

A year as a military fellow in clinical simulation, teaching and research

Simulation training is widely used in clinical education with the key aims of improving learners' competence and confidence, improving patient safety and reducing errors. Training can be designed to facilitate the development of clinical skills, experience in managing rare situations or critical incidents and increasingly for improving non-technical skills, with manikins ranging from simple part-task trainers to full immersion high fidelity simulators.



Major C Gaunt

ST5, Bristol Medical Simulation Centre (BMSC)

The military have embraced developing technologies in training for deployments and this is likely to become increasingly widespread as operations in Afghanistan draw to a close. As military anaesthetists we saw this as an exciting opportunity to undertake an educational role in developing skills that would be of benefit to both our future NHS and military careers.

Why bother?

Claire Jones: I completed my CT 1 and 2 year and passed my Primary FRCA, however was keen for a new challenge rather than directly continuing with my ST3 year. I have always been very interested in teaching and simulation so when I saw the opportunity offered in Bristol by the Army I was very keen to apply with the Army being supportive of my application. With my husband gaining a senior Orthopaedic Fellowship post in Bristol for the year, the position was ideal for me.

This opportunity involved taking a year out of training between CT2 and ST3. During this time I worked at the BMSC three days per week and as a Clinical Fellow in Anaesthetics at the Bristol Royal Infirmary for approximately two days per week, which included a mixture of solo and training lists. These lists were very varied with good support if necessary and enthusiastic teaching while on training lists. Although not officially on the training programme, I participated in the Severn Deanery Final FRCA teaching programme, which enabled me to pass my FRCA early in my ST3 year once back within my own rotation. I felt that the extra year of anaesthetics has given me added confidence in my clinical abilities, and the teaching projects that I became involved in and the

formal teaching qualification gained (PG Cert. Med. Ed.) were very advantageous for my CV when applying to Specialist Training.

Claire Gaunt: Having grappled with completing compulsory modules and the uphill struggle of passing the Final FRCA, I saw this as an exciting opportunity to develop my interest in education with a view to integrating this into my future military career plans. As a Bristol graduate I was keen to return to this vibrant city and to take advantage of anaesthetic training opportunities in another deanery, notably ophthalmic anaesthesia, thoracic surgery and upper GI surgery for which Bristol is a tertiary referral centre. The military were extremely supportive and we agreed, in conjunction with my own training programme director at St George's School, that I would divide the year into 50% OOPT and 50% OOPE, with a 50% on-call commitment to the acute general rota so that I could optimise my time in the simulation role whilst still progressing with ST5 anaesthetic modules.

A year in the life of a military simulation fellow

Bristol Medical Simulation Centre was the UK's first clinical simulation facility with over 15 years of experience in providing courses for pre-and post-registration professionals and external candidates with its range of paediatric to adult interactive manikins. With strong input from us, the centre is expanding 'in-situ' or 'point of care' training onto the wards where the entire process of care can be recreated with participation of the whole team.

The job specification stated that by the end of the year we would be expected to:



Dr C Jones

ST3, Mersey Deanery

- 1 Operate, teach and facilitate courses using a range of human patient simulators.
- 2 Liaise directly with course organisers to develop and deliver effective simulation-based training courses within budget constraints.
- 3 Manage and train external members of faculty, and in turn develop their teaching and facilitation skills using simulation.

In addition, we would be expected to complete the University of Bristol's Teaching and Learning for Healthcare Professionals (TLHP) Post Graduate Certificate in Medical Education. This involves 6.5 face-to-face teaching days covering five modules with pre-course activities and a 1,500 word essay per module.

Training objectives for the year were subdivided into quarters covering teaching, technical/research and administrative objectives as shown in Table 1.

Claire Jones: While at the BMSC I was involved with many varied projects. These included developing and running a point of care simulation programme within the hospital. This entailed taking manikins into clinical areas and running scenarios which were based on either critical incidents or rare but serious events. I evaluated this as part of a research project which was presented by me at the Association for Simulated Practice in Healthcare (ASPIH) Conference in Oxford. I was asked to speak at the Association for the Study of Medical Education (ASME) Annual Conference in Brighton about my experiences and advice to others about setting up such a programme in their hospitals.

I managed a Train the Trainers course for budding simulation trainers became involved as a faculty member in simulation training for anaesthetists and surgeons of all grades, as well as nursing staff and ran medical student emergency simulation teaching.

I was particularly involved in developing Human Factors courses for

Table 1 Quarterly objectives defined for the military fellow post

| QUARTER | OBJECTIVES |
|---------|---|
| 1st | <p>TEACHING</p> <ul style="list-style-type: none"> ■ Prepare and deliver a lecture using audio visual (AV) media ■ Teach on all the different simulators, e.g. METIman, SimMan ■ Run a simulation debrief <p>TECHNICAL</p> <ul style="list-style-type: none"> ■ Familiarity with Laerdal, METI, Gaumard adult and paediatric simulator functions ■ Able to assemble, run, and pack up each simulator ■ Able to operate the AV system ■ Familiar with pipeline and cylinder gas supplies <p>ADMINISTRATIVE</p> <ul style="list-style-type: none"> ■ Familiarity with BMSC website facility ■ Able to operate BMSC bookings and course feedback systems |
| 2nd | <p>TEACHING</p> <ul style="list-style-type: none"> ■ Design and set up various simulator scenarios and work stations ■ Develop a course programme in collaboration with a subject expert ■ Produce a course manual <p>TECHNICAL/RESEARCH</p> <ul style="list-style-type: none"> ■ Develop online course support material ■ Troubleshoot and facilitate a course as faculty technician ■ Propose a research project <p>ADMINISTRATIVE</p> <ul style="list-style-type: none"> ■ Book appropriate resources for a teaching session ■ Manage a course ■ Manage course feedback |
| 3rd | <p>TEACHING</p> <ul style="list-style-type: none"> ■ Run a 'Train the Trainers' course ■ Lead training of new in-house faculty ■ Run an in-situ course using mobile simulation ■ Develop an entirely new course and present a business case <p>RESEARCH</p> <ul style="list-style-type: none"> ■ Conduct a simulation-based research project <p>ADMINISTRATIVE</p> <ul style="list-style-type: none"> ■ Produce a 'new course' report and archive a resource pack for this course |
| 4th | <p>TEACHING</p> <ul style="list-style-type: none"> ■ Lead training of new in-house faculty ■ Complete TLHP requirements <p>RESEARCH</p> <ul style="list-style-type: none"> ■ Publish/present research project at a major national/international meeting <p>ADMINISTRATIVE</p> <ul style="list-style-type: none"> ■ Present a BMSC financial report at a BMSC steering group meeting ■ Prepare and present a formal report of year's activities and outcomes in post |



Preparation for point of care simulation

dentists and maxillofacial trainees and research related to this was presented at the Society in Europe for Simulation Applied to Medicine (SESAM) in Norway. This led to being invited alongside Dr Gaunt and Sister Sarah Sibley to run a workshop at the British Dental Association Annual Conference 2013, in London, introducing Human Factors skills to dental professionals.

As part of my military commitment I was also involved in helping out on the Military Operational Surgical Training (MOST) Course at the Royal College of Surgeons, which has a considerable simulation component to it. This is a Tri-Service course run by the military for medical personnel prior to deploying to Afghanistan.

Claire Gaunt: I have been integral in the preparation, facilitation, debriefing and evaluation of numerous courses including Train the Trainers, Paediatric Key Competencies, Transport, F2 Human Factors, team training and dental student medical training. These skills have been applied in a military setting on the MOST course and Tri-Service Anaesthetic Apparatus (TSAA) course. Notably, I have continued with Dr Jones' point of care work and so far this year we have been able to increase participation in these established areas. We have expanded to include new

areas such as gynaecology wards and demonstrated through participant feedback that confidence levels and team working are improved by mobile simulation. This will be presented at the Society of Anaesthetists of the South Western Region (SASWR) Spring Meeting in Frankfurt. The simulation centre will this year be attending the SESAM conference in Paris, where I will be faculty in a pre-course workshop and presenting new material.

Military relevance

The military place a strong emphasis on maintaining high standards in training and, subsequent to recent conflicts in Iraq and Afghanistan, had led the way in clinical management of major trauma and non-technical skills in trauma teams. The fellowship has direct applications both to current training and future progress. Simulation is embedded in pre-deployment training: from front line combat medics using real life amputees, whole field hospital exercises, TSAA courses to the MOST course aimed at Role 4 theatre teams. I have been involved with many of these and hope to remain so as my military career progresses. As operations in Afghanistan draw to a close, there will always be other conflicts arising; therefore it is essential to maintain competency, strong team

working dynamics and familiarity with equipment and procedures. Education and simulation training enable us to evolve, constantly adapting to new injury patterns and working environments.

Challenges and changes!

Claire Jones: The year I spent at the BMSC provided many different challenges to those faced by full-time clinical medicine. I did initially find being in charge of my own rota a challenge and while excited by the freedom it gave me I had to be much more self-motivated to meet deadlines and achieve my own goals. However, I rapidly became accustomed to this freedom, and most difficult of all over the whole period was the change back to the structure of ST3 where I was no longer in that position of being in charge of my own rota.

Throughout the whole year I was heavily involved with many multidisciplinary courses. The courses I found most daunting involved teaching senior colleagues of different specialties that were perhaps not so accustomed to simulated practice as we are in anaesthetics. Although I have considerable enthusiasm for simulation, some of those on our courses initially did not and on several occasions I have felt more tired having been teaching enthusiastically all day than I have felt after a 12-hour shift on ITU.

The TLHP course fitted in with the teaching sessions I was running at the BMSC and having now passed my PG Cert I am very glad that I took the time to complete this; however, I personally found this a challenging process. Strangely though, I am now considering completing the Diploma in Medical Education which is also run by the University of Bristol... and am trying to encourage Dr Gaunt to do the same!

I realise that many of the skills I have learned on this year out, particularly the management, organisational and public speaking skills, are very transferable and will help me with my future career. I think that completing a year of extra training between CT2 and ST3 is a year



National Dental Conference, Excel Centre, London

very well spent especially if it helps you gain extra skills and competencies which can be used during the rest of your specialist training years.

Claire Gaunt: After the highly structured format of ST3–4 training, although liberating, I also found it strange to be much more self-motivating in prioritising and organising training for myself and others. It was challenging striking a balance between doing enough anaesthetic training without compromising time spent on simulation opportunities, and this does mean sacrificing off-days before or after night shifts. Initially, I was unsure what to be occupying myself with when not involved as course faculty, but I soon realised that there was scenario planning, course development/evaluation or point of care simulation with which to be involved. Like Dr Jones, I also found it can be daunting delivering teaching or debriefing to multidisciplinary professionals who may have much greater experience or expertise than yourself, or to the uncooperative students who are reluctant to engage (such as medical students on a Friday afternoon!), but I am continually striving to improve my own skills in these areas.

The future

Bristol is keen to maintain this military fellowship post and is looking to recruit at least one Fellow each year. The post is suitable for anyone employed by the MoD with an interest in education working in an acute specialty. We would both highly recommend this position to military clinicians, and for non-military clinicians there are numerous other teaching and simulation fellowship posts available. You will gain confidence, skills and knowledge that will be of benefit to whatever direction your future career takes.

Acknowledgement

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