Using simulation to prepare students for their qualified role

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It is important that qualified nurses are able make decisions and solve problems, so a group of 10 BSc adult branch nursing students undertook a ward simulation exercise in preparation for their role as qualified nurses. This article describes the planning, design, implementation and evaluation of the simulation day.

Clinical decision-making and problem-solving skills are an important foundation for nursing practice (Taylor 2000). To advance the acquisition of these skills, 10 third-year BSc adult branch nursing students agreed to undertake a ward simulation exercise in preparation for their role as qualified nurses.

A ward was created to resemble an acute assessment ward in which the students could undertake leadership and team roles. The main aim of the exercise was to enable them to develop their competence and confidence through problem solving in a safe and realistic simulated environment. The day was designed to mirror an early and late shift and there was careful attention to detail in order to replicate authentic clinical practice.

Background

The University of Huddersfield was one of the lead partnership sites for the implementation of Making a Difference (Department of Health, 1999). Fitness for Practice (UKCC, 1999) has provided nurse educators with the opportunity to develop a curriculum to address criticisms of newly qualified nurses, particularly in areas of organisation, management and clinical skills. In response to concerns that newly qualified nurses were not fit for practice, management and teaching strategies have been developed and explored by educationalists. One involves simulation and this is taking an important place in the education of healthcare professionals (Alinier et al, 2004).

Over recent years the School of Human and Health Sciences at the university has invested considerable effort and resources in the development of sophisticated clinical skills labs. Simulated clinical practice forms an extensive part of the curriculum in pre-registration nurse education at the university. Although these facilities should not be a substitute for practice, they can provide an environment for students to practise the skills of the registered nurse safely (Spouse, 2001). Such a facility also enables students to appraise how they will cope as a newly qualified practitioner.

It was thought that there was a need to develop simulated clinical teaching for senior students in order to test their clinical and decision-making skills for overall competency rather than individual specific skills. Consequently a full day of simulated medical ward exercise was designed to develop and consolidate the essential core clinical decision-making skills of the newly qualified nurse.

The simulation day

The emphasis of the day was to make the simulation as ‘real’ as possible and therefore it needed to be complex in order to ensure that ward experiences were mimicked accurately. So in addition to using a ‘SimMan’ universal patient simulator, advanced life support trainers and resuscitation manikins, teaching staff acted the parts of patients, relatives and support trainers and resuscitation manikins, teaching staff acted the parts of patients, relatives and healthcare professionals.

Cioffi (2001) and Gibbons et al (2002) suggest that the creation of realistic patients and clinical settings enhances clinical learning. Furthermore, Gates et al (2001) recommend that students are supported by authentic scripts and ‘actors’ who behave in a manner that captures the essence of real patients with unique health needs.

In preparation for this simulation day, considerable planning and assembly of resources were required to make the ward environment as real as possible. The environment and atmosphere created had to be the equivalent of reality to help students suspend disbelief and act as themselves (Hegarty and Bloch, 2002; Streufert et al, 2001). Rystedt and Lindstrom (2001) suggest that the integration and design of the simulation have a great influence on what the students can learn from it.

Planning

After approaching the group of students with the initial concept, a plan for the day was developed including multiple scenarios throughout each shift. This would offer each student the opportunity to experience many different roles. In order to support each scenario, authentic patient records were

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created including relevant investigations such as X-rays, ECGs and blood investigations. The appropriate clinical equipment was checked for availability and function to support each scenario. Such attention to detail was time-consuming but essential to ensure realism.

Following this initial planning, other senior lecturers were invited to participate in further planning and delivery of the exercise. Several meetings took place in order for each member of the team to share ideas and develop a clear understanding of the objectives of the day. From these discussions it was agreed that each teacher would use their extensive clinical experience to underpin their role play. Teachers developed their individual scenarios as they felt necessary within the overall context of the exercise. For example, a teacher playing a patient admitted from A&E with acute asthma developed a character who wanted to self-discharge.

**The exercise**

Educationalists are concentrating on strategies to prepare students at both pre and post-registration level for the clinical work that they will have to undertake. There is evidence to suggest that students’ performance in simulated environments is very similar to their performance in real clinical practice (Hanson, 2003).

The day was broken into two sections, featuring five planned multiple scenarios within the ‘early shift’ followed by a further five in the ‘late shift’ (Box 1). Each of the scenarios was designed to enable the students to use and develop their problem-solving skills in an appropriate way for the role of a newly qualified staff nurse. Before each exercise students were given information on their specific role and information about patients via a ward report.

**Box 1. Examples of Scenarios**

- Admissions to the ward
- Confused patients
- Troubled relatives
- Matron’s visit
- A cardiac arrest
- A self-discharge against medical advice
- Good and poor clinical staff performance
- A complete ward round conducted by a consultant and the team

**The environment**

The School of Human and Health Sciences has several specialist facilities. This includes one that is designed to simulate a six-bed open ward with two beds in side rooms. All of these rooms were utilised in this exercise. There is a nurses’ station and profiling beds supplied with medical gases as well as a full equipment store with monitors, IV infusers, syringe pumps, transfer trolley and a fully equipped cardiac arrest trolley and defibrillator.

Each of the bed areas is covered by a video camera and students not directly involved in a particular scenario recorded what they saw and took notes to enable accurate evaluation and reflection of the practice-based scenarios. Simulated visitors came and went, as did cleaners and other workers. Appropriate uniform and dress codes were observed throughout the day.

**Roles and responsibilities**

Members of the academic staff were allocated a variety of roles throughout the day and were aware of the scenarios and the timetable involved. Teachers altered their roles frequently and displayed examples of good and bad practice to further challenge the students’ problem-solving and decision-making skills. The students were divided into two groups, with one group undertaking the clinical nursing roles and the other group observing and making a video of the others. One student was in one of the beds to observe the activities from a patient perspective.

At the completion of each scenario a ‘time out’ was called in order to undertake a critique/reflection session involving self and peer assessment. This enabled the students to express critical thought before moving on to the next scenario. Upon completion of the reflective process the students exchanged roles, ensuring equal opportunity to participate in all aspects of the day’s events.

An essential aspect of the simulation was that several scenarios occurred simultaneously. For instance during a ward round one patient with dementia was trying to get out of bed, while opposite two relatives were complaining about the care of their mother. At the same time SimMan had arrested in a side room and a very distressed relative required comforting while SimMan received resuscitation and attention from an on-call resuscitation team. This was just one of many scenarios completed that day.

These simultaneous scenarios created the reality of a clinical environment and the background noise enhanced this realism.

**Evaluation**

All of the students who participated evaluated the experience at the end of the day and again one week later. They reviewed the camera stills and

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video as a group, with members of the teaching staff who were involved in this exercise. The majority of the students found it a very positive experience. Individual comments were recorded from an evaluative questionnaire that captured qualitative narratives. One student offered the following comment: ‘When I first arrived at the skills lab I was feeling quite nervous about doing this simulation exercise. I thought I would be lacking in knowledge.’ ‘On this simulation day I really did feel like a nurse. I solved problems myself. Before the experience I thought the simulation would make me realise how much I did not know. However, it did the opposite.’

It appeared that the realism of the situation aided in making this a positive experience for the majority of the students: ‘Before the day I was very apprehensive as I did not fully understand what the day would involve other than role play. This on previous experience is not something I enjoy or learn much from.’

The same student then commented: ‘One week after the experience since returning to my placement I have had more compliments about my practice than ever before. I feel that the experience has contributed to my practice in a huge way.’

Prior to this day the students had expressed fears in relation to undertaking the role of staff nurse. However, their comments suggested that having an opportunity to simulate the role proved to be extremely helpful: ‘I felt the scenarios went very well, they were well-constructed and the nursing staff were very professional.’

‘It was a great experience for us as it gave us a taster of what to expect when we go through the real transition from student nurse to qualified nurse.’

Discussion and recommendations
The teaching staff involved in this event were all a little apprehensive about how the students would respond. Such concerns were quashed within minutes of the first scenario. All of the students responded far in excess of our expectations. It is important for nurse academics to utilise varying teaching methods in order to produce qualified nurses who are able to make effective clinical decisions. One highly effective method is that of simulation.

It became evident from this exercise that both the students and the academic staff learnt a great deal from the day.

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Any initial fears concerning role play disappeared as the situations presented were very realistic even though the environment was safe. Students found that using self and peer review as a process of assessing each exercise was beneficial to their understanding of the complexities of the role of the qualified nurse.

This event was costly with regard to the number of staff required and the time needed to prepare. However, the day was so successful that senior nursing colleagues have asked to be included in the next simulation, and who better to play matron than matron her/himself? Such involvement of practitioners can only benefit the authenticity of future sessions.

We intend to continue and develop this strategy further and plan to carry out a follow-up evaluation after these students start work as qualified nurses to look at the effect on their clinical practice.

We also intend to take up the offer made by senior clinicians for assistance in developing this for other groups. This would address cost-effectiveness, promote education in practice partnerships and contribute to the development of qualified nurses who are capable of problem solving and delivering effective, safe and professional care.