



Welcome to the 12th edition of our Newsletter, another full issue that once again reflects the growth of simulation in training across the healthcare disciplines. It is also interesting to see the growing international collaboration that is emerging between professional healthcare educators here and their counterparts abroad sharing experiences and best practice.

I would like to thank James McLean and Mark Fores whose recent trip to the States has yielded exciting developments in the 'in-situ' simulation programmes now being implemented at the University Hospital of Leicester.

This newsletter also reports on the early simulation developments now taking place in the Physiotherapy and Learning Disability nursing programmes at Northumbria University. My thanks to John Stephens and Jackie Robertson for sharing their experiences in this relatively new area for simulation and we look forward to following up their progress in later issues.

SUN (Simulation User Network) meetings continue to attract growing interest and you will find a report of the most recent at Southampton University, which was devoted to the subject of Debriefing.

There are many more interesting articles for you to peruse in this issue. Please note the 'Dates for the Diary' on page 12. We have a number of exciting events coming up.

Enjoy the read!

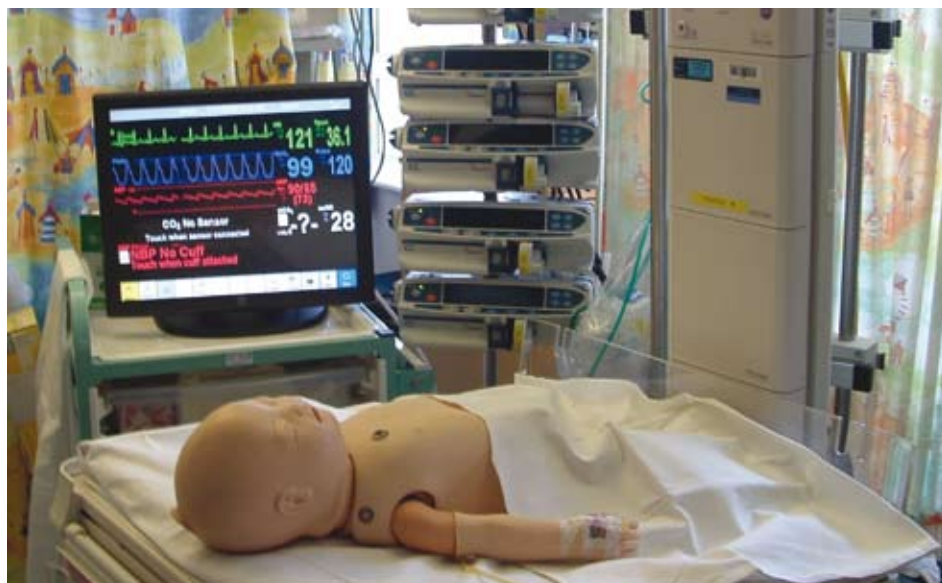
Dr. Jonathan Smart
Managing Director, Laerdal Medical Ltd

Nursing Focus

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Letters from America

Collaboration takes simulation to the next level



SimBaby on Childrens' ICU

Clinical Skills Unit, University Hospitals of Leicester (UHL) NHS Trust

James McLean RGN, RN Child Dip HE, Dip Critical Care of the Child, BA Nursing Clinical skills Unit Manager, Mark Fores MEd RGN, RSCN Senior Clinical Skills Facilitator

The Clinical Skills Unit based at Leicester Royal Infirmary in conjunction with colleagues in the clinical arena have been developing simulation programmes throughout the Trust to meet the needs of clinical staff in critical care areas. The successful application for a grant to study at Boston Children's Hospital MA to undertake the instructor's course for Simulation and Crisis Resource Management (CRM) became the catalyst to further develop the use of High Fidelity Simulation (HFS) for UHL. James McLean and Mark Fores share with us the UHL experience of developing in-situ simulation training.

The initial project was run in tandem where equipment was resourced and faculty were developed to run simulation in the clinical skills centre and predominantly in the clinical environment.

One of the main aims was to take simulation to the clinical environment. We have taken simulation to the workplace, for example Ward areas, the Emergency Department, Delivery Suite and the Paediatric Intensive Care Unit. We have also demonstrated that the simulations can take place and be run anywhere with no loss of fidelity and immersion. This was demonstrated in 2009 at the Paediatric Intensive Care Societies National Conference in Cambridge (Conference venue, Music College), when the UHL coordinated a simulation of a Meningococcal Sepsis as part of a master-class in one of the music teaching rooms. Subsequently in 2010 the seminar room at Glenfield General Hospital hosted a similar scenario as part of the Paediatric and Infant Critical Care Transport Course.



Children's Hospital Boston, USA

Continued from page 1

We have also evolved the simulation equipment to reduce noise and increase portability by adapting a flow-meter to run the manikin's respiratory system off a single "E" sized air cylinder and negated the need for the compressor.

Sim-baby has been at the heart of our projects and we have been able to transport the equipment required to run simulations to all of our venues. There are modifications that we have made to enable the transport of the equipment and also maintain the ability to digitally record the events.



Paediatric and Infant Critical Care Transport Course



SimBaby with Digital Overlay

One such project that has captured the imagination and provided the service with an opportunity is the concept of "Animated Lectures". On the Paediatric Intensive Care Unit (PICU) at Glenfield Hospital, the Norwoods procedure for hypo-plastic left heart was to be introduced as a surgical technique. The concept of using the interactive lecture supported by simulating the post operative care of these patients ("The Animated lecture") was used to introduce this procedure to the Medical and Nursing staff on the PICU. The simulated event was undertaken in the clinical environment of the Paediatric Intensive Care Unit where the treatment is co-ordinated.



SimBaby PICU Post-Operative Norwoods Procedure

The main positives for using simulation are that trainees can practise and improve their skills and knowledge in a safe environment thus preparing them for practice. Strong evidence to support the aphorism that "practice makes perfect" has emerged in the literature (Weinstock et al 2005). Gordon et al (2001) suggests that high fidelity patient simulation may be a powerful tool to bridge basic and clinical science, foster critical thinking, and enhance retention, all while encouraging teamwork and practice for the real patient.

An 8-point pre and post questionnaire was conducted in order to evaluate the impact of the lecture and simulation education. Eleven candidates undertook the session (2 Specialist Registrars and 9 Nursing Staff). The Consultant Intensivist delivered an interactive lecture using power point. Following this, a short period was allowed for the attendees to digest this information and then a simulated post operative event was undertaken by the candidates with guidance and support from the Consultant Intensivist, Education Charge Nurse and Clinical Skills Team. This produced the animated lecture whereby the candidates were encouraged to explore and determine the clinical post-operative management of these patients, including potential complications and interventions in the safe environment of simulation. Eleven questionnaires were given out and five were returned completed.

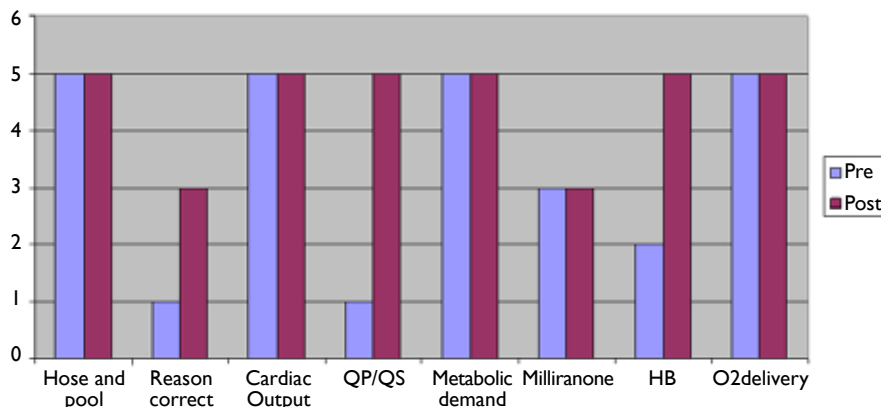
Answers to the questionnaire demonstrated an improvement of knowledge in 3 of the questions. One question demonstrated a change in underlying knowledge to correct reasoning. Knowledge of critical management points had improved. (Table 1)

Verbal feedback following the sessions was very positive with comments that the programme had been highly appropriate and relevant to clinical practice; staff that missed elements were keen to repeat the programme. On one occasion participants attended the animated lecture and simulation in the morning and cared for a patient having the Norwood's procedure in the afternoon. As the participants were multi-professional, both nurses and doctors and allied health professionals benefited from this technique.

This small study demonstrates a positive change in knowledge following the animated lecture and a perception of the positive and useful education for the multi-professional staff that were in attendance. In response to this, a recommendation for future work would be to use an audience response system, to collect data immediately at source therefore improving response rates and increasing the compliance of staff. This pilot programme has provided a structure from which to base future educational sessions using the Animated Lecture format. As stated there is a need to adapt and continue the evaluation of these sessions to determine the effectiveness of simulation as an integrated educational paradigm. This will be an ongoing theme in the UHL paediatric simulation curriculum.

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All photographs taken by James McLean



Using Simulation in the Pre-Hospital Care Setting

Brenda Cottam, BASICS Scotland



ALS Simulator

Trauma is the main cause of death in the first four decades of life in the United Kingdom and also a leading cause of disability. There are approximately 16,000 injury related deaths in the United Kingdom each year with around 1,000 of these in Scotland. Trauma in Scotland is common because of the extensive number of rural roads. It is estimated that around $\frac{3}{4}$ of road deaths in Scotland occur on these roads. Rural Scotland is also a playground for many high risk activities and with large areas being rural and remote requiring long transportation times to hospital, the provision of pre-hospital care in Scotland is extremely important.

BASICS Scotland provides immediate care of skilled medical attention in the pre-hospital setting. BASICS Education Scotland provides training in pre-hospital care for healthcare professionals, particularly in remote and rural areas of Scotland where immediate care services are limited.

The provision of pre-hospital care in Scotland was very significantly improved in 2001 by the formation of The Sandpiper Trust. This organisation was specifically formed to provide rural practitioners with equipment that would allow them to provide immediate care. An early benefit of this organisation was the design of the Sandpiper Bag specifically for the use of rural practitioners in Scotland.

With the help of The Sandpiper Trust, BASICS Education Scotland was able to purchase a new ALS simulator which is a key part of today's training in reproducing pre-hospital emergency incidents.

One teaching simulation involves a motorcycle incident allowing participants to manage key skills (helmet removal, airway and c-spine management, etc) in real time with very little interference from the instructors.

Simulation is an integral part of all courses run by BASICS Education Scotland. The ALS simulator has been a valuable addition and has greatly enhanced the learning experience for candidates.

Future plans include working with medical retrieval teams across Scotland to provide bespoke, combined training days which will encompass pre-hospital emergency care, performed by the remote and rural practitioners, then add on the handover to the retrieval team in real time, allowing the retrieval team to perform their extended resuscitation roles (eg rapid sequence intubation and commence mechanical ventilation). The ALS simulator allows seamless training and care to be demonstrated in real time. This will encourage multi-agency teamwork in a safe training environment, thereby offering valuable experience in this key area of integrated pre-hospital emergency care.



ALS Simulator being used to simulate a compromised airway situation



ACCESS

Simulation at the click of a button.

A Positive Debrief

Laerdal Hosts Simulation User Network (SUN) Meeting



Helping to meet the healthcare sector's demand for a joined-up approach to education through simulation, on 23rd September, Laerdal sponsored an interactive SUN workshop that defined the fundamentals of a successful debrief.

The symposium, which was hosted by the University of Southampton's Faculty of Health Sciences, provided an opportunity for some of the most experienced educators in the field of simulation to bring together their wide range of knowledge and lessons in the delivery of consistent simulation education service.

Thanking Laerdal for its support, Professor Jessica Corner, Dean of the Faculty of Health Sciences, welcomed delegates from several clinical and nursing disciplines, before handing over to Dr Mary Gobbi and Ellie Monger, who have structured an effective simulation training matrix for undergraduates at the University of Southampton.

Managing expectations



*Dr Mary Gobbi and Ellie Monger
University of Southampton*

Talking about the challenges of debriefing simulation training sessions, Dr Gobbi said, "Patient-centred scenarios can present a

stressful environment in which skills and behaviours are assessed by peers and mentors. In the simulation debrief, we have to account for different skill levels in inference, problem solving, immersion, leadership and communication as well as clinical and anatomical knowledge. Planning for every eventuality is crucial. It is important for the facilitators to decide at the outset the degree of realism. If it starts to go wrong, is the student expected to act as they would in practice, or would a mentor step in and encourage corrective actions? The facilitator also needs to consider the complexity of the situation, whether the scenario requires lots of action or is more reflective, whether the cognitive knowledge requirement is too challenging, whether the scenario will raise ethical or cultural issues and what impact the ensuing feedback will have on the student. There are ten principles of good assessment and feedback practice, all of which focus on motivating the student."

Ellie Monger discussed the difficulties and effects of critiquing performance privately and in front of peers and debated the options of running a vicarious master class as opposed to a hands-on session. "One of our main issues was how to approach the debrief, so we decided to look at technological solutions. Whilst facilitators can talk through actions as they happen, it is almost impossible to recapture one's original thoughts in playback mode," she explained. "We worked with the electronics department at the University to develop sophisticated software with an annotation facility. This allows us or other students to bookmark episodes as they happen and capitalise on the reviews."

Human Behaviours

Andy Buttery, Specialist Trainer from the Nottingham and Trent Simulation and Clinical Skills Centre, delivered a frank overview of students' perception of simulation. Liking a simulation exercise to a hypothetical bus journey taken by two disparate groups of people was seen as a useful comparison of group dynamics after delegates imagined emotions and behaviours such as: cooperation, conflict, suspicion, dominance, inhibitions, responsibility, relationships, mutual respect,

identifiable leaders, negotiation and standards.



Andy Buttery, Trent Simulation and Clinical Skills Centre

"Many people go into a simulation feeling like they are on stage," said Andy, "but my approach is that it's a great learning opportunity to watch yourself and other people perform tasks previously only learnt at competence level. Properly debriefed, simulation can give the participant insight, new knowledge and enthusiasm for further development. It is beneficial to take time before the scenario to run through expectations of the day and to help students realise the opportunity to take their skills forward and build confidence. We structure the debrief to include description, analysis and application. First, we hand the agenda over to participants, to seek the learner's experience and memory of the event, their feelings and responses. We empathise with the challenges, focus on strengths and good practice but will always be honest with criticism and highlight ways to improve skills. If someone makes a wrong decision, they should be asked why they made that decision and then guided to find strategies that will help handle the situation in the real world; after all, this is a learning exercise. Simulations are safe when conducted correctly, so it's alright to make mistakes. Facilitators should focus on the debrief as much as the scenario content. It's important to engage everyone, and facilitators need good people skills and planned strategies to encourage engagement and response! A positive debrief is a vital part of ensuring transfer of learning into the future workplace."

Mutual respect



Alan Platt, Andy Buttery, Matthew Aldridge

Showing an emotive video story by Martin Bromiley, an airline pilot whose wife had died as a result of human factor errors during what should have been a routine operation, Alan Platt, Senior Lecturer from the University of Northumbria, reiterated the importance of teamwork, and the challenges that individuals who are 'leading' the scenario may face in terms of situational awareness, fatigue and multi-tasking.

"We are now looking at various methods to enhance our debrief including live video capture, book marking scenario events and adopting a phased model to support the analysis stage of the debrief", Alan explained. "Human factors are integral to training. We can't ignore them any more. We often rely on pattern recognition and personal experiences when concentrating on a task, but even a 'dream team' can make mistakes, so behaviour and protocols should always be addressed during a simulation debrief."

Open discussion about actions and cultural or ethical sensitivities then followed among participants about encouraging dialogue on actions and cultural and ethical sensitivities during and after the scenario to overcome the issues surrounding hierarchy.

Taking responsibility



Using a video clip from 'Master and Commander' and an audience response software mechanism to 'debrief' the film event,

Matt Aldridge from Birmingham City University highlighted the difficulties of decision making, taking responsibility for one's actions and team-working in an emergency situation.

"We have 3000 student nurses at Birmingham City University," Matt explained. "We split the 500-600 students per year into groups of around 30 students, and conduct scenarios in which five or six students participate in the simulation, and the rest of the group watch, reflect on and present these reflections to the peer group. We had led a scenario in which a 'patient' had been the victim of an angina attack following a GP visit. The scenario had featured three facilitators, a good deal of role play, some emotional distraction and a Laerdal AVS audio visual system to stream live feed from each phase of the scenario into the classroom." Matt told of his belief that the pre-brief is as important as the debrief. "The team should get to know each other a little, be given background information on the patient and understand the learning objectives."

A 3D debrief

Matt continued, "During the scenario, the students were presented with an emergency and although they all recognised that certain aspects or actions were not right, no-one wanted to take responsibility. There was a perceived hierarchy that prevented some of the learners from speaking out and taking control. During the debrief, we discussed the loss of situational awareness, delayed delivery of CPR and management of the patient's airway. It was a very powerful experience and it gives students the opportunity to play back and understand problems. It gives them the confidence to go back and hone skills and challenge others if they believe it's the right thing to do. We always conduct a private debrief straight after the scenario, a facilitator-led debrief and a role-player led debrief if there is an 'actor' patient, which helps give it a third dimension. A successful debrief is always structured, direct, open and honest, constructive, sensitive and should be given as soon as possible after the scenario. This is the key to reinforce good practice, challenge attitudes, encourage reflection, reaffirm, reassure and direct future learning."

Practice sessions

Following lunch, delegates were split into groups to watch short, pre-filmed scenarios and conducted practice debrief sessions using role play to understand the challenges facing students and facilitators. The groups finished the meeting by discussing and writing down ways of working

together in the future to unify methods of learning and teaching. These comments and further use of the SUN facility to share experiences, will be carried forward by the presentation team.

Emma Winterman, Senior Lecturer in Nursing at Birmingham City University, commented, "We are in the process of streamlining our resources for simulation exercises, and it has been very interesting to learn how to get students involved in the action plan, the scribing and the debrief."



David Riches, Clinical Skills Tutor from Derriford Hospital, Plymouth, attended the symposium to learn more about delivering debriefs after teaching simulation to multiple disciplines for around twelve months. "It's very interesting to see how other people are working with simulation, and I am hoping to develop relationships with other simulation users," he said. "I have enjoyed the day and plan to implement several of the strategies discussed here."



Sarah Keeley from Bournemouth University uses low fidelity simulation exercises for undergraduate student nurses and has been to a few of the previous SUN meetings. "I find these workshops really useful to keep abreast of what's out there. They stimulate thoughts and ideas," she said. "Listening to the different presentations and methods of debrief makes me feel that we could introduce similar systems, and it was very useful to practise our own debriefing skills."

For details on the next SUN meeting, please email Martin Clarke at martin.clarke@laerdal.co.uk

Progressing the use of Simulation in Physiotherapy and Learning Disability Student Nurse Training

The Northumbria University Experience

In support of a continuum of skills: developments in the use of simulation in physiotherapy training

John Stephens, Senior Lecturer



The Northumbria University Physiotherapy programme(s) define physiotherapy as:

...a science-based healthcare profession. Chartered Physiotherapists identify and maximise individual functional potential through treatment, rehabilitation and health promotion. The distinctive skills used by the physiotherapist include massage and mobilisations, respiratory techniques, exercise and therapeutic movement and the application of electrotherapeutic modalities. Physiotherapy practice is characterised by reflective behaviour and clinical reasoning, underpinning a problem-solving approach to patient-centred care.

(NU, 2007 adapted from CSP, 2002)

Within Programme Area 1, School of Health, Community and Education Studies, are two full-time pre-registration courses BSc(Hons) Physiotherapy run over three years and a two year accelerated MSc programme. Both programmes aim to develop and integrate students' skills through a continuum of learning opportunities that seek to exploit and explore theory-practice links, and that places a high priority on clinical practice. Historically, physiotherapy education is grounded in simulation for the practise of the characteristic psychomotor and reasoning skills through demonstration and replication of therapeutic skills, role play, use of case scenarios and other problem-based approaches (Jones and Sheppard, 2008).

In recent years, the physiotherapy team at Northumbria University, often in collaboration with colleagues from other professions, has sought to explore areas of simulation that have included the use of actors (Stephens et al, 2005), service user involvement in developing clinical reasoning skills (Jones et al 2009, Stephens and Jones, 2007), the development of an e-skills portfolio (Parr and Stephens, 2008), Health Education resources (Innes, 2009) and the continuing development of the Objective Structured Practical Self Evaluation (Githorpe and Stephens, 2010) within the University setting as well as initiatives within clinical practice (Stephens, Abbot-Brailey, and Pearson 2007, Stephens and Abbot-Brailey 2007).

There has been a growing call for the development of high fidelity simulation within physiotherapy education, particularly the use of human patient simulators within cardiorespiratory physiotherapy education (Jones and Sheppard 2008, Blackstock and Jull 2007, Jones and Sheppard 2007, da Silva Bezerra Fitipaldi and Azeredo 2005). Over the past two years developments within the area of cardiorespiratory physiotherapy education in the use of human patient simulators have been undertaken at Northumbria within a framework that reflects the development of pre-registration clinical reasoning skills (Stephens, Dawson and Johnson, 2003).

Within this framework 3 progressive levels are recognised; Year 1/Level 4 Engaging Reasoning, Year 2/Level 5 Participatory Reasoning, and Year 3/Level 6 Integrated Reasoning.

At Level 4 the use of simulators is based around individual components of clinical assessment of the spontaneously breathing patient such as auscultation, and vital observations and the use of simple case scenarios to facilitate students' engagement in making links between applied anatomy and physiology, pathophysiology, clinical features, and the process of clinical assessment. Students work in small groups to enable peer support and coaching with, initially at least, no 'pressure' in terms of time and performance. This is in recognition of the theoretically driven learning processes at early stages of education due to the limited meaningful reflection on and

application of professional craft knowledge (Higgs et al, 2008) due to the lack of any great experience within clinical practice.

Progression across levels draws on the continuing development of students meaning from experience with a focus at Level 5 on the development of the distinctive intervention skills of the profession and the reasoning process that supports their selection and evaluation. Further integration of knowledge and practical skills is developed at Level 6 with a greater focus on changing contexts of care largely through the use of case scenarios focussing on for example, intensive care and the deteriorating patient, allowing the students to become more comfortable with the uncertainty of clinical practice through increasing insight of reasoning error. 'Real-time' address of changing human simulator presentation seeks to facilitate the analysis and articulation of clear relationships between clinical practice, the evidence base for physiotherapy and context of practice.

A similar approach is also being developed across the two year period of the MSc programme although in a slightly modified manner due to the more enquiry-based learning approach that is characteristic of this programme. Within both programmes the development of theory-practice links is also supported by the involvement of clinical colleagues in contributing to more formal teaching within the academic setting along with the facilitation of clinically based workshops for groups of students, for example linked to the use of Non-Invasive Ventilation.

A model based on the exploration of two interprofessional student groups first experience of working on an intensive care unit (Stephens and Abbott-Brailey, 2007) is in the process being developed to inform and guide the use of high fidelity simulation (see Figure 1, below for work in progress). The key driver for the process is in the provision of appropriate space for student reflection prior to, during, and after engaging with tasks. A major contribution to the content of this 'space' is meaningful dialogue – between students, students and simulator; and students and staff in engaging with the tasks/case scenario.

Figure 1. Work in progress: processes in simulation tasks

Furthermore, dialogue content is based around three broad themes:

1. 'Seeing, Thinking and Doing'; the continual gathering and evaluation of cues from engagement with the scenario/tasks to make rational, reasoned decisions
2. 'Fitting in'; orientation to the scenario/tasks through the development of personal and professional relationships with others (other students, staff, simulator)
3. 'Outcome'; the likelihood of making a difference in working towards a positive or desirable impact on the given case scenario/tasks and potential transference to actual practice.

Informal evaluation of the use of high fidelity simulation within the programme has revealed a valuable and enjoyable student learning experience particularly in perceived competence and confidence levels. More formal evaluation is ongoing with planned developments for greater use of 'real-time' clinical situations using simulation both uni- and inter-professionally.

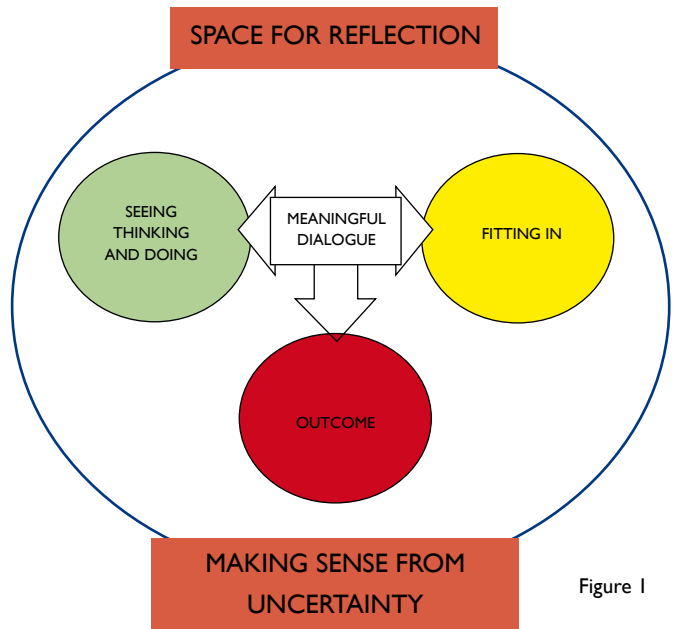


Figure 1

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Simulation within Learning Disability Student Nurse Training

Jackie Robertson, Senior Lecturer
Janice MacKnight, Senior Lecturer
Chris Tuffnell, Learning Technology Advisor

The multiple complex health needs of people with learning disability are well documented within current policy and literature, (DOH, 2008, 2009, 2010) Mencap (2007) Gates and Barr (2009). Diagnostic overshadowing, communication issues and professionals' lack of knowledge and skills regarding how to assess complex health needs within the learning disabled population are just some of the difficulties the literature discusses.

With this in mind, it is imperative that student nurses undertaking the learning



disability branch must have a well grounded foundational knowledge of collaborative working and clinical skills. This will enable the students to not only identify physical health problems and communicate these to clients and carers, but importantly it will prepare students for their role in educating and communicating with other professionals regarding the assessment of our clients' physical and mental health needs. Barrett et al (2005) concur with this and discuss the importance of understanding all professional roles in order that clinical information gathered during the assessment process can be communicated to the appropriate professional in order to get the best possible care for the patient/client.



Patient care simulations have long been used in the learning disability nurse training curriculum in the form of role play to enhance clinical understanding, develop clinical judgement, improve teamwork and gain confidence in caring for patients/clients experiencing crisis or trauma, without risk to

real patients/clients. Hands on clinical skills are also practiced, for example, measuring blood pressures, temperatures, injection technique, hand washing and aseptic technique in order to enable students to learn new care procedures and practices and again, increase confidence in their own competence.

By year two of training, students are ready for new challenges and patient simulators would appear to be the way forward. According to Comer (2005) and Gaberson and Oermann (2006), clinical simulations, relating directly to classroom material, allow students to apply theoretical knowledge whilst developing clinical assessment skills and promote active learning environments. In the airline industry pilots have documented the value of flight simulation in developing theory and practice and Poster et al, (2010) discuss this further in their *Smart Hospital* paper which encourages interactive learning through placing students in a virtual hospital.

Learning Disability can be a very challenging area of practice to simulate and therefore organisation and reality are crucial to the success of any simulation based education.

At Northumbria, the Learning Disability tutors have developed two case scenarios, one for year two and one for year three. Both scenarios adopt a two stage approach in order to challenge the students and develop clinical skills as well as critical thinking.

Stage one takes the students to a natural break in the assessment process and stage two takes them to the evaluation of their interventions. Students are presented with the first stage

of the scenario as a large group initially and encouraged to think about their first priority and what information they may need. Students are then given individual copies of the first stage of the scenario and work in teams of no more than 4 whilst assessing the 'patient'. The 'patient' is a computerised manikin which has pre-programmed scenarios with varying outcomes, depending on how the students assess, plan and implement care. The manikin also has the facility to be operated manually by the tutor. The Learning Disability tutors choose to use a blended approach where we start off with pre-set parameters for the students relating to the scenario and then we move to manual where the tutor reacts to student interventions. We feel this approach allows us to manipulate the session in order to meet the needs of individual students (Biggs, 2003). However, we are aware of how labour intensive this is and will attempt to address this in our future development. Students are encouraged to use any equipment necessary, for example, blood pressure cuffs, thermometers and of course their communication skills in order to move the 'patient' through the stages of the scenario. The second stage of the scenario is given out in session two.

Students are engaging in the cognitive, psychomotor and affective domains of learning (Bloom, 1981) which should accommodate all student learning preferences and develop their critical decision making skills.

We have found a debriefing session to be crucial in order to engage students in emphasising key points and analysing their interventions/decisions taken in order to reinforce their critical thinking/clinical judgement skills. Poster et al (2010) describe this phase as being imperative as students are taught competence and confidence - competence in that they knew what to do and confidence that their decisions were right. However, students should be allowed to make wrong decisions or make mistakes in order to appreciate the consequences of an incorrect intervention but

the seminar leader must be able to re-direct the scenario when necessary. At this stage students have reported feeling frustrated due to lack of preparation time, embarrassed at having to respond to a 'machine' and scared at making wrong decisions. However, from a positive perspective they report to being amazed at their ability to apply theory to practice almost unwittingly and most importantly feel competent that their assessment skills within learning disability practice have a depth which is crucial in ensuring appropriate clinical information is used in preventing diagnostic overshadowing (Mencap 2007).

Human patient simulation is at a very embryonic stage of development within the learning disability curriculum at Northumbria University. Whilst anecdotally there are numerous benefits to be observed with this approach to nurse education, for example students' perceptions of increased assessment skills and self-confidence, published outcomes concerning measurement of learning outcomes has not been found. It is our intention to further research, develop and evaluate environmental factors necessary for learning disability simulation practice, debriefing models and educational outcomes.

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TEACH
Changing the way you'll simulate... forever.

A Paediatric Symposium

Simulation in Paediatric Care from concept to implementation



Wednesday 15th December 2010

10am – 4pm at the

Laerdal Training Centre, Laerdal House, Goodmead Road, Orpington, Kent BR6 0HX

Speakers Include

David Grant, Director, Bristol Paediatric Simulation Programme, Bristol Medical Simulation Centre

Dr. Ian Curran, Head of Innovation & Associate Dean at the London Deanery & Honorary Senior Lecturer in Medical Education and Senior Examiner at the Barts & London School of Medicine and Dentistry

Stephen Marriage, Paediatric Intensivist / Clinical Lead for Paediatric Transport Medicine, Bristol Royal Hospital for Children

Tim Draycott, Consultant Obstetrician and Lead of the Research into Safety and Quality (RISQ) Group, Southmead Hospital

Ralph MacKinnan, Consultant Paediatric Anaesthetist, Principal Consultant for Simulation Education, Royal Manchester Children's Hospital

Practical Simulation Workshops

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From the Outback and the Wild West to the MI

Building on the simulation experiences of others to develop a joint Neonatal and Paediatric Transport Team

Steve Hancock, Embrace Yorkshire & Humber Infant & Childrens Transport Service, UK



Over the last decade there has been rapid development of regional transport teams in the UK. Until now, neonatal and paediatric transport has been provided by different teams following a traditional model. Embrace Yorkshire & Humber Infant & Childrens Transport Team (Embrace) is the first joint team in the UK and has been modelled on successful services in Australia¹ and North America.

From a central non-hospital base just off the M1, the Embrace team carried out the first transport in December 2009 and now completes 40 transports a week. Clinical staff members come from a neonatal, paediatric, anaesthetic or emergency department background and require training to enable them to function as generic transport practitioners. We have developed a simulation programme to facilitate this development which is designed to support the team developing high level skills in telephone call conferencing and direct clinical care.

Telephone call conferencing is a cornerstone of the Embrace system allowing referring clinicians to access clinical advice and discuss transport options with specialists. The Adtec Telebridge system used by Embrace is run by non-clinical call handlers. We have designed simulations to allow

testing of the new system and training of the clinical and non-clinical staff. High standards of clinical care is essential in transport but must be complemented by clear logical thinking, team working and crisis resource management. We utilise a Boston Children's Hospital designed mobile simulation cart² to provide simulation training in a realistic patient environment on site at the Embrace base. The trolley is an in-expensive solution to provide on-site simulation and can easily be assembled. Utilisation of the transport equipment, trolleys and ambulances provide fidelity. Manikins reflect the range of patients transported by the team (SimNewB, SimBaby and MegaCode Kid; Laerdal Medical).

To complement the on-site work a parallel programme³ is run at the Montagu Clinical Simulation Centre. Access to an off site state of the art centre allows team members to take part in simulation sessions with referring hospital staff which is an essential part of our outreach education.

All sessions, both on and off-site, are followed by a structured debrief using a feelings, facts, advocacy inquiry and summary technique.

In these early stages, a formal feedback process is yet to be implemented. Informal feedback has already led to improvements in the process and has indicated that team members put a high value on having access to this form of training. We believe that utilisation of a carefully designed simulation programme can provide important training opportunities for non-clinical and clinical staff employed in a complex high risk service. Simulation provides a safe environment for putting learnt technical and non-technical skills into practice.

References

1. A regionalized transport service, the way ahead? A Rashid, T Bhuta, A Berry. Arch Dis Child 1999; 488-492
2. Simulation at the point-of-care: Reduced cost, in situ training via a mobile cart. PH Weinstock, LJ Kappus, A Garden et al. Pediatric Care Med 2009; 10 (2)
3. Bringing the teams together – simulation training for stabilization and transfer of the critically ill child. S Hancock, A Mayer, T Ralph et al. IPSSW 2009 Scientific Programme RO9c



ASSESS

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Simulation in Nursing Education

Implementation of SimMan Scenarios at Oxford Brookes University

Barry Ricketts, Senior Lecturer



Barry Ricketts

These newly localised Laerdal simulation scenarios for Nursing will offer an opportunity for our second year pre-registration adult nursing students to utilise low to medium fidelity simulation, either by participation or by observation. Students will engage in the assessment of the critically ill patient using the ABCDE approach and track and trigger system (NICE 2007). The diverse range of medical and surgical scenarios offers a range of essential clinical scenarios that Pre-registration Nurses may also encompass during their clinical placements. The facilitators of the workshops will utilise medium fidelity simulation combined with these authentic clinical scenarios to facilitate a range of active learning and to challenge the student's psychomotor and cognitive skills e.g. Medication therapy, biochemistry interpretation alongside naso-gastric insertion and intravenous fluid replacement therapy.

The overall aims of the session are to support the learning outcomes of the module whilst also meeting the following learning objectives:

- Applying the nursing process to the care of the post-operative patient.
- Assessing the patient including information obtained through communication.
- Determine the plan of care by diagnosing the primary nursing interventions using an holistic assessment.
- Implementing the nursing care whilst demonstrating a therapeutic relationship with family and patient.
- Evaluation of care
- Documentation of the assessment and the on-going care.

The scenarios offer authentic simulation opportunities that utilise national guidelines and evidence based theory. These will support junior nurses to engage in experiential learning activities whilst needing to undertake active clinical decision making alongside the performance of core critical care and high dependency nursing skills. The scenarios encompass cognitive, affective and psychomotor skills that can offer students an opportunity to rehearse and repeat their performance whilst receiving valuable feedback and debriefing.



Nursing Scenarios for SimMan

It is envisaged that the half day risk assessment workshops will follow the format of 3 separate assessment stages. Each stage will involve assessment and intervention of a critically ill patient followed by guided reflection to assist in consolidation of related theory and practice learning. Following the simulation, students will be invited to engage in a debate on how the experiential learning can help link theory with practice, and reaffirm learning in preparation for the reality of clinical practice in the care of the critically ill patient.

NICE (2007) Acutely Ill Patients in Hospital. Recognition and response to acute illness in adult in hospital, Available at www.nice.org.

Dates for your diary

National Neonatal Simulation Conference
15th November 2010
National Space Centre, Leicester

Quality and Impact of Simulation in Healthcare inaugural conference - ASPiH 2010
16th - 18th November 2010
St James Park, Newcastle

Simulation in Paediatric Care from Concept to Implementation
15th December 2010
Laerdal Training Centre, Orpington



Reader contributions

If you would like to contribute articles to this newsletter relating to simulation in healthcare education, we would be pleased to hear from you. Please contact the editor, Martin Clarke, email: martin.clarke@laerdal.co.uk

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Scenarios to support the nursing curriculum

www.laerdal.co.uk




Top 10 downloads

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- SimMan Maintenance Checklist
- PALS SimBaby Scenarios Sample: lower airway obstruction - bronchiolitis Joshua Bowman
- Start-up and Troubleshooting Guide
- Female Vocals
- CXR Trauma Bilat Flail chest
- Auto AVS
- Dani's High School SimMan Demo
- Lab screenprints
- UKRC CasTeach 5 Scenarios for SimMan

Forum Topics

- General
- Events
- SimMan 3G Functional
- SimMan 3G Technical
- SimMan/SimBaby Technical
- SimMan/SimBaby Functional
- Patient Cases and Scenarios
- SimNewB
- ALS Simulator
- VitalSim Manikins
- Resusci Anne Simulator
- MicroSim





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Association for Simulated Practice in Healthcare

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ASPiH formed in 2009 in the UK by merger of the
National Association of Medical Simulators (NAMS)
and the Clinical Skills Network (CSN)

The overarching goal of ASPiH is to enable wider
sharing of knowledge, expertise and educational
innovation related to simulated practice across the
breadth of healthcare professions and organisations



Product News

The Ascent of SimMan

The evolution of a world class patient simulator



NEW SimMan Essential

As the world's most widely used advanced patient simulator, SimMan from Laerdal Medical, has played a significant role in the spread of simulation training. After 10 years with SimMan in service, Laerdal is now set to make the benefits of simulation even more accessible, building on the third generation of SimMan with its latest wireless innovation – SimMan Essential.

A Complete Simulation Solution

As simulation has gathered universal acceptance over the years as an integral part of healthcare training, and seen by many as fundamental to patient safety practice, the challenge now for providers of healthcare education is how to make it more accessible to the wider healthcare community.

Designed to meet this need, SimMan Essential is a realistic, adult, full body, advanced, wireless patient simulator; which offers comprehensive clinical functionality to teach the core skills of airway, breathing, cardiac and circulation management. As 'simplicity of use' is a fundamental principle of its design, both novice and experienced instructors can now take full advantage of the benefits of simulation. With a range of Technical and Educational services to ensure simulation programmes are fully supported from the outset, and ready made patient cases to ease the instructor's preparation time – SimMan Essential is the solution set to define a new era in simulation training.

The Importance of Mobile Simulation

In-Situ and interdisciplinary team training are now key requirements of simulation training enabling multi-disciplined healthcare professionals to come together in their workplace and rehearse both common clinical scenarios and emergency critical incidents for improved real patient outcomes. The wireless capability of the patient simulator is an essential element of these training programmes.

Commenting on Laerdal's advances into mobile simulation, Martin Hetland, Director of Strategic Marketing at Laerdal, said, "SimMan Essential can facilitate diverse and versatile patient scenarios in a range of operational environments. From an emergency in a remote location through the process of definitive care in a hospital, from a war-torn battlefield to a busy hospital ward – we wanted to create a mobile simulation solution that injects a greater realism into scenario based training to further enhance and contextualise learning objectives in preparation for real patient encounters."

Overcoming Environmental Challenges

Increasing the accessibility of simulation to a wider community of healthcare professionals in a diverse range of workplaces means that the simulator must be able to withstand extensive handling and operate reliably in all manner of environments and terrains. A robust and rugged design is essential – a feature that has differentiated Laerdal products from its rivals since the first Resusci Anne in 1960. Like SimMan before, and with a complete range of Technical Services supporting it - SimMan Essential has been built to last.

A Legacy of Learning

SimMan is a milestone in Laerdal's 50 year history of creating high quality basic, intermediate and advanced simulation training solutions for healthcare professionals. He has helped to transform simulation into a viable and essential training solution in healthcare.

Laerdal is proud to introduce the new SimMan Essential in the spirit of further advancing the potential and value of simulation training in healthcare. The company is confident that SimMan Essential will take over the mantle of its predecessors, further increasing the use of this training methodology in support of the company's long held mission – *helping save lives*.



MANAGE

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