



Welcome to the 11th edition of our Newsletter. We have devoted much of this issue to report on the continuing developments of simulation integration into Nurse education, amongst many other interesting initiatives that are now taking place in simulated practice.

I would like to thank Alan Platt, Senior Lecturer from Northumbria University for sharing the university's experience of embedding simulation into their undergraduate nursing curriculum. As we see an increasingly widespread adoption of simulation as a valued teaching methodology in both nursing and medical education, these insights are sure to be useful.

This newsletter also reports on the growing interest in simulation in Primary Care. I would like to thank Jim Milligan, Primary Care Resuscitation Officer of NHS Fife, for sharing with us his own experiences of how he is applying the versatility of simulation to meet some of the unique training challenges within this area of healthcare training.

There are many more interesting articles for you to peruse in this issue, but may I draw your attention to the 'Dates for the Diary' on the back page. 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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Breaking New Ground

Simulation is moving to Primary Care



While simulation training is becoming firmly established within our Acute Hospitals and Schools of Nursing and Medicine, the needs of Primary Care are no less important. Jim Milligan, Primary Care Resuscitation Officer of the NHS Fife region invites us to look at the newly built simulation training suite at the Cardenden Health Centre and tells us how their simulation programmes are helping to overcome some of the unique challenges in primary care.

Pick a challenge!

The provision of on-going and refresher training for clinical skills in rare emergencies in a climate strained by budget limitations is one challenge. Add to that the fragmentary nature of primary care itself with the multiple and diverse healthcare disciplines that make up this public service, and then consider the logistical challenges resulting from the wide dispersion of these services throughout a large geographical region. This is the world of Primary Care.

These challenges are not unique to the Fife region, but the development of a simulation centre within a Health Centre is a first and significant step forward to help provide more educational opportunities to a broad range of healthcare staff and improve the overall quality of patient care.

Considering the possibilities

"We wanted to adopt a transprofessional and multiprofessional approach to our education delivery to ensure that medical, nursing and AHP staff were given the necessary training opportunities to develop their clinical skills in the management of acute medical emergencies, cardiac arrest and other events appropriate to their clinical remit", explains Jim Milligan. "We embarked on a project to construct an educational environment to include 'virtual learning' to support the learning needs of the professions fragmented geographically throughout NHS Fife."

Cardenden Healthcare Centre's training facility provides educators and staff with a range of online, video conferencing and simulation training with the patient simulator SimMan.

Defining the different training needs

While the use of simulation training has been well documented within acute hospital settings and curricula integration in the Medical and Nursing schools, very little, if any has been mapped out within the primary care environment. In drawing up the training agenda, Jim Milligan and fellow team members started with a blank page. First, existing simulation projects were analysed to uncover practices and issues that were relevant and easily applied to the Primary Care environment. This was then

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followed up by a collaborative discussion within the Community Health Partnership to reach a consensus on measurable standards in training and to identify the types of courses that should be made available for staff working in particular fields.

Highlighting the diversity of educational needs between the primary care disciplines, Milligan explains how simulation objectives were designed accordingly. "In mental health (MH) and Learning Disability (LD) inpatient settings, patients can be vulnerable to cardiac or respiratory arrest through co-existing physical illness, through self-harm, and through the effects of medication, including rapid tranquilisation, physical intervention, or seclusion in the short term management of disturbed or violent behaviour. The learning objectives for this scenario are quite different to those, say for managing elderly patients within the primary care environment. Elderly patients respond differently to illness and injury. They are more likely to develop toxic reactions to drugs; they do not tolerate fluids well and in general, many physiologic capacities are diminished. This type of scenario requires different training parameters and yet both scenarios can be delivered through our simulation centre using SimMan."

The Primary Care Emergency Service is another beneficiary of the simulation centre. In support of their GP colleagues, the Urgent Care Practitioners will often be required to work in conjunction with Paramedics and therefore benefit from mutually designed scenarios. They can often be faced with emergencies that should have been 999 calls. "Simulation training in this context has proved invaluable as it also has for our Community Dental Services", continues Milligan. "Take conscious sedation for example, which is a fundamental part of the pain and anxiety management of patients in certain operative dentistry. Simulated dental scenarios in this context lead to improved treatment management for this group of patients. The versatility of all the simulated scenarios we can run combine to help improve the quality of care for patients passing through the different Primary Care services."

An all-round solution

Milligan is in no doubt that simulation is bringing real value to healthcare professionals within primary care. "There is nothing more satisfying than when a member of staff from Mental Health or Learning Disabilities

states at the end of the course that they feel more ready to deal with an Acute Medical Emergency or Cardiac Arrest than they have ever been. They are not exposed to the volume of incidents as our Acute Hospital colleagues. The use of SimMan leads to a more realistic event for them."

Comprising two rooms, the eMedical Education, Virtual Reality, Simulation Training Suite can accommodate training for 8 people in the context of small group teaching or 40 people for a lecture style event, video conferencing and boardroom type meetings. The facility is fully equipped with multi-media projectors, interactive SMART boards, cable and wireless internet, video, DVD, laptops, and all that you would expect from a professional training centre. The tilt, Swivel and Pan Ceiling mounted camera is an essential ingredient to the quality of training provided as this facilitates the well documented 'feedback' process, allowing trainees to reflect upon their individual and team performances. Milligan has observed that the learning taken back to their workplace through these reflections is a critical component in support of the Primary Care Authority's endeavours to continuously improve their healthcare provision.

Exponential training through Video Conferencing to remote sites

One of the on-going pressures facing those in the NHS is to make efficiencies without compromising the quality of the service. In terms of training, Cardenden Health Centre is capitalising on the opportunities of video conferencing. Taking Adult/Paediatric Life Support training as an example, Milligan explains that as a mandatory course with a high staff throughput, conducting the course through video link to multiple and remote sites

is just one example of how efficiencies can be made without compromise. Previous cost burdens as a result of staff travel and hours lost at work are greatly reduced through video conference training. "One community hospital has already installed a VC system so I can run some courses from my office just as effectively, observe staffs' performance and still manage scenarios by changing clinical parameters as necessary."

Never a dull moment!

The simulation centre is in high demand not just for the training provision of the region's primary healthcare staff, but inter-professional collaborative training also takes place with colleagues from the Police Service as well as Fife Council sport and leisure staff. Resuscitation training is a core part of the centre's timetable and is made widely accessible. Many educators of specialised disciplines will take induction training on the functionality of the eMedical Education suite which will then allow them to carry out their own teaching with specific learning objectives using SimMan.

A future training model for primary care?

The Cardenden Health Centre has made significant investment in this facility which typically could not be financially replicated amongst all of Fife's primary healthcare disciplines individually. Milligan has observed that maintaining quality training on multiple sites has provided many challenges and barriers, often requiring constant review and lacking sustainability. The Cardenden Health Centre has emerged as a hub of quality and cost effective training that can be sustained and appropriately meet the needs of the multiple health services it caters for.



10th Laerdal meeting initiates drive for national simulation user network



Significant steps were taken towards establishing a proactive national simulation framework at the 10th Laerdal SUN meeting on Friday 7th May. As event host, the School of Health and Wellbeing at the University of Wolverhampton chose the theme of inter-disciplinary training for this symposium. The full day's programme included presentations on the progress of inter-disciplinary, scenario-based training at Wolverhampton, Birmingham City and Northumbria Universities; an interactive workshop that helped define a course for further action, and student nurses' accounts of putting simulation training into practice.

Making a difference

Opening the symposium, Professor Linda Lang, Dean of the School of Health and Wellbeing, talked about the University of Wolverhampton's commitment to blended learning across all health and social care disciplines. "Inter-disciplinary learning using simulation is an excellent way for students to practise how to work together," she said. "Through effective training, we can facilitate the delivery of effective care for people when they need it most." Referencing the case of Baby Peter, she continued, "Training people in health and social care is unlike other professions as the student is often removed from the client. Following its success within the aviation industry, the use of high and low fidelity simulation has now come into health and social care training and we are seeing that it is beginning to make a real difference to our students."

Senior lecturers Marina Kendrick and Chris Thomson presented information on a simulation based pilot scheme run by Wolverhampton University in 2008, and disclosed plans to embark on a second training programme in June this year. Marina said, "Inter-disciplinary training is the driving force in the UK. It is paramount to the personalisation agenda. The recurrent theme in mistakes made in healthcare delivery is lack of communication within teams. The use of simulation within inter-disciplinary training has been suggested as a bridge to the gap in learning and practice."

Chris went on to explain how students had benefitted from the pilot scheme, in which pharmacy, physicians' assistants, social care and

nursing students had volunteered to take part in scenarios in clinical and community environments. "Before the programme commenced, there was a common assumption made about people's roles within the team. For instance, some students would step back and let students from other disciplines make decisions and take over. They assumed it was the right thing to do, which it quite often wasn't. All students gained an insight into the strengths and parameters of others' roles and they all supported each other and learned from each other throughout the week. Through multi-professional training using actors, simulators and a range of scenarios, they experienced situations

they may not usually encounter. For instance, pharmacy students found it very useful to witness symptoms and reactions of unwell patients and physicians' assistant students realised the value of nurses' knowledge and experience."

Challenging stereotypical behaviour

Dr Philip Begg, Associate Dean at Wolverhampton University, agreed, "Inter-professional learning (IPL) promotes skills that are necessary to support client-centred delivery of service. If we are not doing this with the patient at the centre, we have missed the point. Through the use of scenario based, inter professional training, we hope to identify group activities that facilitate trust and will challenge stereotypical behaviour. We believe that collaborative education can break down professional barriers and will help to develop flexible ways of working. With this type of training we are hoping to underpin the importance of communication and teamwork and deliver an improved understanding of others' roles before students enter professional practice."

"We learnt a huge amount from our pilot scheme. This next one will include the delivery of three scenarios that will all last for around two hours. Each will have elements that will require skills from every profession within the team. We will provide 200 case studies online that people can access to research and study as well as virtual, computer based scenarios. We will also have some formative assessments that will look at decision-making, communication skills, documentation and care planning, and an appreciation of shared learning and teamwork. SMOTS cameras will film the scenarios and at the end of the week, students will share their experiences."

Data protection

The use of recorded audio-visual scenario footage in debrief is incredibly beneficial to students and educators and is often an essential part of the learning process. Linsey Duncan-Pitt, Head of Interdisciplinary & Multimedia Learning at the University of Wolverhampton, explained how the University's adoption and use of the SMOTS AV system within the SimMan 3G scenario experience had to be correctly administered in terms of data protection. Linsey advised, "When deploying a system

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Linsey Duncan-Pitt, Head of Interdisciplinary and Multimedia Learning, University of Wolverhampton

like this, you need to be aware of and address any software conflicts, ensure the stability of your network, devise secure log-in protocols for staff and have protocols and procedures for the retrieval, storage and transfer of files by staff and students. We all recognise the value in using footage to inform and educate students who haven't participated, but you also need to protect the participants from mis-use of footage. We have worked hard to ensure compliance with data protection acts and that students using and/or not using SMOTS are not disadvantaged in any way and I am happy to share our experiences and documentation with other educators and organisations."

Sharing experiences

Matthew Aldridge, Tracey Gregory, Senior Lecturers and Gerri Nevin (Head of Skills and Simulation Division at Birmingham City University, also ran a pilot scheme for inter professional students last year. They discussed their experiences of running a chest pain scenario as part of the wider, NHS West Midlands-funded collaborative project with University of Birmingham and Worcester University. In this scheme, actors and simulators played a part in simulating clinical events. The scenario, based on Kolbs cycle of learning, involved the patient making a routine visit to his GP, rapid access chest pain clinic, admittance to the ward and treatment of a sudden cardiac arrest whilst keeping a close relative informed of progress.

Alan Platt, Senior Lecturer, Northumbria University and Simon Warne, Healthcare Coordinator at the North East Simulation Centre, Freeman Hospital, Newcastle upon Tyne, gave a joint presentation on a pilot collaborative project entitled 'Saving life with the Sims'. This brought final year nursing and medical students together in high fidelity full immersive simulation scenarios that focused on inter-professional learning. Like Wolverhampton and Birmingham City Universities, they found that inter professional simulation based training was extremely well-received. Talking about the use of patient simulators, Alan explained, "We use MegaCode Kelly in Year 1 to get students used to working with simulators from a fidelity point of view, and then go on to increase the level of fidelity using SimMan in later scenarios. Simon continued, "Reading and writing essays are an essential part of learning, but how you deal with someone who is turning blue in front of your eyes is completely different. Realistic scenarios

involving actors and simulators give students crucial hands-on clinical, social and teamwork experience and really help them gain confidence."

After showing a video reconstruction of a routine operation that went wrong and led to the death of a patient, Alan and Simon reiterated the importance of mutual respect within a team framework. Simon commented "We agree that on many levels, the traditional hierarchal behaviour within the health service needs to change. Each individual has an important role to play and each can add value and experience. We deliberately built stress and distractions into our scenarios, to prepare students for what it may actually be like in an emergency situation." Alan continued "During delivery, debrief and assessment, we concentrated on human factors, physical demands, mental workload, product and device design and the teamwork process. Students were motivated and fully engaged. The next step for us is to prove that scenario based, inter professional learning is actually working in practice before we embed it."

In an afternoon workshop, Dr Sharon Buckley, Education Development Specialist at the College of Medical and Dental Sciences, University of Birmingham, discussed plans to embed simulation training within the curriculum in Universities and teaching hospitals across the West Midlands. Delegates were split into teams to discuss requirements for a regional collaboration in simulation-based IPL delivery.

Reinforcing the message that simulation through education does work, nursing students from the University of Wolverhampton, told delegates how they had put skills learnt from scenarios into practice during placements. "We practised a number of procedures that gave us hands-on experience before we went out onto the ward. Of course all patients have different anatomies, but our confidence was definitely boosted, and it was easier to retain the information as the learning was carried out in a realistic environment. We also felt we could discuss treatment or technique in situ, which wouldn't have been possible in front of the patient. Overall, we felt supported throughout the exercise and for us, this type of learning complemented classroom-based theory very well."

Having participated throughout the event, Professor Lang noted key requirements that had been highlighted throughout the day.

- a facility for scenario sharing between educators
- an online forum for exchanging ideas and experiences
- a standardisation of student and facilitator training
- a regional/national sharing of resources between NHS organisations
- a clear data protection strategy
- evaluation of the long-term effectiveness of scenario based training

These will be delivered to the Strategic Health Authority in an effort to collaborate nationally in helping NHS educators integrate inter-professional simulation training into the healthcare curriculum.

Closing the symposium, Jonathan Smart from Laerdal UK, told delegates, "As momentum has gathered over the last few years, we have sponsored simulation user networking (SUN) events throughout the UK. Getting people together to discuss experiences and methodologies on a regular basis has helped drive and sustain the development of a dedicated group of simulation users who want to help education providers understand the benefits of simulation training and embed it within the curriculum. I am delighted to announce that Laerdal will be helping to broaden this esteemed group further by facilitating a pan-European network that will be hosted at Birmingham City University."

Bolt on to integration: Embedding simulation into the undergraduate/pre-registration adult nursing curriculum

Alan Platt, Senior Lecturer, School of Health, Community and Education Studies, Northumbria University

Introduction

The use of simulation is starting to play an increasingly important role within healthcare education (Alinier 2007), a development that is supported by healthcare literature (Alinier et al 2004, Gaba 2004, Alinier et al 2006, Chief Medical Officer (CMO) (2009), Okuda 2009 and McGaghie et al 2010). Correspondingly its use as a teaching and learning modality in nursing curricula has increased greatly during the past decade (Jeffries and Spunt 2008). The Nursing and Midwifery Council (NMC) (2007) identified that simulation should be utilised in order to help prepare students for practice. In response to this initiative Northumbria University aimed to embed simulation throughout the three years of the adult nursing curriculum. This article outlines how this integration has been implemented and the university plans for the future.

Background

Two significant developments aided the integration of simulation into the curriculum. The first was the development and expansion of the clinical skills centre. The centre has been established for approximately 10 years, but the University's continued commitment to create an innovative, dynamic and interactive environment for healthcare students, has meant that over the past 4 years there has been significant investment in equipment, resources and facilities (Figure 1). Full details below:

- A peri-operative suite complete with an anaesthetic room
- A SimMan and SimBaby which are hi-fidelity manikins that produce altered physiology, including heart and lung rhythms, and are capable of procedures such as surgical interventions and haematology sampling.
- A six bedded ward area equipped with handling and lifting equipment.
- Intensive care unit and paediatric intensive care area.
- A midwifery room including a birthing bed and pregnancy manikins.
- Computerised birthing models.

- An occupational therapy kitchen and splinting area.
- Fully equipped physiotherapy rooms including the use of ultrasound.



Figure 1: Skills Centre

The second development was the revalidation of the undergraduate/pre-registration healthcare curricula, and this offered an ideal opportunity to pioneer the integration of simulation throughout the curricula.

Current Integration

Northumbria University has a large portfolio of undergraduate health related courses including operating department practitioners, midwives, occupational therapists, physiotherapists and all branches of nursing. Although all groups actively engage in simulation, this article will focus on the adult nursing curricula. The curriculum is based on Bruner's (1977) spiral curriculum model and its underpinning philosophy of a constructivism. It runs over three years and is modular based with approximately 4 modules per year, and in the region of 550 students per year undertake the programme. As Kardong-Edgren et al (2008) suggest, various simulation techniques have been used to teach nursing skills for decades - an approach very familiar at Northumbria. As simulated technology has advanced and significant

investments in terms of human simulators (SimMan™), facilities and staff have followed, subsequent simulated sessions were initially 'bolted' onto relevant modules. In essence, we have the equipment we must use it! However, as Alinier (2007) asserts, simulation must be integrated in such a way that it is delivered in an effective way and at the right time in the curriculum - a stance that underpins the curriculum simulation strategy. The actual strategy is based on Miller's (1990) model of skill development (Figure 2) a model that complements the curriculum philosophy. Year one focuses on cognitive and psychomotor skills development, mainly through part task trainers e.g. basic life support, bed bathing and injection technique. In years two and three, simulation is aimed at enhancing clinical skills further, whilst developing the student's clinical reasoning, decision making, problem solving and psychosocial skills, through active engagement in increasingly higher fidelity full immersive scenarios as they progress through the curriculum (Alinier 2007, Daley and Hetzel Campbell 2009).

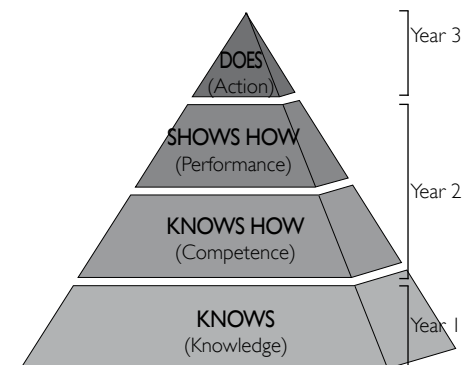


Figure 2: Simulation development through the curriculum development (Adapted from Miller's (1990) model of skill/competence/performance assessment)

These simulated scenarios are not 'bolted on' or 'stand alone' within the modules. They are as McGaghie et al (2010) attest to - most powerful when integrated with other educational methods e.g. lectures, workshops, seminars and online resources. This mixed modality approach is adopted throughout the curriculum with all simulated activity being embedded in each module and aligned to its aims and objectives.

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Year 1

The simultaneous use of cognitive, psychomotor, and psychosocial skill sets can be especially challenging for novice students (Kardong-Edgren et al 2008), and to overcome this Henneman and Cunningham (2005) advocate the use of simple simulation exercises early in the curriculum to reduce students' anxiety about interacting with a manikin so that they can become more familiar with the overall concept. Therefore, students in year one are exposed to the MegaCode Kelly (VitalSim™) during a practical session focusing on vital observations. This practical session falls within the year one module entitled 'Foundation Core Skills or Professional Practice', and it is accessed by all professional groups in the undergraduate curriculum. The aim of this session is two-fold; firstly as identified above, to overcome the 'fear factor', and secondly allowing the students to practise their technical skills in performing and interpreting vital observations. Thus MegaCode™ (VitalSim™) is utilised as a 'part task trainer' (Image 1).

The evaluation of this practical was extremely positive. The evaluation results show that 86% (N = 173) of students found the practical relevant to their practice with comments including: "These sessions are extremely important and beneficial", and "I found it very helpful...". In relation to the introduction of the VitalSim™ (MegaCode™) manikin, over 80% of students found it to be both realistic (89% N=179) and



Image 1: A first year student undertaking vital observations

effective in applying theory to practice (98% N=198). Comments included "pressure free way of learning", "helps build confidence" and "very good to have the model...not worried about causing discomfort...easier to hear BP". Although nursing schools have used low-fidelity manikins to teach basic clinical skills to nursing students for years (Katz and Peifer 2010), the evaluation was supportive of the early introduction and use of the VitalSim™ (MegaCode™) manikin as a part-task trainer and its use as a spring board for future simulated activity with all professional groups.

Year 2

In year two the adult nursing students move into their specialist branch and over the course of the year they are exposed two 3 hr and one 4 hour simulated practicals. These focus

on various patient conditions e.g. asthma, hypovolaemia, sepsis, angina, anaphylaxis and cardiac arrest. As discussed previously, they are integral to the mixed modality approach within the modules. For example, the first module entitled 'Fundamentals of Adult Nursing' has lectures/seminars and workshops that cover shock, post operative care and cardio-respiratory pathophysiology. The first simulated practical complements this material as it is based on the early detection and management of a patient with a post-operative bleed. Each practical follows a set standard for simulation delivery (Figure 3) that includes a sound introduction outlining the manikin itself using a short video clip, the actual environment and the audio visual equipment. Additionally, the learning outcomes of the session, participant roles and expectations and general etiquette/behaviour are outlined. During each practical scenario the students are divided into groups of 4 – 6 students, and whilst one group participates in the scenario, a second group observes the first through the audio visual system (Image 2). The sessions are facilitated by a lecturer who role plays the students' mentor. However, as the students progress through the year and into the second and third practicals, the facilitator takes a less directive role. The scenario is then followed by a structured debrief using Steinwachs (1992) three phase debriefing model. This is to encourage students' reflections on their performance (Jones and Alinier 2009).

30 mins		1st hour		15 mins	2nd Hour		15mins
		20 mins	40 mins		20 mins	40 mins	
Intro to all students	Students split into groups A & B	Scenario 1 (Group A - 6 students) In sim room SMOTs (Group B - 6 students) recording In class room	Debrief all 12 students In class room	All groups change scenario, students change role	Scenario 2 (Group D - 6 students) In sim room SMOTs (Group C - 6 students) recording In class room	Debrief all 12 students In class room	Evaluation of session
	Students split into groups C & D	Scenario 1 (Group C - 6 students) In sim room SMOTs (Group D - 6 students) recording In class room	Debrief all 12 students In class room		Scenario 2 (Group B - 6 students) In sim room SMOTs (Group A - 6 students) recording In class room	Debrief all 12 students In class room	Evaluation of session

Figure 3

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Image 2 (taken from AV system): Second year students undertaking simulation

Again evaluations were very positive. All students (N=93) either agreed or strongly agreed that this simulation enabled them to develop their skills, and link theory to their practice. 95% of students either agreed or strongly agreed that they could recognise a deteriorating patient and respond appropriately following the simulation session. Although 8% of students either agreed or strongly agreed that the simulated activity put too much pressure on them 96% felt that their confidence had grown as a result of participating in these sessions. Comments included, "More simulators would improve learning plus linking theory to practice throughout the course", and "I think there should be more sessions like these".

Year 3

As discussed previously, the plan for the third year within the simulation strategy was to further increase the level of fidelity and fully immerse the students in various clinical scenarios. During these sessions facilitators would play a medical colleague/senior nurse and they would not interrupt the students unless called upon, but observe them remotely and discuss any learning points during the debriefing, and again, this would take place immediately after the simulation encounter (Jeffries and Spunt 2008; Lasater 2007; Nagle et al. 2009). A small pilot project (Image 3) was undertaken to evaluate this approach and the scenarios were structured as outlined above e.g. introduction, scenario and debrief. The evaluation was once again positive where all students (N=12) strongly agreed/agreed that the simulation enabled them to develop their skills in the recognition and management of a deteriorating patient, and link theory to practice. Although they all strongly agreed/agreed that they were anxious prior to the session and were also concerned about their knowledge and skills, they all strongly agreed/agreed that their confidence had grown as a result of participating in the simulation. One student commented that "It would be really beneficial to have more

sessions like this. I was anxious prior, but it really helped me realise how much knowledge I have and linked new theory to practice. I now feel more confident that I can do the correct thing in an emergency situation". Other comments included "...raised confidence in dealing with any potential critical situations", "I found this session extremely helpful in facilitating my learning", and it "...increased [my] knowledge base and confidence, would recommend attending future classes to other students".

Following the success of this pilot, the higher fidelity full immersive scenarios are to be introduced within the third year module, 'Core Skills for Professional Practice – Transition'. In this module the plan is to undertake a further four hour simulation practical following the same structure as outlined in the previous year and develop them in line with the module aims and objectives. These include the enhancement of problem solving, clinical reasoning and clinical decision making skills. Additionally a key theme of this module is the assessment and management of patient risk. Therefore, the simulation will not only incorporate technical skills but also non-technical skills or 'human Factors' (Hamman 2004), e.g. communication, teamwork, assertiveness, mental workload, situational awareness and physical demands (Leonard et al 2004, Patient Safety First 2009). A larger scale evaluation is planned for this simulation activity.



Image 3 (taken from AV system): Third year students undertaking simulation during the pilot project

Overall, simulation using a range of patient manikins has been successfully integrated into the adult nursing curriculum at Northumbria University, and this has been very positively received by students. The use of simulation is a dynamic process and the plans are to continue to review and refine the use of simulation

to ensure that it remains appropriate and based on the best evidence and pedagogical principles, thus giving the students a valuable learning experience (Alinier et al 2004).

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Using simulation to improve the care for patients suffering from the effects of Stroke and TIA

Mark Garside, STAT (Stroke and TIA Assessment Training), Hexham, Northumberland



From left to right: Dr Chris Price (Stroke Consultant), Mrs Susan Elliot (Stroke Research Nurse) Bernie (SimMan) Mrs Margaret Bell (STAT Administrator) and Dr Mark Garside (Stroke Teaching & Research Fellow)

Stroke is a medical emergency. In the UK alone, there are an estimated 150,000 new cases of stroke every year, which equates to one every 5 minutes. If patients are brought to hospital within hours of developing symptoms, then they might be able to benefit from a treatment called thrombolysis, which can restore blood flow to the affected area of the brain and so reduce long-term disability. Evidence shows that the sooner this treatment is administered, the greater its chance of success but there are a number of steps that must be taken to ensure that treatment is appropriate and safe. These include neurological examination, urgent brain imaging and communication with a stroke specialist. Training emergency care and stroke unit staff to accurately recognise the signs and symptoms of a stroke, and to manage patients efficiently is essential for patients to have rapid access to thrombolysis and other treatments offered by specialist stroke units.

STAT (Stroke and TIA Assessment Training) has been developed by the stroke service at Northumbria Healthcare NHS Foundation Trust with financial support from the North of England Cardiovascular Network. It blends classroom-based teaching with real time partially scripted simulated scenarios to show nurses and doctors how to triage, assess and manage patients with acute stroke and TIA. As fluctuating stroke-related neurological symptoms are difficult to simulate, the scenarios incorporate video material of real stroke patients projected onto a screen behind the patient simulator. This integrates well, and does not disrupt the information-gathering process. Combined with a SimMan 3G, this enables a highly interactive experience, with learners encouraged to take a history from the simulated patient, observe the neurological signs on video, monitor observations, practise important communication with other staff and see the outcome of their decisions.

As well as simulating stroke patients, STAT also recreates stroke mimics such as seizures and hypoglycaemia. Learners have an opportunity to individually assess one of these simulated patients and receive feedback. In one day, they learn how to apply stroke recognition screening tools such as the FAST (Face, Arm, Speech, Time) test and the ROSIER (Recognition of Stroke in the Emergency Room) score, and how to follow stroke treatment protocols including thrombolysis. In order to obtain a certificate of attendance, learners have to pass an on-line MCQ after STAT.

So far, 192 staff have attended STAT training days in Northumbria between May 2009 and May 2010. Average MCQ score pre- and post-course was 55% and 81% respectively. Self-assessment of confidence in stroke management on a 0-10 score rose from an average of 4/10 before attendance to 8/10 immediately afterwards. Feedback shows that the simulator and video combination is highly valued as a part of the training. More than 50 STAT trainers have been created, and STAT is now available at a number of hospitals across the NHS. For further information, please visit our website: <http://www.strokesim.nhs.uk>



2nd National Neonatal Simulation Conference

Topics

Point of Care Simulation
Simulation Centres
Debriefing & Feedback
Simulation Training at Harvard
Simulation outside medicine
Training the Trainers
Future Developments



Workshops

Delivering feedback
Keeping it real
Designing simulation Scenarios
Making your manikin work



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Contact : Ruth Brown
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Introducing the Association for Simulated Practice in Healthcare (ASPiH) www.aspih.org.uk

The Association for Simulated Practice in Healthcare (ASPiH) formed in November 2009 through the merger of the National Association of Medical Simulators (NAMS) and the Clinical Skills Network (CSN). This was felt necessary due to the expanding and increasingly diverse roles being explored by clinical educators, researchers and commercial organisations regarding the potential contribution of simulation to the development of innovative education and training for healthcare staff, and ultimately supporting patient safety and quality improvement in clinical practice. Another important factor highlighted was the benefit of establishing a single overarching learned body or organisation, bringing together clinicians, educators, live simulators/factors (or standardised patients) and researchers under a single 'umbrella' in order to enable effective networking and sharing of good practice across organisational, professional and academic boundaries.

The past 6 months have seen the interim Executive Committee working hard behind the scenes to initiate and formalise an organisational structure and establish some core functions for ASPiH that will underpin the strategic development of the organisation. We have proposed a mission statement and developed some key aims to help focus our direction in this early stage of our development and these are described below.

Mission statement

To improve the quality and safety of healthcare by drawing together a body of knowledge and expertise to support the effective and innovative use of simulated practice and its translation into enhancing clinical practice.

Aims

- To provide an effective communication network for those involved in simulated practice in the UK and beyond
- To develop quality exemplars of best practice in the use of simulation to support education, assessment, and research in healthcare

- To develop and share key operational and strategic resources for members drawn from experience within the association and from links with relevant educational bodies nationally and internationally
- To encourage and support scholarly development and recognition for members through wider dissemination of innovative practice at scientific meetings and publications

Our next steps include establishing a healthy and vibrant membership, who can help form and benefit from networking with a body of experience and expertise in the advancement of simulation and its applications in healthcare. This will include an annual conference that reinforces our core goal for wider sharing of knowledge, expertise, and educational innovation related to simulated practice in healthcare. Our inaugural conference is currently being finalised and will be held in Newcastle on 16th – 18th November 2010. This will invite submissions to provide workshops and small group seminars as well as free papers and posters for discussion in an open and friendly forum. More details will be available via our website as they become finalised – see www.aspih.org.uk.

Membership

ASPiH is currently inviting membership from all of those involved in the organisation and delivery of healthcare education, training and research using any forms of simulation and would encourage interested individuals to contact any of the interim Executive Committee listed or visit the website to express your interest.

At a strategic level, ASPiH is seeking to develop links or affiliations with key national, professional and specialty organisations such as the Royal Colleges, the Academy of Medical Educators, the Higher Education Academy, the Association for the Study of Medical Education, National Patient Safety Agency and the NHS Institute for Improvement and Innovation amongst others. In addition, relationships will be explored with industry

and international organisations such as the Society in Europe for Simulation Applied to Medicine (SESAM) and the Society for Simulation in Healthcare (SSH).

We hope to meet many of our longstanding friends and colleagues at ASPiH 2010 in Newcastle or to hear from you via our website, but recognise also that there are many more people interested in how to use simulation in its many guises to optimal effect in their specific areas of interest. We would encourage you strongly to join ASPiH and benefit from learning and sharing practices with colleagues, all of whom have a common passion to provide effective and innovative education and training in healthcare as well as support improvements in patient safety.

Please contact any of the Executive Committee directly for further information:

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Council of Deans of Health



ASPiH 2010

Inaugural Conference
16th – 18th November 2010

St James' Park, Newcastle

Association for Simulated Practice in Healthcare

QUALITY AND IMPACT OF SIMULATION IN HEALTHCARE

16th November Masterclass sessions

17th & 18th November Main conference

Call for Workshops and Free Papers & early bird registration
to open soon. Please visit www.aspih.org.uk for further details

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



Simulated Practice in Paediatric Nursing



7th October 2010

This conference is intended to explore the various ways of how Simulated Practice in Paediatric Nurse Education is delivered around the country. The day will include presentations and workshops on the successful delivery of education in this area.

For further information, please contact: Martin J Clarke, Laerdal Medical Ltd by email at: martin.clarke@laerdal.co.uk

Venue:

K2 Building, Southwark Campus
London South Bank University



SimMan or Nursing Anne?

Some 'value for money' considerations



Since the General Election, budget cuts and the challenges they represent in maintaining present and desired future levels of simulation education in healthcare are now some of the principal considerations in the development of many healthcare training programmes. Roderick Cable (Lecturer) from the Undergraduate Clinical Skills Centre of the University of Nottingham talks to Martin Clarke and gives us an insight into how simulation programmes may be achieved within budget constraints to deliver some needs of Nursing (and Medical) curricula with Nursing Anne.

Less is more (maybe)

Within many Skills Centres, you are likely to see a Laerdal SimMan patient simulator as the primary manikin of simulation based learning. SimMan was launched in 2001 and for many was a trigger for the widespread adoption of simulation in healthcare education.

While SimMan remains a valued component of simulation training in nurse and medical education, the desire and challenge to spread the benefits of simulated learning throughout a student's course has not been totally realised by this simulator. And the reason is simple. While SimMan offers the tutor extensive clinical functionality, its cost reflects this and the question we must consider is - 'Is this level of functionality / complexity and its related cost, minimising simulation opportunities to a wider user group? SimMan is great for 'pilot' projects but can be problematic at the roll out stage'

As Roderick Cable observes, "However you try to be creative with timetabling, two SimMan can never meet the provision of simulation training across 3 year groups where each year group on average comprises 150 nursing students twice a year.

In 2004, and as a result of many Nursing Schools internationally incorporating simulation into their curricula delivery, Laerdal's Nursing Anne was introduced. While her clinical functionality is less than SimMan, she has been designed to facilitate the essential clinical skills requirements for today's students within a cost base that makes it possible to offer simulation training throughout any healthcare course.

Back to front

Roderick Cable uses both SimMan and Nursing Anne in the University of Nottingham's nursing and medical training programmes and believes that in an ideal world, Nursing Anne would have been available first. Students (Nursing, Medical and Midwifery) at the university use Nursing Anne to develop a variety of essential skills. "She is simple to use and more user friendly for straight forwards skills training, and this makes her a more cost-effective teaching tool", continues Roderick. "Not all staff have the time to really get to grips with SimMan but Nursing Anne with the Vitalisim is very much a 'grab and go system'".

Essential Skills

Through the advent and proliferation of hi-fidelity simulation, there has been much emphasis on CRM (Crisis Resource Management) training and the contextualisation of emergency scenarios in simulation practice, which at times has overshadowed the more core and tangible benefits of simulation - namely the building of skills competencies. Going back to essential skills with the likes of Nursing Anne underpin these principles of simulation, leaving the more advanced patient simulators to facilitate more complex clinical scenarios where teamwork and communication skills are key.

Making simulation more commonplace in the delivery of the 'essential' skills is important. Roderick comments, "To achieve this you need to be able to 'pickup and go' then 'plug in and play'. Nursing Anne is just such a simulator with no compressors or monitor attachments needed. You can attach Nursing Anne to a hospital ECG monitor to assess the 1400 ECG rhythms available with the VitalSim. Simulation using Nursing Anne requires minimal planning in terms of booking rooms or finding adequate space for training – you can do it anywhere." Roderick also observes that by introducing simple simulation practice in the early stages of nurse training, students are less overwhelmed by the more complex scenario training and team interplay later in the curriculum with SimMan, where valuable simulation time can sometimes be lost just by waiting for the student to 'settle into the scenario'.

Roderick thinks Nursing Anne is especially good for skills in the areas of Personal hygiene, Blood pressure, pulse, ECG monitoring, wound care, catheter care, IV care, NG, stoma care and systematic assessment (the chest doesn't go up and down, but you can turn the breathing sounds volume up).

Continued on page 14

Continued from page 13

We were all technically challenged once

It has often been observed that perhaps a reason for the initial slow adoption of simulation may have been attributed to the complexity of the simulator itself and the time and commitment required to get to grips not just with the simulator equipment, but also the principles of this training methodology. But as simulation has become firmly embedded within healthcare education in recent years, the design of simulators has evolved to reflect the need for more 'ease of use'. Roderick considers that, "With Nursing Anne's wide range of functionality reliability and simplicity of use, I see her as a valuable training tool for the future, particularly in the present time of strained budgets."

In summary

Roderick says, "You can buy five Nursing Annes (with the VitalSim system) for the same price as one SimMan and they are so much easier to set up and use. The answer is probably a mixture of products, but you need more Nursing Annes than you do SimMans".

"And finally a word to Teachers of medical students - do not ignore Nursing Anne just because it's called 'Nursing'".

The final piece



Nursing Scenarios for SimMan

In response to the Nurse Educator's diminishing available time to design scenarios for their simulation programmes, Laerdal has teamed up with Oxford Brookes University and the University of Northumbria to create a ready-made solution to support the nursing curriculum.

Originally developed in the USA in conjunction with the National League of Nursing, twenty scenarios have been adapted for use in the UK, which are designed to challenge undergraduate students at different levels on vital signs observation, problem recognition and management of life threatening complications.

Easing the integration of simulation with ready-made courseware

Nurse educators at Oxford Brookes University agree, "This scenario package can and will

become integrated into the curriculum for 2nd and 3rd year students. It will consolidate and bring together students' newly acquired essential skills into practice, covering the areas of related science, pharmacology, pathophysiology, clinical skills, decision making, team working and communication."

Following national policy and healthcare guidelines

A spokesperson for the university continued, "While also giving the student an appreciation of other Allied Healthcare Professions, these scenarios will also bring together government directives, national policies and common surgical and medical scenarios as seen in clinical practice.

Responsive to variances in students' capabilities

The scenario package gives up to date intervention and management options using realistic scenarios that are flexible for facilitators to respond to individual student group's abilities.

Nursing scenarios for SimMan are now available. Please contact your Laerdal Regional Sales Manager for details. (Tel: 01689 876634).

Coming Soon - Nursing Scenarios for VitalSim.



Complete the picture with our courseware



Scenarios to support the nursing curriculum

www.laerdal.co.uk



Top 10 downloads

- Confidentiality Agreement
- 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





Helping improve clinical skills training for nurses



Now available with ECG monitoring capability

Nursing Anne

The manikin for the development of clinical skills for the nursing student

Nursing Anne is designed for scenario based training for the care and management of a wide variety of hospital patients. She is an efficient, effective, flexible manikin for clinical training in women's health, obstetrics, post-partum, general patient or wound assessment and care.



For further information:

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Dates for your diary

Symposiums & Conferences

21st October 2010
Pre-hospital Symposium
RNLI Centre, Poole

15th November 2010
2nd National Neonatal Simulation Conference
National Space Centre, Leicester

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

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

Contact Martin Clarke for details:
martin.clarke@laerdal.co.uk

Simulation Network Meetings for Nursing 2010

Thursday 23rd September
The Fundamentals of Debriefing Simulations in Nurse Education
Southampton University

7th October 2010
Simulated Practice in Paediatric Nursing
London South Bank University

Wednesday 10th November
Simulation across the nursing specialties
University of Hertfordshire



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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