while Atack et al (2005) (moderate quality) reported that the intervention improved accuracy, Rankin et al (2013) (high quality) reported no significant difference between the experimental and control groups. Greci et al (2013) measured self-reported knowledge and reported that this increased following delivery of an online intervention, while Yazdannik et al (2018) compared online courses with workshops by measuring tested knowledge and showed improvements in both interventions, with greater improvements in the online intervention.

Peer shadowing

Peer shadowing was used in four (6%) studies, three of which combined this with lectures. The interventions consisted of working with more experienced colleagues and learning from their decision-making processes. Kriengsoontornkij et al (2010), who explored peer shadowing combined with lectures, measured triage accuracy in practice and reported significant increases. However, the other studies that considered peer shadowing either lacked measurable outcomes (Jakobsen and Villumsen 2011, Doherty 2016) or used only self-reported confidence as the outcome and was low quality (Baston and Simms 2002).

Specific interventions

Specific interventions were discussed in six (9%) studies. One study (Jarvis and de Freitas 2009) compared a 'serious game' – that is, a game where the purpose is to educate rather than to entertain – with tabletop exercises, in which the serious game group showed better simulated triage accuracy; however, the study was low quality. Jang et al (2021) investigated the effects of peer-based learning on triage accuracy and found that accuracy improved, although ED waiting times did not change significantly; furthermore, the quality of the study was moderate.

Other specific interventions included reflective practice, which showed significant positive effects on triage accuracy and ED KPIs (Saban et al 2021), and 'the clock model' tool for 'clinical reasoning in the ED' (Schumaker and Bergeron 2016). The methodological quality of Schumaker and Bergeron's (2016) study was low however, as they evaluated the intervention rather than its effect on triage accuracy.

Limitations

Nine reports were excluded from the final review as the full text could not be retrieved and six were excluded because they were not available in English. These 15 studies may have contained relevant information about training in triage.

While the methodological quality of the studies was measured using validated critical appraisal tools, the outcomes are subjective assessments by the authors based on the results of these validated tools. However, these assessments were made by both authors blinded to each other's decisions and agreement was at a very good level, increasing the rigour.

Implications for policy, practice and future research

The results of this scoping review suggest that lectures, simulation and workshops appear to be effective training interventions for improving triage accuracy and may provide direction for the development of future training programmes. However, due to the heterogeneity of the studies, the mix of outcome measurements used – many of which did not directly measure triage accuracy – and methodological quality, the authors advise significant caution before applying

these results to practice. The authors also suggest that future training programmes should undergo rigorous validation with comparisons against controls to demonstrate their effectiveness.

The authors recommend establishing a gold standard for measuring triage training outcomes and that triage accuracy should be assessed in clinical practice. Further high-quality research into the effectiveness of training interventions using these outcomes will be required. Finally, a meta-analysis of training interventions may provide good evidence for practice but given the heterogeneity of the research this may prove challenging to undertake.

Conclusion

The current literature on training in triage is heterogeneous, covering a wide variety of interventions and using multiple outcome measurements. Additionally, the methodological quality of studies is low, with only 25 (37%) of those reviewed rated high or very high quality, and most interventional studies lack comparison. There is a need for further research to ensure that the evidence base for training in triage is effective for application to practice. The authors recommend establishing a gold standard for measuring triage training outcomes and that triage accuracy should be assessed in practice. Where this is not possible, assessing accuracy by simulation should be used as an alternative.

References

Arksey H, O'Malley L (2005) Scoping studies: towards a methodological framework. International Journal of Social Research Methodology. 8, 1, 19-32. doi: 10.1080/1364557032000119616

Arroabarren E, Alvarez-García J, Anda M et al (2018) Impact of specific training in anaphylaxis for triage nursing staff in the pediatric emergency department of a tertiary hospital. Journal of Investigational Allergology and Clinical Immunology. 28, 6, 401-406. doi: 10.18176/jiaci.0271

Atack L, Rankin JA, Then KL (2005) Effectiveness of a 6-week online course in the Canadian Triage and Acuity Scale for emergency nurses. Journal of Emergency Nursing. 31, 5, 436-511. doi: 10.1016/j.jen.2005.07.005

Baston S, Simms M (2002) Mental health nursing developing effective education in A&E. Emergency Nurse. 10, 2, 15-18. doi: 10.7748/en2002.05.10.2.15.c1381

Campbell D, Fetters L, Getzinger J et al (2022) A clinical nurse specialist-driven project to improve emergency department triage accuracy. Clinical Nurse Specialist. 36, 1, 45-51. doi: 10.1097/NUR.0000000000000641

Coster WJ (2013) Making the best match: selecting outcome measures for clinical trials and outcome studies. American Journal of Occupational Therapy. 67, 2, 162-170. doi: 10.5014/ajot.2013.006015

Delnavaz S, Hassankhani H, Roshangar F et al (2018) Comparison of scenario based triage education by lecture and role playing on knowledge and practice of nursing students. Nurse Education Today. 70, 54-59. doi: 10.1016/j.nedt.2018.08.006

Doherty KQ (2016) Role modeling as a teaching strategy for the novice nurse in the emergency department. Journal of Emergency Nursing. 42, 2, 158-160. doi: 10.1016/j.jen.2016.02.001

Ekins K, Morphet J (2015) The accuracy and consistency of rural, remote and outpost triage nurse decision making in one Western Australia Country Health Service Region. Australasian Emergency Nursing Journal. 18, 4, 227-233. doi: 10.1016/j.aenj.2015.05.002

Farrohknia N, Castrén M, Ehrenberg A et al (2011) Emergency department triage scales and their components: a systematic review of the scientific evidence. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 19, 42. doi: 10.1186/1757-7241-19-42

French S, Gordon-Strachan G, Kerr K et al (2021) Assessment of interrater reliability of the emergency severity index after implementation in emergency departments in Jamaica using a learning collaborative approach. Journal of Emergency Nursing. 47, 1, 58-65. doi: 10.1016/j.jen.2020.07.003

Ghazali DA, Choquet C, Casalino E (2019) Simulation-based training for triage of HIV exposures in the emergency department. Medical Education. 53, 5, 521-522. doi: 10.1111/medu.13862

Gorick H (2022) Factors that affect nurses' triage decisions in the emergency department: a literature review. Emergency Nurse. 30, 3, 14-19. doi: 10.7748/en.2022.e2123

Greci LS, Ramloll R, Hurst S et al (2013) vTrain: a novel curriculum for patient surge training in a multi-user virtual environment (MUVE). Prehospital and Disaster Medicine. 28, 3, 215-222. doi: 10.1017/S1049023X13000083

Grossmann FF, Zumbrunn T, Ciprian S et al (2014) Undertriage in older emergency department patients – tilting against windmills? PLoS One. 9, 8, e106203. doi: 10.1371/journal.pone.0106203

Hardy A, Calleja P (2019) Triage education in rural remote settings: a scoping review. International Emergency Nursing. 43, 119-125. doi: 10.1016/j.ienj.2018.09.001

Hinson JS, Martinez DA, Cabral S et al (2019) Triage performance in emergency medicine: a systematic review. Annals of Emergency Medicine. 74, 1, 140-152. doi: 10.1016/j.annemergmed.2018.09.022

Hoseini SD, Khankeh HR, Dalvandi A et al (2018) Comparing the effect of the two educational methods: competency-based, and lecture, on the knowledge and performance of nurses in the field of hospital triage. Health in Emergencies and Disasters Quarterly. 3, 2, 77-83. doi: 10.29252/nrip.hdq.3.2.77

Hu F, Yang J, Yang BX et al (2021) The impact of simulation-based triage education on nursing students' self-reported clinical reasoning ability: a quasi-experimental study. Nurse Education in Practice. 50, 102949. doi: 10.1016/j.nepr.2020.102949

Jakobsen A, Villumsen NK (2011) New, shared emergency departments require training and an interdisciplinary outlook. Sygeplejersken/Danish Journal of Nursing. 111, 8, 64-67.

Jang J-H, Kim SS, Kim S (2020) Educational simulation program based on Korean Triage and Acuity Scale. International Journal of Environmental Research and Public Health. 17, 23, 9018. doi: 10.3390/ijerph17239018

Jang K, Jo E, Song KJ (2021) Effect of problem-based learning on severity classification agreement by triage nurses. BMC Nursing. 20, 1, 256. doi: 10.1186/s12912-021-00781-2

Jarvis S, de Freitas S (2009) Evaluation of an immersive learning programme to support triage training. Conference in Games and Virtual Worlds for Serious Applications, IEEE Computer Society, Los Alamitos CA.

Jordi K, Grossmann F, Gaddis GM et al (2015) Nurses' accuracy and self-perceived ability using the Emergency Severity Index triage tool: a cross-sectional study in four Swiss hospitals. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 23, 62. doi: 10.1186/s13049-015-0142-y

Kaiafas KN, Bennett RC (2021) Cost savings of frequent, concise skills competency training in the emergency department. Journal of Emergency Nursing. 47, 1, 181-185. doi: 10.1016/j.jen.2020.07.013

Kriengsoontornkij W, Homcheon B, Chomchai C et al (2010) Accuracy of pediatric triage at Siriraj Hospital, Bangkok, Thailand. Journal of the Medical Association of Thailand. 93, 10, 1172-1176.

Olsson M, Svensson A, Andersson H et al (2022) Educational intervention in triage with the Swedish triage scale RETTS©, with focus on specialist nurse students in ambulance and emergency care - a cross-sectional study. International Emergency Nursing. 63, 101194. doi: 10.1016/j.ienj.2022.101194

Pham MT, Rajić A, Greig JD et al (2014) A scoping review of scoping reviews: advancing the approach and enhancing the consistency. Research Synthesis Methods. 5, 4, 371-385. doi: 10.1002/jrsm.1123

Rankin JA, Then KL, Atack L (2013) Can emergency nurses' triage skills be improved by online learning? Results of an experiment. Journal of Emergency Nursing. 39, 1, 20-26. doi: 10.1016/j.jen.2011.07.004

Recznik CT (2018) Comparison of two methods of pediatric triage education. Doctoral dissertation, Duquesne University, Pittsburgh PA.

Recznik CT, Simko LM (2018) Pediatric triage education: an integrative literature review. Journal of Emergency Nursing. 44, 6, 605-613.e9. doi: 10.1016/j.jen.2018.01.003

Saban M, Drach-Zahavy A, Dagan E (2021) A novel reflective practice intervention improves quality of care in the emergency department. International Emergency Nursing. 56, 100977. doi: 10.1016/j.ienj.2021.100977

Schumaker RH, Bergeron K (2016) The Clock Model: a tool for clinical reasoning in the emergency department. Journal for Nurse Practitioners. 12, 7, 467-472. doi: 10.1016/j.nurpra.2016.05.002

Smith A, Lollar J, Mendenhall J et al (2013) Use of multiple pedagogies to promote confidence in triage decision making: a pilot study. Journal of Emergency Nursing. 39, 6, 660-666. doi: 10.1016/j.jen.2011.12.007

Tam HL, Chung SF, Lou CK (2018) A review of triage accuracy and future direction. BMC Emergency Medicine. 18, 1, 58. doi: 10.1186/s12873-018-0215-0

Yazdannik A, Dsatjerdi EI, Mohamadirizi S (2018) Utilizing mobile health method to emergency nurses' knowledge about Emergency Severity Index triage. Journal of Education and Health Promotion. 7, 10. doi: 10.4103/jehp.jehp_29_17

Yurkova I, Wolf L (2011) Under-triage as a significant factor affecting transfer time between the emergency department and the intensive care unit. Journal of Emergency Nursing. 37, 5, 491-496. doi: 10.1016/j.jen.2011.01.016

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Why you should read this article:

- To be aware that temporary lower-limb immobilisation increases the risk of venous thromboembolism
- To recognise the need to assess venous thromboembolism risk in adults with lower-limb immobilisation
- To better understand which patients with lower-limb immobilisation should be offered thromboprophylaxis

Risk assessment and thromboprophylaxis in adult patients with lower-limb immobilisation

Kirsty Limeira Thomson, Edward Pool and Pauline Kerray

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Abstract

Temporary lower-limb immobilisation following injury is a risk factor for the development of venous thromboembolism (VTE), which encompasses deep vein thrombosis (DVT) and pulmonary embolism. However, patients are not always risk-assessed for VTE in clinical practice and there is a lack of consensus among healthcare professionals on whether thromboprophylaxis should be offered and to whom. This article uses the fictional case study of a patient with an ankle fracture to explore the literature and guidance on VTE risk assessment and thromboprophylaxis in adults presenting to emergency settings with lower-limb trauma requiring immobilisation. It appears that it is important to consistently risk-assess patients and offer thromboprophylaxis to those deemed at moderate or high risk of VTE, since thromboprophylaxis is safe, efficacious and cost-effective in these patient groups.

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Keywords

accident and emergency, cardiorespiratory, cardiovascular diseases, deep vein thrombosis, emergency care, pulmonary embolism, vascular diseases, venous thromboembolism

Lower-limb injuries such as fractures and soft-tissue injuries are common and are a financial burden on healthcare systems (Yu et al 2016). Lower-limb immobilisation is often recommended during the first six weeks after injury – six weeks being the approximate time during which the healing of a fractured bone can be negatively affected by weight bearing (Kortekangas et al 2019). The National Institute for Health and Care Excellence (NICE) (2021) defines lower-limb immobilisation as 'any clinical decision taken to temporarily manage the affected limb in a way that would prevent normal weight-bearing status or use of that limb, or both'.

Lower-limb immobilisation following trauma is a risk factor for developing venous thromboembolism (VTE), which encompasses deep vein thrombosis (DVT) and pulmonary embolism (Anderson and Spencer 2003, Heyes et al 2015). DVT is the formation of a thrombus in a deep vein, usually in a leg or in the pelvis, which obstructs blood flow. The thrombus can dislodge and travel via the circulation to other parts of the body, including to the pulmonary arteries where it then causes a pulmonary embolism (NICE 2022a).

In a study conducted to determine the prevalence of DVT in patients with lower-limb trauma, Kapoor et al (2016) found that DVT was present in six out of 125 patients (approximately 5%). Four of those six patients were aged over 60 years. In addition to age, risk factors for DVT included comorbidities and immobilisation for more than five

days (Kapoor et al 2016). Patients with these risk factors are therefore at increased risk of developing a pulmonary embolism (Patel et al 2012).

NICE (2022b) lists temporary and intrinsic risk factors for DVT (Table 1).

In the authors' experience, patients presenting to minor injury units in Scotland who require lower-limb immobilisation are not consistently risk-assessed for VTE. Furthermore, Batra et al (2006) reported significant variations in clinical practice relating to thromboprophylaxis for preventing VTE in patients with lower-limb immobilisation in UK orthopaedic departments. There is a lack of agreement between clinicians on whether thromboprophylaxis should be offered and to whom (Ricci et al 2019), and these questions remain the subject of international debate (National Institute for Health and Care Research 2022).

This article uses a fictional case study as the basis for an exploration of the literature and guidance around risk assessment and thromboprophylaxis in adult patients with lower-limb immobilisation following injury.

Case study

Martin, a man in his 60s, presented to a minor injuries unit in Scotland with an ankle injury. He had been walking on uneven ground when he had sustained an inversion ankle injury. From that moment, he was unable to weight-bear and he still could not do so 24 hours later, on presentation to the minor injuries unit. Medical history taking showed that Martin had hypertension, which he managed through lifestyle adaptations. He was overweight (body mass index of 26) and his occupation involved desk work. He was on holiday in the UK and was supposed to return home on a long-haul flight ten days later.

On inspection, swelling was seen around the ankle joint, particularly in the lateral aspect of the ankle and lateral malleolus. Some mild bruising was seen from the lateral malleolus down to the midfoot. On palpation of the ankle, there was tenderness slightly above the lateral malleolus and in the lateral malleolus itself, but there was no tenderness in the tarsus or in the base of the fifth metatarsal. Martin was experiencing too much pain for his ankle movement to be meaningfully assessed. An X-ray was requested and showed a Weber B fracture, defined by Kennedy et al (1998) as a distal fibula fracture at the level of the syndesmosis.

As for most ankle fractures, the recommended treatment in Martin's case was lower-limb immobilisation for up to six weeks (British Orthopaedic Association 2016). As explained above, lower-limb immobilisation is a risk factor for VTE (Anderson and Spencer 2003, Heyes et al 2015), and in Martin's case concerns were heightened by his upcoming long-haul flight. Long-haul flights are a risk factor for DVT, since prolonged sitting slows down the circulation, thereby encouraging clot formation (Thachil 2014).

Literature review method and included studies

A literature review was conducted with a focus on adults requiring temporary lower-limb immobilisation after an injury. Children and young people were excluded because their treatment may differ from that recommended

Table 1. Risk factors for deep vein thrombosis

Factors that temporarily raise the risk of deep vein thrombosis	Intrinsic risk factors for deep vein thrombosis
» Recent major surgery » Recent hospitalisation » Recent trauma » Chemotherapy » Significant immobility (bedbound, unable to walk unaided or likely to spend a substantial portion of the day in bed or in a chair) » Prolonged travel (for more than 4 hours) » Significant trauma or direct trauma to a vein (for example intravenous catheter) » Hormone treatment (for example oestrogen-containing contraception or hormone replacement therapy) » Pregnancy and the postpartum period » Dehydration	» History of DVT » Cancer » Age over 60 years » Being overweight or obese » Male sex » Heart failure » Medical illness (for example acute infection) » Acquired or familial thrombophilia » Inflammatory disorders (for example, vasculitis, inflammatory bowel disease) » Varicose veins » Smoking

(National Institute for Health and Care Excellence 2022b)

Key points

- Venous thromboembolism (VTE) is a well-known risk in adults with lower-limb immobilisation following injury
- All adults with lower-limb immobilisation should undergo VTE risk assessment
- All adults with lower-limb immobilisation deemed to be at moderate or high risk of VTE should receive thromboprophylaxis

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in adults. Studies focusing on patients requiring surgical intervention were excluded because this was not relevant to the setting chosen for the case study – that is, a minor injuries unit. The databases MEDLINE, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Embase were searched. Searches were limited to the previous ten years and to articles published in English.

A total of 288 articles were found, duplicates were removed and the articles were assessed against the inclusion and exclusion criteria. Six articles were ultimately included in the review: three systematic reviews (Testroote et al 2014, Zee et al 2017, Pandor et al 2019), one practice review (Horner et al 2020a), one randomised controlled trial (Bruntink et al 2017) and one quantitative prediction model study (Nemeth et al 2020).

Thematic analysis (Braun and Clarke 2013) was used to identify themes.

Table 2 gives an overview of the included studies.

Discussion

Four overarching themes emerged from the thematic analysis of the literature: risk assessment, cost-effectiveness, safety and efficacy, which are all relevant factors to consider in Martin's case. The themes and their application to Martin's case are discussed below.

Risk assessment

The reviewed literature suggested that the level of risk should be taken into consideration when deciding whether or not to offer thromboprophylaxis.

Nemeth et al (2020) used data from a case-controlled study into the aetiology of VTE and a randomised controlled trial (RCT) of the effectiveness of thromboprophylaxis following cast immobilisation to develop and validate a risk scoring system for VTE. Factors encompassing the severity or type of trauma (one item), the type of immobilisation (one item) and patient characteristics such

Table 2. Overview of the included studies

Study	Aims	Themes	Findings
Systematic review by Testroote et al (2014)	To assess the efficacy of thromboprophylaxis with low molecular weight heparin (LMWH) in patients with lower-limb immobilisation	» Efficacy of thromboprophylaxis	Thromboprophylaxis with LMWH in patients with lower-limb immobilisation is effective
Randomised controlled trial by Bruntink et al (2017)	To study the incidence of deep vein thrombosis (DVT) in patients immobilised below the knee and to assess the safety of anticoagulation and the efficacy of thromboprophylaxis with LMWH	» Safety of anticoagulation » Efficacy of thromboprophylaxis	The incidence of DVT decreased with thromboprophylaxis with LMWH
Systematic review by Zee et al (2017)	To assess the efficacy of thromboprophylaxis with LMWH in patients with lower-limb immobilisation in an ambulatory setting	» DVT risk assessment » Safety of anticoagulation » Efficacy of thromboprophylaxis	The number of patients who developed DVT was lower in the treatment group than in the control group and adverse events with thromboprophylaxis were rare
Systematic review by Pandor et al (2019)	To determine the efficacy and cost-effectiveness of different strategies for providing thromboprophylaxis to patients with lower-limb immobilisation	» Cost-effectiveness of thromboprophylaxis » Efficacy of thromboprophylaxis	Thromboprophylaxis is cost-effective and clinically effective
Practice review by Horner et al (2020a)	To review the efficacy and cost-effectiveness of thromboprophylaxis and compare agents	» Cost-effectiveness of thromboprophylaxis » Safety of anticoagulation » Efficacy of thromboprophylaxis	Thromboprophylaxis reduces the incidence of DVT and the rates of major bleeding and mortality from complications of thromboprophylaxis are low
Quantitative prediction model study by Nemeth et al (2020)	To develop and validate a risk scoring system for venous thromboembolism (VTE) in patients with lower-limb immobilisation	» DVT risk assessment » Cost-effectiveness	Thromboprophylaxis could be cost-effective if given to patients who have been determined to be at higher risk

as age, body mass index, family history of VTE, pregnancy and comorbidities (12 items) were used to calculate a risk score. A cut-off score of 7 was chosen because the risk of VTE in patients with a risk score <7 was lower than 1.0%.

Approximately 50% of patients had a risk score of <7 (mean VTE risk of 0.8%) and were classified as low risk. The other half had a risk score ≥7 (mean VTE risk of 2.5%) and were classified as high risk. Patients at high risk would be offered thromboprophylaxis and patients at low risk would not. Nemeth et al (2020) also mentioned the possibility of categorising patients in three groups: low risk, moderate risk and high risk – high-risk patients being those with a risk score ≥10. Low-risk patients would not require any treatment, moderate-risk patients would receive the current dosage and duration of thromboprophylaxis, and high-risk patients would receive a higher dosage and duration of thromboprophylaxis. However, as Nemeth et al (2020) pointed out, a large management study is needed to determine the ultimate cut-off score and corresponding optimal treatment.

If Nemeth et al's (2020) risk scoring system is applied to Martin, his score would be 8, indicating either a moderate or a high risk of VTE, depending on how the score is interpreted. The risk of VTE in patients with a risk score ≥7 being almost 2.5% (Nemeth et al 2020), this would need to be taken into consideration in the decision-making regarding Martin's care.

None of the other studies included in this literature review investigated a risk assessment system, but some looked at risk factors. In their RCT, Bruntink et al (2017) recorded some risk factors for DVT but did not consider them when analysing the results, so their stance on risk assessment could not be determined. In their systematic review, Zee et al (2017) recognised the relevance of risk assessment. Zee et al (2017) had analysed eight studies to assess the efficacy of thromboprophylaxis with low molecular weight heparin (LMWH) in patients with lower-limb immobilisation in an ambulatory setting. They noted that, despite the fact that all eight studies had excluded patients at high risk of VTE, rates of DVT were lower in patients who had received thromboprophylaxis (0-37%) than in patients who had not received thromboprophylaxis or had received a placebo (4.3-40%).

As part of its guidance on reducing the risk of hospital-acquired DVT and pulmonary embolism, NICE (2018) has produced a VTE risk assessment tool that can assist clinicians in decision-making. The guidance is partly based on the findings of an observational study by Maynard et al (2010), who had prospectively validated a VTE risk-assessment/prevention protocol and had shown that its use improved thromboprophylaxis, resulting in a substantial reduction in hospital-acquired VTE.

Cost-effectiveness

Three of the six studies came to the conclusion that conducting a risk assessment to determine patients' level of risk and only offering thromboprophylaxis to those found to be at high risk would reduce costs (Pandor et al 2019, Horner et al 2020a, Nemeth et al 2020). Pandor et al (2019) noted that cost-effectiveness was optimised by only offering thromboprophylaxis to patients most at risk. Horner et al (2020a) examined the potential cost-effectiveness of using a risk assessment method to decide whether or not to offer thromboprophylaxis. They found that a risk assessment method could potentially improve the cost-effectiveness of thromboprophylaxis depending on the threshold above which it would be offered (Horner et al 2020a). In Nemeth et al (2020), only participants with a risk score ≥7 – indicating moderate or high risk depending on how the score is interpreted – received thromboprophylaxis because of the cost implications of treating low-risk patients with minimal benefit.

The Scottish Intercollegiate Guidelines Network (SIGN) (2014) guideline on the prevention and management of VTE supports Pandor et al's (2019) and Nemeth et al's (2020) conclusions that thromboprophylaxis is cost-effective in patients at moderate or high risk of VTE. Thromboprophylaxis would therefore be cost-effective in Martin's case.

Although none of the six studies reviewed for this article mentioned the cost of the blood tests to assess patients' risk of bleeding – which the Scottish Intercollegiate Guidelines Network (2014) recommends to carry out – that cost was considered by the authors of this article in their decision-making regarding Martin's care.

Safety

As with most treatments, the benefits of thromboprophylaxis must be weighed against its risks (BMJ Best Practice 2023) and the greatest risk of anticoagulation treatment is bleeding (British National Formulary 2023).

In their RCT, Bruntink et al (2017) used the two anticoagulants fondaparinux sodium (commonly used in the UK) and nadroparin calcium (not licenced for use in the UK) and found that treatment with these medicines was safe, with no incidences of major bleeding and with complications limited to haematomas at the injection site. However, Bruntink et al (2017) did not provide any statistical data on the safety aspects of their RCT. In their systematic review, Zee et al (2017) found that major side effects of anticoagulation treatment such as haematoma, acute major bleeding, allergic reaction and thrombocytopenia were rare and reported an incidence of major bleeding events of 0.3% (two out of 750 participants).

In their practice review, Horner et al (2020a) cited figures from a previous systematic review (Horner et al 2020b), explaining that it had found limited evidence of harm from prophylactic-dose anticoagulation. Only four major bleeding events had occurred in a total population of just under 7,000 participants, with insufficient evidence of an increased risk in patient groups who had received LMWH (Horner et al 2020b). Minor bleeding had been found in 0-10.5% of patients treated with LMWH, 0-1.5% of patients treated with fondaparinux and 0-6.8% of the patients in control groups (Horner et al 2020a, 2020b).

From the findings of the three reviewed studies that had looked at the risk of bleeding (Bruntink et al 2017, Zee et al 2017, Horner et al 2020a), it appears that the benefits of anticoagulation treatment outweigh the risk of bleeding. Thromboprophylaxis would therefore be safe in Martin's case, whose medical history and blood test results had not revealed any risk factors for bleeding.

Efficacy

All six reviewed studies found thromboprophylaxis to be effective. Horner et al (2020a) reported that the incidence of DVT decreased from 2% to 1% with the administration of anticoagulation treatment. Bruntink et al (2017) found that treatment with fondaparinux or nadroparin reduced the incidence of DVT by up to 10.6%, the reduction being statistically significant. In their respective systematic reviews, Zee et al (2017) found that studies showed lower incidences of DVT in intervention groups than in control groups and Testroote et al (2014) noted a notable reduction in DVT in patients with lower-limb immobilisation receiving LMWH and managed conservatively. There is no evidence from any of the six studies suggesting that anticoagulation treatment lacks efficacy for preventing DVT, so in Martin's case, thromboprophylaxis would be efficacious.

Limitations

There were limitations to the literature review. There was not enough time to conduct a systematic review so it is possible that not all available literature was considered. Two of the six studies (Horner et al 2020a, Nemeth et al 2020) were deemed to be of low-to-medium quality with a moderate risk of bias, which should be considered when applying their findings to practice.

Implications for practice

The Royal College of Emergency Medicine (RCEM) (2019) recommends that:

- All emergency departments should have recommended tools in place for assessing the risk for VTE in adults requiring lower-limb immobilisation.
- All patients found to be at notable risk of VTE should have their first dose of thromboprophylaxis administered before discharge from the emergency department.
- All patients discharged from the emergency department with a leg immobilisation device should be given an information leaflet about the risk of VTE.

In line with the findings of the literature review and the recommendations of the RCEM (2019), Martin started to receive anticoagulation treatment with apixaban before discharge. When he was discharged from the minor injuries unit, he had received verbal advice and a leaflet explaining the risk of VTE and was wearing a walking boot – a form of lower limb immobilisation.

Conclusion

The literature supports the use of VTE risk assessment and thromboprophylaxis in adults who require temporary lower limb immobilisation following injury, since these measures appear to be cost-effective, safe and clinically effective.

Rates of VTE in patients with lower-limb immobilisation could be reduced if risk assessment was more consistently implemented in clinical practice and if thromboprophylaxis was offered to patients in higher risk categories. Local guidance and policies need to reflect the recommendations of the RCEM to ensure a more consistent approach to care.

References

Anderson FA Jr, Spencer FA (2003) Risk factors for venous thromboembolism. Circulation. 107, 23 Suppl 1, I9-16. doi: 10.1161/01.CIR.0000078469.07362.E6

Batra S, Kurup H, Gul A et al (2006) Thromboprophylaxis following cast immobilisation for lower limb injuries - survey of current practice in the United Kingdom. Injury. 37, 9, 813-817. doi: 10.1016/j.injury.2006.03.016

BMJ Best Practice (2023) Weighing Up Benefits and Harms: Information for Patients. bestpractice.bmj.com/info/toolkit/practise-ebm/weighing-up-risks-and-benefits (Last accessed: 6 February 2023.)

Braun V, Clarke V (2013) Successful Qualitative Research: A Practical Guide for Beginners. SAGE, Thousand Oaks CA.

British National Formulary (2023) Treatment Summaries: Oral Anticoagulants. bnf.nice.org.uk/treatment-summary/oral-anticoagulants.html (Last accessed: 6 February 2023.)

British Orthopaedic Association (2016) BOAST – The Management of Ankle Fractures. boa.ac.uk/resources/boast-12-pdf.html (Last accessed: 6 February 2023.)

Bruntink MM, Groutars YME, Schipper IB et al (2017) Nadroparin or fondaparinux versus no thromboprophylaxis in patients immobilised in a below-knee plaster cast (PROTECT): a randomised controlled trial. Injury. 48, 4, 936-940. doi: 10.1016/j.injury.2017.02.018

Heyes GJ, Tucker A, Michael ALR et al (2015) The incidence of deep vein thrombosis and pulmonary embolism following cast immobilisation and early functional bracing of Tendo Achilles rupture without thromboprophylaxis. European Journal of Trauma and Emergency Surgery. 41, 3, 273-276. doi: 10.1007/s00068-014-0408-5

Horner D, Goodacre S, Pandor A et al (2020a) Thromboprophylaxis in lower limb immobilisation after injury (TiLLI). Emergency Medicine Journal. 37, 1, 36-41. doi: 10.1136/emermed-2019-208944

Horner D, Stevens JW, Pandor A et al (2020b) Pharmacological thromboprophylaxis to prevent venous thromboembolism in patients with temporary lower limb immobilization after injury: systematic review and network meta-analysis. Journal of Thrombosis and Haemostasis. 18, 2, 422-438. doi: 10.1111/jth.14666

Kapoor CS, Mehta AK, Patel K et al (2016) Prevalence of deep vein thrombosis in patients with lower limb trauma. Journal of Clinical Orthopaedics and Trauma. 7, Suppl 2, 220-224. doi: 10.1016/j.jcot.2016.07.003

Kennedy JG, Johnson SM, Collins AL et al (1998) An evaluation of the Weber classification of ankle fractures. Injury. 29, 8, 577-580. doi: 10.1016/s0020-1383(98)00116-8

Kortekangas T, Haapasalo H, Flinkkilä T et al (2019) Three week versus six week immobilisation for stable Weber B type ankle fractures: randomised, multicentre, non-inferiority clinical trial. BMJ. 364, k5432. doi: 10.1136/bmj.k5432

Maynard GA, Morris TA, Jenkins IH et al (2010) Optimizing prevention of hospital-acquired venous thromboembolism (VTE): prospective validation of a VTE risk assessment model. Journal of Hospital Medicine. 5, 1, 10-18. doi: 10.1002/jhm.562

National Institute for Health and Care Excellence (2018) Risk Assessment for Venous Thromboembolism (VTE). www.nice.org.uk/guidance/ng89/resources/department-of-health-vte-risk-assessment-tool-pdf-4787149213 (Last accessed: 6 February 2023.)

National Institute for Health and Care Excellence (2021) Venous Thromboembolism in Adults. Quality standard No. 201. Quality statement 2: Venous Thromboembolism Risk Assessment for People with Lower Limb Immobilisation. www.nice.org.uk/guidance/qs201/chapter/Quality-statement-2-Venous-thromboembolism-risk-assessment-for-people-with-lower-limb-immobilisation (Last accessed: 6 February 2023.)

National Institute for Health and Care Excellence (2022a) Deep Vein Thrombosis: What is It? cks.nice.org.uk/topics/deep-vein-thrombosis/background-information/definition (Last accessed: 6 February 2023.)

National Institute for Health and Care Excellence (2022b) Deep Vein Thrombosis: What are the Risk Factors? cks.nice.org.uk/topics/deep-vein-thrombosis/background-information/risk-factors (Last accessed: 6 February 2023.)

National Institute for Health and Care Research (2022) 22/35 Thromboprophylaxis in Lower Limb Immobilisation. www.nihr.ac.uk/documents/2235-thromboprophylaxis-in-lower-limb-immobilisation/30109 (Last accessed: 6 February 2023.)

Nemeth B, Douillet D, le Cessie S et al (2020) Clinical risk assessment model to predict venous thromboembolism risk after immobilization for lower-limb trauma. eClinicalMedicine. 20, 100270. doi: 10.1016/j.eclinm.2020.100270

Pandor A, Horner D, Davis S et al (2019) Different strategies for pharmacological thromboprophylaxis for lower-limb immobilisation after injury: systematic review and economic evaluation. Health Technology Assessment. 23, 63, 1-190. doi: 10.3310/hta23630

Patel A, Ogawa B, Charlton T et al (2012) Incidence of deep vein thrombosis and pulmonary embolism after Achilles tendon rupture. Clinical Orthopaedics and Related Research. 470, 1, 270-274. doi: 10.1007/s11999-011-2166-6

Ricci WM, Broekhuyse H, Keating JF et al (2019) Thromboprophylaxis an update of current practice: can we reach a consensus? OTA International. 2, 4, e027. doi: 10.1097/OI9.0000000000000027

Royal College of Emergency Medicine (2019) VTE Risk in Lower Limb Immobilisation, National Quality Improvement Project National Report 2018/19. rcem.ac.uk/wp-content/uploads/2021/10/RCEM_VTE_Risk_In_Lower_Limb_Immobilisation_National_Report_2018_19.pdf (Last accessed: 6 February 2023.)

Scottish Intercollegiate Guidelines Network (2014) Prevention and Management of Venous Thromboembolism. A National Clinical Guideline. Healthcare Improvement Scotland, Edinburgh.

Testroote M, Stigter WA, Janssen L et al (2014) Low molecular weight heparin for prevention of venous thromboembolism in patients with lower-leg immobilization. Cochrane Database of Systematic Reviews. Issue 4. CD006681. doi: 10.1002/14651858.CD006681.pub3

Thachil J (2014) Deep vein thrombosis. Hematology. 19, 5, 309-310. doi: 10.1179/1024533214Z.000000000284

Yu H, Randhawa K, Côté P (2016) The effectiveness of physical agents for lower-limb soft tissue injuries: a systematic review. Journal of Orthopaedic and Sports Physical Therapy. 46, 7, 523-554. doi: 10.2519/jospt.2016.6521

Zee AA, van Lieshout K, van der Heide M et al (2017) Low molecular weight heparin for prevention of venous thromboembolism in patients with lower-limb immobilization. Cochrane Database of Systematic Reviews. Issue 8. CD006681. doi: 10.1002/14651858.CD006681.pub4

Why you should read this article:

- To gain insight into caring for people at the end of life in the emergency department
- To enhance your understanding of the concept of a good death
- To count towards revalidation as part of your 35 hours of CPD, or you may wish to write a reflective account (UK readers)
- To contribute towards your professional development and local registration renewal requirements (non-UK readers)

Overcoming the barriers to optimal end of life care in the emergency department

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Abstract

The focus of care in the emergency department (ED) is on saving or sustaining life, but some patients admitted to the ED die in the ED. Nurses whose focus is on saving lives may therefore find themselves providing end of life care to patients and their families in a stressful and distressing environment. Providing optimal end of life care involves reflecting on what a good death looks like and how patients can be supported to have a good death. This article describes the barriers to optimal end of life care in the ED and prompts nurses to think about how they can enhance their practice when caring for dying patients and their families.

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Keywords

accident and emergency, advance care planning, advance directives, attitudes to death, clinical, death, good death, grief, emergency care, end of life care, palliative care, sudden death

Aim and intended learning outcomes

The aim of this article is to support nurses working in emergency and acute care settings, including the emergency department (ED), to understand the barriers to optimal end of life care and encourage them to consider how they can enhance care for patients at the end of life and their families. After reading the article and completing the time out activities you should be able to:

- Understand the fundamental principles of care in the last days and hours of life.
- Discuss the barriers to optimal end of life care in the ED.
- Explain the advantages and disadvantages of families being present during resuscitation.
- Outline the importance of advance care planning and shared decision-making.

Introduction

Patients present to the ED with differing levels of acuity. For those whose life is at risk there is often an expectation that ED staff will be able to provide life-sustaining or life-saving treatment (Dawood 2020, Carlin et al 2020). However, despite the best efforts of staff, some patients will die in the ED. The exact number is difficult to determine since the Office for National Statistics does not keep a record of the number of patients who die in the ED (Office for National Statistics 2018). One large teaching hospital in the UK estimated that approximately ten to 15 people die in its ED each month (McCallum et al 2018).

Optimal end of life care requires the involvement of the wider multidisciplinary team including nurses, doctors, physiotherapists, occupational therapists, psychologists, chaplains and social workers. However, the physical care of dying patients and the care of the body after death are usually provided mainly by nurses (Ferrell et al 2015, White and Meeker 2019). Caring for dying patients is regarded by some as one of the most fundamental of all nursing

activities (Bailey et al 2011a, Moscrop and Robbins 2013). As such, it is an aspect of nursing that each nurse needs to own and take pride in (Moscrop and Robbins 2013).

TIME OUT 1

Reflect on a recent patient death in your practice setting. In your view, did the person have a good death? What did the nursing team do to support them to have a good death? What more could have been done?

End of life care

End of life care is an integral part of person-centred, holistic care (Anderson et al 2015). The Nursing and Midwifery Council (2018) expects its registrants to 'recognise and respond compassionately to the needs of those in the last few days and hours of life'. Ensuring that patients have a good death is important, not only for the person themselves but also for those close to them, and it is something that nurses can contribute to in any setting (Vanderveken et al 2019).

In its information for the public on the care of adults in their last days of life, the National Institute for Health and Care Excellence (NICE) (2015) explains that:

- People who are nearing the end of their life are entitled to high-quality care wherever they are being cared for.
- It is important that their wishes are respected and that they are involved in decisions about their care whenever possible.
- Care should be focused on maintaining the person's comfort and dignity.
- Any symptoms should be managed.

The Leadership Alliance for the Care of Dying People (2014) set out five Priorities for Care of the Dying Person. These apply when it is thought that a person may die in the next few days or hours and are all equally important for achieving optimal end of life care (Box 1).

Furthermore, the organisations represented in the Leadership Alliance for the Care of Dying People – which included the Nursing and Midwifery Council and the Royal College of Nursing – committed to ensure that care in the last days and hours of life would (Leadership Alliance for the Care of Dying People 2014):

- Be compassionate and tailored to the needs, wishes and preferences of the dying person and the needs of those important to them.
- Include regular and effective communication between healthcare staff, the dying person and their family as well as between staff.
- Involve re-assessing the person's condition whenever it changes and responding to those changes in a timely manner.
- Be led by a senior responsible doctor and a lead responsible nurse with support from specialist palliative care services when needed.
- Be delivered by doctors, nurses, carers and others who have high professional standards and the skills, knowledge and experience needed to care for dying people and their families.

Barriers to optimal end of life care in emergency settings

Stressful and distressing situations

Emergency and acute care settings tend to be busy, stressful environments (Alqahtani and Mitchell 2019, Barleycorn 2019) in which it is challenging for nurses to work (Grover et al 2017) and provide optimal end of life care (Mughal and Evans 2020). Nurses in these settings are exposed daily to pain and trauma and experience high levels of stress and distress (Mughal and Evans 2020) and supporting the family of a deceased patient may add to their stress and distress (Walker 2014). Within one shift, ED nurses may be involved in a failed resuscitation attempt, a difficult conversation with a bereaved relative, providing last offices, clearing up the bed space and restocking the resuscitation trolley.

Certain cases can be particularly distressing because of nurses' individual circumstances – for example, a nurse who has a five-year-old child may be particularly distressed

Box 1. The five Priorities for Care of the Dying Person

When it is thought that a person may die within the next few days or hours, the five Priorities for Care of the Dying Person are that:

1. This possibility is recognised and communicated clearly, decisions are made and actions are taken in accordance with the person's needs and wishes, and these decisions and actions are regularly reviewed and revised accordingly
2. Sensitive communication takes place between staff and the dying person and between staff and those identified as important to the dying person
3. The dying person, and those identified as important to them, are involved in decisions about treatment and care to the extent that the dying person wishes
4. The needs of families and others identified as important to the dying person are actively explored, respected and met as far as possible
5. An individual plan of care that covers food and drink, symptom control and psychological, social and spiritual support is agreed, coordinated and delivered with compassion

(Adapted from Leadership Alliance for the Care of Dying People 2014)

Key points

- Care in the emergency department (ED) is focused on saving or sustaining life, but some patients admitted to the ED die in the ED
- EDs tend to be stressful environments in which it is challenging to provide optimal end of life care
- Care at the end of life should be compassionate and tailored to the needs, wishes and preferences of the person and the needs of those important to them
- Ensuring that patients have a good death is something nurses can contribute to in any setting
- Reflection and self-care should be priorities for all healthcare professionals caring for dying patients

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when caring for a child of a similar age who is thought to be approaching death – and nurses' ability to provide optimal end of life care may be negatively affected as a consequence (De Brasi et al 2021).

Nurses in the ED may find it upsetting to manage the care of the patient's body after death, particularly if the person has died in a traumatic or violent manner (Schuster and Dwyer 2020). Furthermore, in the case of patients presenting to the ED with injuries sustained from a crime or assault, staff may face the challenge of being involved in forensic work (Filmalter et al 2018). As pointed out by Filmalter et al (2018), every trauma patient in the ED should be treated as a forensic case until otherwise advised and healthcare professionals must be able to identify forensic cases and collect evidence.

Focus on saving or sustaining life

Care in the ED is focused on saving people's lives (Bailey et al 2011b, Wolf et al 2015, Hogan et al 2016). As part of this, nursing care in emergency and acute care settings concentrates on keeping patients alive (Giles et al 2019). Working in a fast-paced environment where the focus is on saving or sustaining life while also supporting dying patients can lead to a 'dualistic culture' (Scott 2013) in which speed, rigor and possibly a disconnection from one's feelings exist in parallel with the emotions and spiritual questions that can arise when one is confronted with death and dying.

Sudden death has been described medically as death within 24 hours of the onset of symptoms (Saukko and Knight 2015). Despite the focus on saving or sustaining life, sudden death is a relatively common occurrence in the ED – in fact it may be the form of death that ED staff are most exposed to (Peters et al 2013). There is evidence that ED staff try to find meaning in their work even in situations such as the sudden death of a patient (Scott 2013, 2020). However, a sudden patient death often causes high levels of stress among nurses and can have severe negative effects on their mental health (Morrison and Joy 2016).

Lack of training

Because the focus in the ED is on saving or sustaining life, ED staff may feel uncomfortable, or be unsure about, providing end of life care. It has long been recognised that staff in emergency and acute care settings need support to provide optimal end of life care (Cauthorne 1975). More recently, Alqahtani and Mitchell (2019) found that insufficient education and training was a major barrier to optimal end of life care in the ED – one among many obstacles being a lack of understanding of what a good death looks like. The drive for more education and training in palliative and end of life care for staff in these settings is ongoing (Gloss 2017, Mughal and Evans 2020).

TIME OUT 2

Imagine that a nursing student on a clinical placement in your practice setting has never witnessed a resuscitation attempt. They ask you how to support the family of a patient who is due to undergo a resuscitation attempt. What do you advise?

Attempted resuscitation

One of the pivotal aspects of care in the ED is the ability to potentially resuscitate people who have experienced a catastrophic event that has caused cardiac arrest. However, not all resuscitation attempts are successful and the sudden death of a patient undergoing cardiopulmonary resuscitation (CPR) can be distressing and traumatic for the nurses involved (Blomquist and Lasiter 2022).

A long-debated question is whether the family should be present during attempted resuscitation. There is a growing body of evidence showing that witnessing resuscitation is generally positive for families (Pratiwi 2018, Sak-Dankosky et al 2019, Vardanjani et al 2021). Even if the patient dies, family members tend to be glad they were present. Family members who had witnessed attempted resuscitation reported feeling closer to their relative and included and respected by staff (Vardanjani et al 2021). Similarly, family members who had been present in failed resuscitation attempts experienced fewer complicated grief reactions than family members who had not been present (Erogul et al 2020, Saifan et al 2023).

From the viewpoint of nurses, however, it can be challenging to have family members present during resuscitation attempts. Staff may worry about what the family might hear during the intervention (Waldemar and Thylen 2019) and be concerned that the family will be upset (Waldemar et al 2021). They may have concerns regarding potential litigation and feel that they lack time to support the family (Grimes 2020). The literature supports the principle of having one member of staff dedicated to assist the family during resuscitation (Vardanjani et al 2021) but this is not always possible, which is a source of anxiety for nurses (Drewe 2017).

Situations where resuscitation is not attempted

Not all patients admitted to the ED undergo resuscitation. Some patients' clinical condition does not warrant resuscitation. Some patients have a 'do not attempt cardiopulmonary resuscitation' (DNACPR) recommendation in place. Others are deemed not well enough to undergo resuscitation. The last two scenarios can create challenges for staff because patients and families may not understand why the decision not to attempt resuscitation has been taken or contest it. Similarly, they may not understand what a DNACPR recommendation is (Tomkow et al 2023).

A DNACPR recommendation exists to inform clinical decision-making at the time of an emergency. Patients should be involved in discussions about resuscitation, but whether to make a DNACPR recommendation is ultimately a clinical decision. A DNACPR recommendation is not legally binding – it is a guide for the clinician who has to make a decision about whether or not to start CPR (Baldock and Ruck Keene 2023). DNACPR recommendations are made using recognised predictors of adverse outcomes and patients with a DNACPR recommendation in place have been shown to have received appropriate care (Sutton et al 2021, Piscator et al 2022).

Decision-making and interprofessional communication

Decisions regarding end of life care can be challenging to make in any setting, but even more so in settings where healthcare professionals have limited knowledge of the patient's clinical condition, goals and values (George et al 2016). In recognition of these challenges, George et al (2016) published a consensus statement and research agenda on shared-decision making to support the provision of palliative and end of life care in the ED. The researchers acknowledged that it is essential to use shared decision-making to align care in the ED with patients' wishes and preferences.

In a systematic review exploring the challenges of providing optimal end of life care in the ED from the perspectives of staff, Alqahtani and Mitchell (2019) found that one of the challenges related to communication and decision-making, with doctors and nurses potentially disagreeing about who has authority to make decisions. Nurses may find that this power struggle negatively affects interprofessional communication, leading them to feel dissatisfied with the quality of care and believe that they do not have a voice.

TIME OUT 3

An 86-year-old woman who lives in a nursing home has been brought to the emergency department in an ambulance. She has Parkinson's disease and community-acquired pneumonia. Her respiratory rate is 12 breaths per minute and she cannot be roused. Do you need to consider the possibility that she is approaching the end of life? If so, what do you anticipate her care needs to be?

Long-term conditions and advance care planning

Patients presenting to the ED towards the end of their life include people who have a long-term condition (Amado-Tineo et al 2021), for example a nursing home resident who has Parkinsons's disease or a person with advanced cancer who lives at home. There is a perception among ED staff that the hectic, bright and noisy environment of the ED is not the appropriate setting in which to care for such patients (Mughal and Evans 2020). Avoiding admission to the ED is likely to be in these patients' best interests, but this relies on advance care planning decisions having been made and on patients' preferred place of care at the end of life being available and appropriate in an emergency. However, these conditions are rarely fulfilled.

There has been a focus on advance care planning in recent years, for example with initiatives such as ReSPECT, or Recommended Summary Plan for Emergency Care and Treatment. The ReSPECT process creates a summary of personalised recommendations for a person's care if they no longer have capacity to make choices or express their wishes in a future emergency (www.resus.org.uk/respect/respect-healthcare-professionals). The aim is to encourage people to consider the care they want at the end of their life and ultimately improve their care (Eli et al 2020, Hendicott and Holt 2022, McDermott et al 2022). More work is required to raise awareness of the necessity of advance care planning and of initiatives such as ReSPECT.

TIME OUT 4

The care of dying patients can be distressing but every person reacts differently and has different 'triggers' that make them more or less distressed when faced with death and dying. Make a list of your triggers and think about how you might manage them

Learning, self-care, reflection and teamwork

Nurses learn to cope with distressing situations throughout their professional lives, a transformation process described

in the seminal work by Benner (1984) and explored by Huang et al (2016) among nurses caring for dying patients. Huang et al (2026) described a three-step process of ongoing learning and growth:

- First the nurse experiences emotional distress, which can be overwhelming.
- After some time the nurse finds a way to cope with that distress.
- Finally the nurse learns, through reflection and self-awareness, how to use their experiences to deepen their knowledge and ability to care without losing compassion or experiencing burnout.

Self-care should be a priority for any healthcare professional caring for dying patients (Stilos and Wynnychuk 2021). This was reinforced during the coronavirus disease 2019 pandemic (Cook et al 2021), when self-care was acknowledged as a crucial factor in staff being able to continue fulfilling their roles (Galanis et al 2021). For anyone working in healthcare (Lubinska-Welch et al 2016), particularly in the ED and critical care areas (Enns and Sawatzky 2016), it is important to take time for relaxation and exercise. In their personal lives, nurses can also nurture their well-being by interacting with family and friends and engaging in hobbies and other activities (Stilos and Wynnychuk 2021).

To enhance the quality of the end of life care they provide, ED nurses may find it helpful to reflect on what a good death looks like and consider what they can do to ensure dying patients experience a good death. They can attempt to find meaning in the situation by reflecting on the death of the patient and the care provided to them (Mason and Warnke 2017). Nurses also need to be aware that other team members may find it challenging to care for dying patients and make time to support their colleagues. Optimal teamwork is important in an emergency setting (Grover et al 2017), as well as self-awareness and a recognition of the challenges likely to be experienced when working in such an environment (Barleycorn 2019).

Debriefing, whether formal or informal, is commonly offered to healthcare staff after the death of a patient and has been shown to have positive effects on staff (Harder et al 2020, Gerace et al 2021). Nurses should also be offered clinical supervision, a process designed to support, educate and aid reflection (Baldwin et al 2022) that has been shown to improve job satisfaction and patient safety (Driscoll et al 2019, Saab et al 2021). To manage the distress or trauma caused by the sudden death of a patient undergoing CPR, nurses can employ coping strategies and techniques such as seeking emotional support, psychologically and/or emotionally distancing themselves from the situation, and focusing on problem-solving – that is, considering the technical side of the intervention and think about what may have gone wrong in order to learn (Blomquist and Lasiter 2022).

The fictional case study of Andrew and his family (Case study 1) provides an example of optimal end of life care in the ED.

Case study 1. Andrew and his family

Andrew, a 49-year-old man, was brought to the emergency department (ED) after collapsing while playing five-a-side football on a Saturday afternoon. On arrival he was breathing but had a score of 4 on the Glasgow Coma Scale (GCS) (Mehta and Chinthapalli 2019).

A computed tomography (CT) scan of Andrew's head showed a large haemorrhage into previously undetected brain metastases. A CT scan of his chest, abdomen and pelvis showed that Andrew had metastatic lung cancer. By this stage, Andrew was completely unresponsive, with a GCS score of 3.

The clinical team in the ED, including staff nurse Tom, spoke to Andrew's wife Lucy and his teenage son Liam, who had travelled with him in the ambulance. Considering the catastrophic nature of the brain haemorrhage and the advanced stage of Andrew's cancer, the decision was made with the family not to attempt resuscitation.

Andrew was moved to a quiet room in the ED designed for these situations. Tom spent time with Lucy and Liam, offering support, referring them to the chaplaincy team and ensuring they had food and drink – including finding a can of Liam's favourite fizzy drink.

Tom was aware of the local policy on end of life care and ensured that anticipatory medicines were at hand in case Andrew developed pain, became agitated or showed other signs of distress, which did not happen. Andrew did not regain consciousness and died four hours later with his wife and son at his side. Tom supported the family until they were ready to leave and ensured they had information about the bereavement services provided by the trust. Tom and a colleague then performed the last offices for Andrew and handed him over to the mortuary staff.

Tom was supported throughout the care episode by the wider team, who avoided asking him to perform other tasks or cover for breaks or absences so that he could dedicate his time to Andrew and his family. Before going home that evening, Tom had a debrief with his team leader.

Lucy later wrote to the department saying she was grateful for the care Andrew and the family had received.

CPD CONTINUING PROFESSIONAL DEVELOPMENT

Conclusion

End of life care is a fundamental part of nursing, but optimal end of life care is challenging to achieve in the ED, notably because of the stress and distress inherent to the setting and because care in the ED is focused on saving or sustaining life. Nurses working in the ED can, however, contribute to ensuring that the care needs of dying patients and their families are addressed, even in situations such as failed resuscitation attempts. To enhance the quality of end of life care, ED nurses need to ensure that they look after their own well-being and that they support each other. Nurses may also find it useful to reflect on what a good death looks like and what they can do to ensure dying patients under their care experience such a death.

TIME OUT 5

Identify how overcoming the barriers to optimal end of life care in the emergency department applies to your practice and the requirements of your regulatory body

TIME OUT 6

Now that you have completed the article, reflect on your practice in this area and consider writing a reflective account. See: **rcni.com/reflective-account**

References

Alqahtani AJ, Mitchell G (2019) End-of-life care challenges from staff viewpoints in emergency departments: systematic review. Healthcare. 7, 3, 83. doi: 10.3390/healthcare7030083

Amado-Tineo JP, Oscanoa-Espinoza T, Vásquez-Alva R et al (2021) Emergency department use by terminally ill patients: a systematic review. Journal of Pain and Symptom Management. 61, 3, 531-543. doi: 10.1016/j.jpainsymman.2020.08.009

Anderson NE, Kent B, Owens RG (2015) Experiencing patient death in clinical practice: nurses' recollections of their earliest memorable patient death. International Journal of Nursing Studies. 52, 3, 695-704. doi: 10.1016/j.ijnurstu.2014.12.005

Bailey C, Murphy R, Porock D (2011a) Professional tears: developing emotional intelligence around death and dying in emergency work. Journal of Clinical Nursing. 20, 23-24, 3364-3372. doi: 10.1111/j.1365-2702.2011.03860.x

Bailey CJ, Murphy R, Porock D (2011b) Dying cases in emergency places: caring for the dying in emergency departments. Social Science and Medicine. 73, 9, 1371-1377. doi: 10.1016/j.socscimed.2011.07.036

Baldock C, Ruck Keene A (2023) DNACPR: nurses' step-by-step guide from Resuscitation Council UK. rcni.com/nursing-standard/features/dnacpr-nurses-step-step-guide-resuscitation-council-uk-193831 (Last accessed: 15 August 2023.)

Baldwin S, Coyne T, Kelly P (2022) Supporting nursing, midwifery and allied health professional teams through restorative clinical supervision. British Journal of Nursing. 31, 20, 1058-1062. doi: 10.12968/bjon.2022.31.20.1058

Barleycorn D (2019) Awareness of secondary traumatic stress in emergency nursing. Emergency Nurse. 27, 5, 19-22. doi: 10.7748/en.2019.e1957

Benner P (1984) From Novice to Expert: Excellence and Power in Clinical Nursing Practice. Addison-Wesley, Menlo Park CA.

Blomquist M, Lasiter S (2022) Nurses' coping strategies during and after an adult in-hospital resuscitation attempt: a scoping study. Journal of Clinical Nursing. 31, 17-18, 2437-2449. doi: 10.1111/jocn.16128

Carlin E, Dubash R, Kozlovski J (2020) End of life care in the emergency department. Emergency Medicine Australasia. 32, 3, 504-506. doi: 10.1111/1742-6723.13528

Cauthorne CV (1975) Coping with death in the emergency department. Journal of Emergency Nursing. 1, 6, 24-26.

Cook DJ, Takaoka A, Hoad N et al (2021) Clinician perspectives on caring for dying patients during the pandemic: a mixed-methods study. Annals of Internal Medicine. 174, 4, 493-500. doi: 10.7326/M20-6943

Dawood M (2020) End of life care in the emergency department. Emergency Medicine Journal. 37, 5, 273-278. doi: 10.1136/emermed-2019-208632

De Brasi EL, Giannetta N, Ercolani S et al (2021) Nurses' moral distress in end-of-life care: a qualitative study. Nursing Ethics. 28, 5, 614-627. doi: 10.1177/0969733020964859

Drewe C (2017) Benefits of, and barriers to, family-witnessed resuscitation in practice. Nursing Standard. 31, 49, 47-51. doi: 10.7748/ns.2017.e10699

Driscoll J, Stacey G, Harrison-Dening K et al (2019) Enhancing the quality of clinical supervision in nursing practice. Nursing Standard. 34, 5, 43-50. doi: 10.7748/ns.2019.e11228

Eli K, Ochieng C, Hawkes C et al (2020) Secondary care consultant clinicians' experiences of conducting emergency care and treatment planning conversations in England: an interview-based analysis. BMJ Open. 10, 1, e031633. doi: 10.1136/bmjopen-2019-031633

Enns CL, Sawatzky JA (2016) Emergency nurses' perspectives: factors affecting caring. Journal of Emergency Nursing. 42, 3, 240-245. doi: 10.1016/j.jen.2015.12.003

Erogul M, Likourezos A, Meddy J et al (2020) Post-traumatic stress disorder in family-witnessed resuscitation of emergency department patients. Western Journal of Emergency Medicine. 21, 5, 1182-1187. doi: 10.5811/westjem.2020.6.46300

Ferrell B, Malloy P, Virani R (2015) The End of Life Nursing Education Nursing Consortium project. Annals of Palliative Medicine. 4, 2, 61-69. doi: 10.3978/j.issn.2224-5820.2015.04.05

Filmalter CJ, Heyns T, Ferreira R (2018) Forensic patients in the emergency department: who are they and how should we care for them? International Emergency Nursing. 40, 33-36. doi: 10.1016/j.ienj.2017.09.007

Galanis P, Vraka I, Fragkou D et al (2021) Nurses' burnout and associated risk factors during the COVID-19 pandemic: a systematic review and meta-analysis. Journal of Advanced Nursing. 77, 8, 3286-3302. doi: 10.1111/jan.14839

George NR, Kryworuchko J, Hunold KM et al (2016) Shared decision making to support the provision of palliative and end-of-life care in the emergency department: a consensus statement and research agenda. Academic Emergency Medicine. 23, 12, 1394-1402. doi: 10.1111/acem.13083

Gerace A, Giles T, Breaden K et al (2021) Nurses' perceptions of dealing with death in the emergency department. Collegian. 28, 1, 71-80. doi: 10.1016/j.colegn.2020.06.002

Giles TM, Hammad K, Breaden K et al (2019) Nurses' perceptions and experiences of caring for patients who die in the emergency department setting. International Emergency Nursing. 47, 100789. doi: 10.1016/j.ienj.2019.100789

Gloss K (2017) End of life care in emergency departments: a review of the literature. Emergency Nurse. 25, 2, 29-38. doi: 10.7748/en.2017.e1707

Grimes C (2020) The effects of family-witnessed resuscitation on health professionals. British Journal of Nursing, 29, 15, 892-896. doi: 10.12968/bjon.2020.29.15.892

Grover E, Porter JE, Morphet J (2017) An exploration of emergency nurses' perceptions, attitudes and experience of teamwork in the emergency department. Australasian Emergency Nursing Journal. 20, 2, 92-97. doi: 10.1016/j.aenj.2017.01.003

Harder N, Lemoine J, Harwood R (2020) Psychological outcomes of debriefing healthcare providers who experience expected and unexpected patient death in clinical or simulation experiences: a scoping review. Journal of Clinical Nursing. 29, 3-4, 330-346. doi: 10.1111/jocn.15085

Hendicott E, Holt A (2022) P-100 are we ReSPECTing care home residents? The use of do not attempt resuscitation (DNAR) and recommended summary plan for emergency care and treatment (ReSPECT) documents for care home residents attending the emergency department (ED). BMJ Supportive & Palliative Care. 12, Suppl2, 88-119, A46.

Hogan KA, Fothergill-Bourbonnais F, Brajtman S et al (2016) When someone dies in the emergency department: perspectives of emergency nurses. Journal of Emergency Nursing. 42, 3, 207-212. doi: 10.1016/j.jen.2015.09.003

Huang CC, Chen JY, Chiang HH (2016) The transformation process in nurses caring for dying patients. Journal of Nursing Research. 24, 2, 109-117. doi: 10.1097/jnr.0000000000000160

Leadership Alliance for the Care of Dying People (2014) One Chance to Get it Right: Improving People's Experience of Care in the Last Few Days and Hours of Life. assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/323188/One_chance_to_get_it_right.pdf (Last accessed: 15 August 2023.)

Lubinska-Welch I, Pearson T, Comer L et al (2016) Nurses as instruments of healing: self-care practices of nurses in a rural hospital setting. Journal of Holistic Nursing. 34, 3, 221-228. doi: 10.1177/0898010115602994

McCallum KJ, Jackson D, Walthall H et al (2018) Exploring the quality of the dying and death experience in the emergency department: an integrative literature review. International Journal of Nursing Studies. 85, 106-117. doi: 10.1016/j.ijnurstu.2018.05.011

McDermott A, Woodall CA, Chamberlain C et al (2022) Which patients received a RESPECT form, what was documented and what were the patient outcomes? A protocol for a retrospective observational study investigating the impact of the COVID-19 pandemic on the implementation of the RESPECT process. BMJ Open. 12, 7, e060253. doi: 10.1136/bmjopen-2021-060253

Mason TM, Warnke J (2017) Finding Meaning After a Patient's Death. www.myamericannurse.com/wp-content/uploads/2017/09/ant9-Patient-Death-824.pdf (Last accessed: 15 August 2023.)

Mehta R, Chinthapalli K (2019) Glasgow Coma Scale explained. BMJ. 365, l1296. doi: 10.1136/bmj.l1296

Morrison LE, Joy JP (2016) Secondary traumatic stress in the emergency department. Journal of Advanced Nursing. 72, 11, 2894-2906. doi: 10.1111/jan.13030

Moscrop J, Robbins J (2013) Caring for the Dying Patient and the Family. Springer, New York NY.

Mughal A, Evans C (2020) Views and experiences of nurses in providing end-of-life care to patients in an ED context: a qualitative systematic review. Emergency Medicine Journal. 37, 5, 265-272. doi: 10.1136/emermed-2018-208278

National Institute for Health and Care Excellence (2015) Care of Dying Adults in the Last Days of Life. NICE guideline No. 31. NICE, London.

Nursing and Midwifery Council (2018) The Code: Professional Standards of Practice and Behaviour for Nurses, Midwives and Nursing Associates. NMC, London.

Office for National Statistics (2018) Deaths occurring within emergency departments. www.ons.gov.uk/aboutus/transparencyandgovernance/freedomofinformationfoi/deathsoccurringwithinemergencydepartments (Last accessed: 15 August 2023.)

Peters L, Cant R, Payne S et al (2013) Emergency and palliative care nurses' levels of anxiety about death and coping with death: a questionnaire survey. Australasian Emergency Nursing Journal. 16, 4,152-159. doi: 10.1016/j.aenj.2013.08.001

Piscator E, Göransson K, Forsberg S et al (2022) Do-Not-Attempt-Cardiopulmonary-Resuscitation (DNACPR) decisions in patients admitted through the emergency department in a Swedish University Hospital–an observational study of outcome, patient characteristics and changes in DNACPR decisions. Resuscitation Plus. 9, 100209. doi: 10.1016/j.resplu.2022.100209

Pratiwi ID (2018) Family presence during resuscitation: patient and family members' preferences and attitudes. International Journal of Research in Medical Sciences. 6, 2, 394-400. doi: 10.18203/2320-6012.ijrms20180275

Saab MM, Kilty C, Meehan E et al (2021) Peer group clinical supervision: qualitative perspectives from nurse supervisees, managers, and supervisors. Collegian. 28, 4, 359-368. doi: 10.1016/j.colegn.2020.11.004

Saifan AR, Elshatarat RA, Saleh ZT et al (2023) Health professionals and family members during cardiopulmonary resuscitation: a qualitative study on the experience of witnessing resuscitation in Jordanian critical care units. Heart & Lung. 62, 101-107. doi: 10.1016/j.hrtlng.2023.06.020

Sak-Dankosky N, Andruszkiewicz P, Sherwood PR et al (2019) Preferences of patients' family regarding family-witnessed cardiopulmonary resuscitation: a qualitative perspective of intensive care patients' family members. Intensive and Critical Care Nursing, 50, 95-102. doi: 10.1016/j.iccn.2018.04.001

Saukko P, Knight B (2016) Knight's Forensic Pathology. Fourth edition. CRC Press, Boca Raton FL.

Scott T (2013) Sudden death liminality: dehumanisation and disengagement. International Emergency Nursing. 21, 1, 10-16. doi: 10.1016/j.ienj.2011.11.005

Scott T (2020) Sudden Death: Intervention Skills for the Emergency Services. Springer, Cham.

Schuster M, Dwyer PA (2020) Post-traumatic stress disorder in nurses: an integrative review. Journal of Clinical Nursing. 29, 15-16, 2769-2787. doi: 10.1111/jocn.15288

Stilos KK, Wynnychuk L (2021) Self-care is a MUST for health care providers caring for the dying. Canadian Oncology Nursing Journal. 31, 2, 239-241.

Sutton L, Goodacre S, Thomas B et al (2021) Do not attempt cardiopulmonary resuscitation (DNACPR) decisions in people admitted with suspected COVID-19: secondary analysis of the PRIEST observational cohort study. Resuscitation. 164, 130-138. doi: 10.1016/j.resuscitation.2021.04.028

Tomkow L, Dewhurst F, Hubmann M et al (2023) 'That's as hard a decision as you will ever have to make': the experiences of people who discussed Do Not Attempt Cardiopulmonary Resuscitation on behalf of a relative during the COVID-19 pandemic. Age and Ageing. 52, 6, afad087. doi: 10.1093/ageing/afad087

Vanderveken L, Schoenmakers B, De Lepeleire J (2019) A better understanding of the concept "a good death": how do healthcare providers define a good death? American Journal of Geriatric Psychiatry. 27, 5, 463-471. doi: 10.1016/j.jagp.2018.12.017

Vardanjani AE, Golitaleb M, Abdi K et al (2021) The effect of family presence during resuscitation and invasive procedures on patients and families: an umbrella review. Journal of Emergency Nursing. 47, 5, 752-760. doi: 10.1016/j.jen.2021.04.007

Waldemar A, Bremer A, Holm A et al (2021) In-hospital family-witnessed resuscitation with a focus on the prevalence, processes, and outcomes of resuscitation: a retrospective observational cohort study. Resuscitation, 165, 23-30. doi: 10.1016/j.resuscitation.2021.05.031

Waldemar A, Thylen I (2019) Healthcare professionals' experiences and attitudes towards family-witnessed resuscitation: a cross-sectional study. International Emergency Nursing. 42, 36-43. doi: 10.1016/j.ienj.2018.05.009

Walker WM (2014) Emergency care staff experiences of lay presence during adult cardiopulmonary resuscitation: a phenomenological study. Emergency Medicine Journal. 31, 6, 453-458. doi: 10.1136/emermed-2012-201984

White D, Meeker MA (2019) Guiding the process of dying: the personal impact on nurses. Journal of Hospice and Palliative Nursing. 21, 5, 390-396. doi: 10.1097/NJH.0000000000000539

Wolf LA, Delao AM, Perhats C et al (2015) Exploring the management of death: emergency nurses' perceptions of challenges and facilitators in the provision of end-of-life care in the emergency department. Journal of Emergency Nursing. 41, 5, e23-e33. doi: 10.1016/j.jen.2015.05.018

Barriers to optimal end of life care

TEST YOUR KNOWLEDGE BY COMPLETING THIS MULTIPLE-CHOICE QUIZ

1. Optimal end of life care requires the involvement of which healthcare professionals?

a) Essentially doctors ☐
b) Essentially the chaplaincy team ☐
c) Essentially social workers ☐
d) The wider multidisciplinary team ☐

2. Ensuring patients have a good death is something that:

a) Goes well beyond the role of nurses ☐
b) Nurses can contribute to in any setting ☐
c) Is not a concern to nurses in the emergency department (ED), where the focus is on sustaining life ☐
d) Is more important in hospices than in hospital ☐

3. The five Priorities for Care of the Dying Person apply when it is thought that the person may die:

a) Within the next few days or hours ☐
b) Within the next four weeks ☐
c) Within the next six months ☐
d) Within the next 12 months ☐

4. The Leadership Alliance for the Care of Dying People has committed to ensure that care in the last days and hours of life:

a) Is compassionate and tailored to the needs, wishes and preferences of the dying person ☐
b) Includes regular and effective communication between healthcare staff, the dying person and their family ☐
c) Is led by a senior responsible doctor and a lead responsible nurse with support from specialist palliative care services when needed ☐
d) All of the above ☐

5. Sudden death has been described medically as:

a) Death within one hour of the onset of symptoms ☐
b) Death within 24 hours of the onset of symptoms ☐
c) Death within 48 hours of the onset of symptoms ☐
d) Unforeseen death ☐

6. Which of the following statements is accurate?

a) Nursing care in emergency and acute care settings concentrates primarily on supporting patients to have a good death ☐
b) Rigorous care cannot exist in parallel with the emotions and questions that arise when one is faced with death and dying ☐
c) ED staff are unable to find meaning in situations such as the sudden death of a patient ☐
d) The sudden death of a patient often causes high levels of stress among nurses ☐

7. Why can it be challenging for nurses to have family members present during an attempt to resuscitate a patient?

a) Because they may worry about what the family might hear during the intervention ☐
b) Because they may be concerned that the family will be upset ☐
c) Because they may feel that they lack time to support the family ☐
d) All of the above ☐

8. Which of the following statements is incorrect?

a) A 'do not attempt cardiopulmonary resuscitation' (DNACPR) recommendation exists to inform clinical decision-making at the time of the emergency ☐
b) Patients should be involved in discussions about resuscitation ☐
c) Whether or not to make a DNACPR recommendation is ultimately the patient's decision ☐
d) A DNACPR recommendation is not legally binding ☐

9. For a patient with a long-term condition who is nearing the end of their life, it is best to avoid presentation to the ED. However, this often relies on:

a) Beds being available on an acute ward ☐
b) A DNACPR recommendation having been made ☐
c) Advance care planning decisions having been made ☐
d) The patient having mental capacity to make decisions about their preferred place of care ☐

10. According to Huang et al (2016), nurses who care for dying patients go through:

a) A three-step process of ongoing learning and growth ☐
b) Complicated grief reactions ☐
c) Post-traumatic stress disorder ☐
d) Compassion fatigue ☐

How to complete this assessment

This multiple-choice quiz will help you test your knowledge. It comprises ten multiple choice questions broadly linked to the previous article. There is one correct answer to each question.

You can read the article before answering the questions or attempt the questions first, then read the article and see if you would answer them differently.

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This multiple-choice quiz was compiled by **Anne-Claire Bouzanne**

The answers to this quiz are:

1. d 2. b 3. a 4. d 5. b 6. d
7. d 8. c 9. c 10. a

This activity has taken me ___ minutes/hours to complete. Now that I have read this article and completed this assessment, I think my knowledge is:

Excellent ☐ Good ☐ Satisfactory ☐ Unsatisfactory ☐ Poor ☐

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For example: Nursing and Midwifery Council (NMC) at first mention, NMC thereafter. Articles that refer to policy or legislation must state the country to which it applies.

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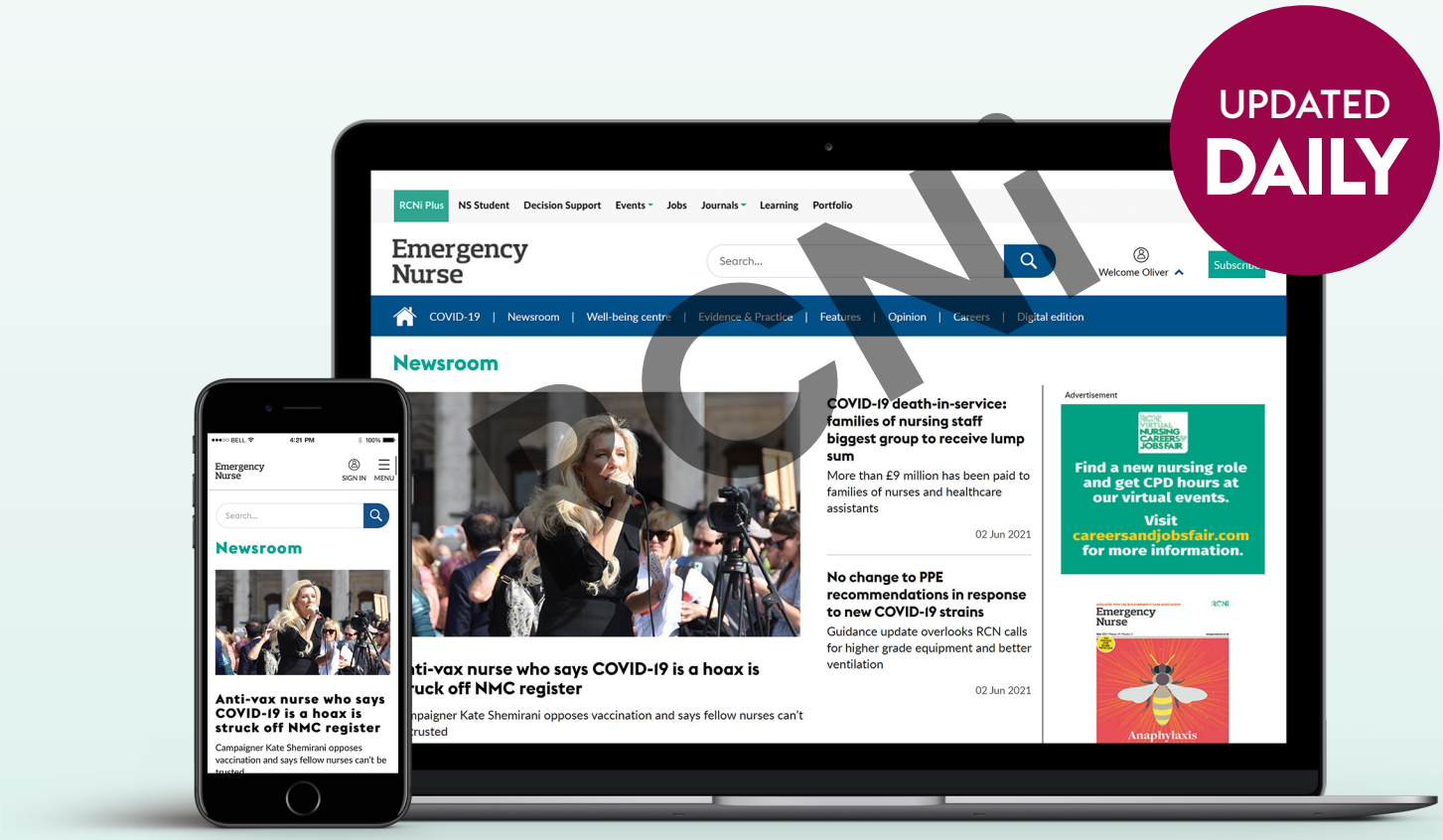

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