

North East and north Cumbria

Specialty Training

School of Radiology - Standardised Ultrasound Simulator Training (SUST) – Report to HENE

Background

Approximately one year ago, HENE entered a true partnership with the University of Teesside to deliver standardized ultrasound simulator training (SUST) to all health care professionals who use ultrasound as part of their normal practice. This includes, but is not limited to: radiologists, sonographers, obstetricians, midwives, gynaecologists, fertility specialists, intensivists, anaesthetists, emergency room practitioners, acute medical specialities, orthopaedics, rheumatologists, paramedics, physiotherapists, podiatrists.

Principle & Mandate

That all target health care professionals for whom HENE has a training responsibility would undertake specific simulator training to a defined standard prior to undertaking mentored training with patients. The extent of required training for doctors and the necessary standards would be set by the appropriate Schools and managed through ARCP. Other allied health care professionals would take their lead from the nearest applicable speciality (sonographers to radiologists, midwives to O&G, paramedics to Emergency Medicine, as occurs now). The prime driver for this training programme is safe standardized practice to protect patients across the entire Region, and to ensure proper governance and standards are met in the use of diagnostic ultrasound in the workplace.

Progress

HENE made a capital award of just over £500k. A formal partnership with a five year service level agreement was entered into with the University of Teesside. The University has provided:

- Dedicated space
- Folded its own MedaPhor ScanTrainer into the facility
- Full IT support
- A web-based booking facility such that learners may book training slots on line
- Trainer support (the University has run the Region's sonography training programme to a very high standard for several years)
- Infrastructure
- Administrative support
- Purchasing and tendering support (due to the size of the monies, a European Tendering process was followed). This has been managed to the requisite standards. NHS Purchasing has also been involved. A full evaluation was undertaken of the

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Out of Programme Standard Operating Procedure

simulation equipment on offer, with a final decision taken by the Project Board on the mix of equipment to be purchased to meet the diverse needs of the Region and where best to locate this equipment in order to deliver the training as comprehensively, safely and sustainably as reasonably practicable.

- The University will run the simulator training programmes, and develop supporting training packages.
- The University will enrol all users as Associates, who will be issued swipe card access. The Facility will be open 0800 – 2000hrs weekdays.

At the time of writing, the project is on target, on budget and will open to its first students in September 2015. The following equipment has been procured:

- 3 full system MedaPhor ScanTrainers to be located in the Facility with the extant University unit to bring the total to 4. These include full transabdominal scanning and transvaginal scanning devices and supporting software and training packages. These are particularly suited to radiologists, sonographers, O&G, midwives;
- 3 manikin-based CEA Trainers. One each will be based at the RVI and JCUH to deliver Point of Care Simulation Training, and is aimed at Emergency Care physicians, paramedics, and others requiring Point of Care ultrasound skills. The third, which is equipped with Echocardiography, is to be based at the Facility, and is aimed at intensivists, cardiologists etc.
- 3 Aplio 400 Toshiba Ultrasound Systems for live model scanning. A formal partnership has been entered into with Toshiba who will provide application specialist training, and provide additional machines at no charge to the Facility where paid-for courses are being run. The Facility will retain any earnings made to off-set running costs. Toshiba will not profit financially from this Agreement. Any paid-for courses will not be developed at the expense of the prime directive, and will only use spare capacity (if there is any).
- Two HD cameras, one ceiling mounted, one cart mounted, for recording scan technique;
- Several Laerdal stand-alone laptop based trainers, new to the UK market, for Point of Care Ultrasound Training. Packages purchased include, but is not limited to, MSK, which may interest Orthopaedics and Rheumatology. Other packages include FAST etc.
- Several Blue Phantom devices for ultrasound guided line placement and ultrasound guided nerve blocks.
- Furnishings and projection facilities.

In return for its investment, every learner for whom HENE has a training remit who requires SUST as part of their training has **unlimited free access to the Facility and the designed supporting training courses and packages** for the duration of the Service Level Agreement (five years, September 2015 to September 2020). This includes free access to the satellite facilities, both current (RVI and JCUH) and as may be expanded in the future (eg QEH, possibly others).

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Programme

Currently in development is an introductory one-day compulsory course that every new SUST user must complete prior to commencing Simulator Training. This course will cover:

- Knobology (or, how to drive an ultrasound machine, and what the different knobs do)
- Very simple ultrasound physics of image generation
- Governance
- Report writing
- How to access the Facility and book slots on line
- Introduction to the relevant Training System that you will be using and getting you started, and where applicable, the setting up of Cloud Accounts
- Introduction to real machines.

Each School will, after evaluating the Simulators themselves, decide what level of expertise and experience should be gained, and over what time period. It is also up to the individual School to decide how that evidence is to be recorded (for instance in the e-portfolio, and how compliance is managed through ARCP.) For example, the School of Radiology has decided that all ST1s will complete the basic transabdominal training packages over the first 6 weeks of their employment. We estimate 20 hours of simulator training time would be required to complete this to the required standard. The School of Radiology has issued Standard Operating Procedures (SOPs) to this effect, which may be viewed on the HEE NE website ([Radiology page](#)).

The Future

The author is of the view that once the systems are up and running for the target staff groups, the remit will need to be extended to include current and future trainers, since HEE NE has a remit to train the trainers. To some extent this may be met by paid-for training courses that Trusts may elect to commission for its senior medical and other staff. This is, however, an extension of the original Mandate, and would be subject to senior HEE NE approval.

Already, the Regional SUST programme has had one offer of an extant TV ScanTrainer to be folded into the regional programme, based at the QEH. This is, however, contingent on cloud-enabling and upgrade monies, which also include the purchase of the transabdominal scanning unit to make the Trainer complete. This is the subject of a separate business case already submitted to HEE NE. The upgraded unit would remain at QEH.

Author

Dr Richard Cooper
Head of the Northern School of Radiology
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