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NURSING STUDIES

Major incidents: how nursing students can prepare for them

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Simulation can give students an understanding of what to expect in a mass casualty event, and a chance to develop their leadership skills. Find out what's involved



University of East Anglia nursing students on a major incident simulation Picture: UEA Health

A major incident is [an event or situation with a range of serious consequences](#) that require special arrangements to be implemented by one or more emergency responder agencies.

Types of major incident and how nurses might be involved

Types of major incident include:

- 'Big bangs' such as explosions or traffic incidents.
- Internal incidents at hospitals, such as fires or loss of power.
- CBRN incidents – those that involve chemical, biological, radiological or nuclear causes.

Where large numbers of people are injured in a major incident, it may be referred to as a [mass casualty event](#). Examples include the [London bombings](#) on 7 July 2005, the [Grenfell Tower fire](#), which started on 14 June 2017, and the 2002 [Potters Bar train crash](#).

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When a major incident is declared, specific protocols are followed by the organisations involved.

For hospitals this may include suspending any non-emergency surgery, discharging patients from wards to increase capacity, and calling in extra staff. Specific processes, such as implementing a [major incident triage](#), are also followed.

Preparing nursing students for a major incident

To help our nursing students better understand what happens during a major incident, and to gain some experience of what it is like to be involved in one, we ran a major incident simulation at the University of East Anglia, of a coach crash involving 50 adults and 20 children.

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About 200 third-year students studying adult, mental health and children and young people's nursing took part in the simulation in February 2024, taking on the roles of nursing staff, patients and support staff, with some acting as observers.

As the final simulation session of their degree programme, it gave students the opportunity to consolidate three years of learning, practise clinical skills and build confidence in their clinical decision-making and communication skills.



Students took the role of patients, nurses and support staff Picture: UEA Health

Students participated in setting up a major incident simulation

Before the event, the students were taught some core theory about major incidents, such as the different types of major incident, the [actions taken by different hospital departments](#) when a major incident is declared, and the major incident emergency department triage tools for adults and paediatrics.

They then spent time preparing for the event. They allocated their own roles, including triage nurse and shift lead nurse positions, ensuring each area had enough staff. Other students took on the role of patients, writing their own patient profiles, which included physical and mental health conditions and personal details.

The students considered what type of injuries and relevant medical history the patients would have, and what their physiological observations would be.

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Major Incident Day short film



Creating a realistic major incident scenario

Simulation teaching rooms were set up to act as a hospital, with an intensive care unit, adult and children's wards and emergency departments, a minor injuries unit and mental health area.

To make the experience more realistic, each area also had patients who had not been involved in the crash but who needed to receive care.

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Patients from the crash were made up to look as though they had wounds, bruising and broken bones, and young people from two local high schools took on the roles of the children involved in the major incident. Their patient scenarios were written by children and young people's nursing students, who also supported the children throughout the simulation.



Picture: UEA Health

How to get the most out of a major incident simulation – top tips

- **Engage in pre-learning activities** to ensure you have a good understanding of terminology and processes. For example, find out about the [M/ETHANE model](#), and how triage differs in a major incident
- **Immerse yourself in the simulation** 'Buying in' to the simulation allows you to make more of the learning opportunities



- **Know your role** What area are you working in and what is expected of you?
- **Be confident in your skills and abilities** but know your limitations and ask for help if you need it
- **Engage in the debrief** The learning doesn't stop when the simulation does



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A chance to practise escalation techniques

Once the major incident began, the simulation was entirely student-led, with lecturers and clinicians from our local hospital providing support and offering clinical and organisational guidance when requested.

Students had to apply escalation techniques to obtain assistance, such as contacting bleep numbers, making phone calls and locating appropriate staff members to whom they could escalate concerns.

The scenario ran for about 2.5 hours, including a shift handover and some unexpected twists and turns. Students navigated challenging situations, such as managing a distressed relative in a busy emergency department and addressing deteriorating patients in ward areas – all within the context of a major incident, with pressure on resources.

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In addition to managing patient flow and evolving scenarios, students had the opportunity to practise their clinical skills. For example, when an acutely unwell patient was admitted and a care plan was established, the students carried out procedures such as cannulation and catheterisation on a manikin.

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What did the students think of the simulation?

Feedback from the students – which was initially gathered during the debrief sessions and then via an online form – was overwhelmingly positive.

Although some felt intimidated at the start, once they immersed themselves in the experience, they found it beneficial for their learning.

Comments from students included:

- 'The debrief was valuable for reflecting on what went well and what could be improved, and to recognise the knowledge gained throughout the degree'
- 'The scenario felt very realistic, allowing me to fully assume the role of a registered nurse'
- 'Working together as a team in the adult ward area was invaluable. Planning and communication before patient interaction strengthened our teamwork and supported our well-being'
- 'I was able to assess my strengths and weaknesses and reflect on these to enhance areas where improvement is needed'



The immersive experience allowed students to assume the role of registered nurse Picture: UEA Health

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Effective teamwork emerged as a prominent theme in the feedback, with students recognising the importance of good communication and mutual support.

Students also reported increased confidence in areas such as knowledge acquisition and patient handover, with many commenting on how the realism of the simulation significantly enhanced their learning experience.

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Opportunity to take a leadership role

This simulation provided a critical first opportunity for many students to assume leadership roles. Some took on the roles of site practitioners and nurses in charge in an area, requiring them to use and adapt their communication skills, make difficult decisions and convey these decisions to various teams promptly.

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Those not in leadership roles worked effectively as a team and demonstrated leadership qualities while acting as registered nurses. They managed direct patient care and communicated with relatives and members of the multidisciplinary team, which often necessitated escalation of care.



Students who took part followed up the simulation with debrief sessions to reflect on the experience Picture: UEA Health

Debriefs allowed the learning to continue beyond the simulation

Following the simulation, we held debrief sessions with each department, allowing for a more focused discussion with a manageable number of students. These sessions were student-led and facilitated by lecturers and clinicians who had spent time in the settings.

Observers from each area contributed by providing an objective view of events and feedback based on their observations. Key learning points were explored, providing students with an opportunity to reflect on their experience and emphasise important learning areas.

Overall, this activity not only bolstered students' confidence in their clinical skills and knowledge, it also improved their ability to identify their own learning needs as they progress toward qualifying.



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