Military Anaesthesia in contingencies: what skill sets are required and how will we prepare our trainees?

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ABSTRACT
The Defence Medical Services are now in an established period of contingency operations. In 2008, the Royal College of Anaesthetists approved a Military Anaesthesia Higher Training Module which could be easily achieved by deploying to the field hospital in Camp Bastion, Afghanistan, for two months under the supervision of a consultant anaesthetist. This opportunity no longer exists but the need to assure quality training and to demonstrate military skill sets is still essential. This article discusses the revised Military Higher Module and how it will be implemented in the future either during deployment or during times of peace.

INTRODUCTION
The Defence Medical Services (DMS) are currently involved in a busy period of contingency operations. The term contingency is defined in the Oxford Dictionary as “a future event or circumstance which is possible but cannot be predicted with certainty” with a more military definition being “planning, reorganising and training so that we are ready to deploy wherever and whenever—to react across the full spectrum of operations from peace support including humanitarian aid to warfighting”.1 These deployments are significantly different from the previous long-standing engagements on Op TELIC (Iraq) and Op HERRICK (Afghanistan), where for a period of over 10 years the injuries were caused by high-energy blasts from improvised explosive devices and high energy ballistics. A six-week tour during the busiest periods in Afghanistan provided equivalent exposure to almost three years of UK trauma experience in penetrating torso trauma alone.2

Future contingency operations will offer a number of key challenges to the deploying Defence cadre anaesthetist. Working in the future operating environment (FOE)3 will require moving away from a ‘Bastion Mindset’ (working in the established Role 3 trauma hospital in Afghanistan) and medical paradigms.4 Defence cadre anaesthetists need to develop new mental models in order to prepare for managing FOE unknown unknowns, working in resource-limited and dispersed areas of operations with logistical challenges for medical resupply, lack of airframes for pre-hospital emergency medicine (PHEM) and longer evacuation timelines, with stretched lines of communications.

Consultants belonging to the Department of Military Anaesthesia, Pain and Critical Care (DMAPCC) when not deployed are now embedded into the NHS working in either one of the Defence Medical Group Units based in Plymouth, Portsmouth, Middlesbrough and Frimley Park, the Royal Centre for Defence Medicine (Birmingham) or in a singleton attachment to an NHS hospital. Even if working in a major trauma centre (MTC), the majority of serious trauma in the UK is as a result of motor vehicle collision5 and so it is essential to look for other ways to prepare for a deployment which could potentially be in a remote or austere environment. Recent reviews have considered military surgical training6 and the skill sets required to deploy as a military surgeon.2 This article considers the process and a package of training to demonstrate currency as a Defence anaesthetist for contingency operations and how our trainees will achieve this in the future.

REVALIDATION
On 3 December 2012, the General Medical Council launched the appraisal and revalidation process. Essentially all consultants are now required to actively engage in an annual appraisal and providing that this is deemed satisfactory then every five years they will be formally revalidated. DMAPCC consultants are encouraged to undertake appraisal in their own NHS hospital; however, as DMS personnel, a proportion of their job plan will be allocated to Military Protected Time (MPT), and so the appraisee must also demonstrate evidence of military competence as would be required for other areas such as private practice, education and research. The appraisal process draws on evidence from many domains including participation in clinical governance, research, education and training, job plan review, logbook review, reflection and continuous professional development (CPD). To assist in the latter, the Royal College of Anaesthetists has produced a CPD matrix, the latest version in 2013,7 consisting of three levels: level 1 (core knowledge areas for anaesthesia, including basic science and medicolegal issues), level 2 (knowledge and skills that are relevant to an individual doctor’s ‘whole’ practice) and level 3 (knowledge and skills required by those whose routine clinical practice includes one or more special interest areas in their routine clinical practice). Following a review by the DMAPCC Special Interest Group in Training,8 a Military Anaesthesia Level 3 Matrix has been published9 with nine separate topic headings (Table 1).

TRAINING COURSES
In order to achieve Level 3 CPD over the five-year revalidation cycle, there are several current courses that have been adapted for the contingency environment (Table 2).

CORE COURSES
Military Operational Surgical Training Course
The Military Operational Surgical Training (MOST) Course10 was developed in 2009 to prepare the multidisciplinary team for deployment to Camp Bastion in Afghanistan. It initially began with a ‘live link up’ to the current team in the Role 3 Trauma Hospital to give insight as to the current tempo and the course was subsequently altered based on experience and new evidence. MOST has now been adapted for the contingency environment and is one week in duration at the Royal College of Surgeons in London. The whole multidisciplinary trauma team attend and undertake lectures, small group workshops, fully immersive simulation scenarios and cadaveric workshops. Highlights of the programme are listed below.

Equipment familiarisation
Workshops focus on the equipment required for advanced vascular access,11 Belmont Rapid Infuser (Belmont Rapid Infuser, Belmont Instrument, Boston, USA), difficult airway equipment, thromboelastography (RoTEM, Pentapharm, Munich, Germany) and the current anaesthetic

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casualty transfer

There is an introduction to PHEM outlining how patients would be transported to the contingency facility and the treatment that they could potentially receive.22 23 There is also a discussion on the role of the Critical Care Air Support Team (CCAST) with an overview of their capabilities and preparing to package a patient for a CCAST transfer.24

Sub-specialty-specific workshops

A. Difficult airway: Guidelines produced by the UK Difficult Airway Society provide advice on the management of the unanticipated difficult airway.25 The MOST course focuses on the management of the anticipated difficult airway in the deployed environment26 and the importance of human factors.27 There is a joint cadaveric session with the trauma surgeons to practice both emergency cricothyroid airway and a more controlled tracheostomy. Recently, the available deployed airway equipment has been rationalised and this is discussed.28

B. Burns: The workshop discusses how to conduct an anaesthetic for a casualty with burns in the deployed environment.

C. Paediatrics: The workshop discusses the management of paediatric casualties, particularly focusing on massive transfusion equipment,29 previous operational experience30 and the management of a child on the critical care at Role 3.31 This is supplemented with a fully immersive simulation scenario.

D. Cardiothoracic anaesthesia: A joint workshop with the trauma surgeons who review the current management of cardiothoracic injuries including the management of traumatic cardiac arrest.33 A cadaveric workshop allows rehearsal of where personnel stand and key moments during procedures, particular a thoracotomy. This is especially tailored towards a contingency environment with limited blood and blood products.

E. Pain management: An overview is given on the current acute pain guidelines34 and is supplemented by a half-day workshop on regional anaesthesia in the deployed environment.36

F. Critical care: The Deployed Critical Care Guidelines for Operations (Hutchings S, currently unpublished) are discussed and there is a focus on the management of blast lung injury37 and traumatic brain injury38. Depending on the contingency unit, candidates the opportunity to familiarise themselves with Defence anaesthesia equipment with consolidation of this knowledge occurring later in the course with fully immersive simulation scenarios.

Table 1: The Military Anaesthesia Level 3 CPD Matrix and designated CPD Code 3A14

<table>
<thead>
<tr>
<th>General</th>
<th>Advanced leadership and crew resource management</th>
<th>Military clinical governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prehospital</td>
<td>Military prehospital anaesthesia</td>
<td>Prehospital resuscitation options</td>
</tr>
<tr>
<td>Resuscitation</td>
<td>Military massive haemorrhage protocol</td>
<td>Fluid management for major burns with trauma</td>
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<tr>
<td></td>
<td>Intraosseous devices and control of catastrophic haemorrhage</td>
<td>Near patient coagulation testing</td>
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<tr>
<td></td>
<td>Concepts of vascular access and rapid infusion devices</td>
<td>Ketamine for Military Anaesthesia</td>
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<tr>
<td></td>
<td>Management of military airway injuries</td>
<td>Brosetow bags and paediatric skills relevant to resuscitation</td>
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<td></td>
<td>Management of pelvic injuries</td>
<td>Overview of initial management of pelvic injuries</td>
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<td>Military Anaesthesia</td>
<td>Anaesthesia for blast and ballistic injuries to the chest</td>
<td>Anaesthesia for blast and ballistic injuries to the head and neck</td>
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<tr>
<td></td>
<td>Anaesthesia for blast and ballistic injuries to the abdomen</td>
<td>Deployed anaesthetic apparatus</td>
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<tr>
<td></td>
<td>Paediatric adaptations of deployed apparatus</td>
<td>Deployed theatre and transfer ventilators</td>
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<tr>
<td></td>
<td>Deployed indirect laryngoscopy devices</td>
<td>Anaesthesia for severe burns</td>
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<tr>
<td></td>
<td>Anaesthesia for head injuries in the military setting</td>
<td>Overview of anaesthetic management at Role 4</td>
</tr>
<tr>
<td>Regional anaesthesia</td>
<td>Regional anaesthesia for military injuries</td>
<td>Deployed regional anaesthesia equipment including CPNB catheters</td>
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<td>DMS regional anaesthesia protocols and documentation</td>
<td>Working knowledge of sono-anatomy</td>
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<td>Use of regional blocks during transfer</td>
<td>Role 4 anaesthesia protocols</td>
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<tr>
<td>Field pain management</td>
<td>Field hospital analgesia ladder</td>
<td>Early prophylaxis of neuropathic pain</td>
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<td></td>
<td>Field PCA equipment</td>
<td>Analgesia for aeromedical evacuation</td>
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<tr>
<td>Critical care</td>
<td>Preparation of patients for CCAST evacuation</td>
<td>Role 4 analgesia protocols</td>
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<tr>
<td></td>
<td>Deployable specialised medical assets</td>
<td>Pain management during rehabilitation</td>
</tr>
<tr>
<td></td>
<td>Management of blast lung</td>
<td>Specific deployed ICM equipment</td>
</tr>
<tr>
<td>Training</td>
<td>Awareness of the Royal College of Anaesthetists Military Anaesthesia Higher Training Module</td>
<td>Preparation of patients for CCAST evacuation</td>
</tr>
<tr>
<td></td>
<td>Military appraisal process during deployment</td>
<td>Deployable specialised medical assets</td>
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<td></td>
<td>Risks of PTSD and decompression processes</td>
<td>Management of blast lung</td>
</tr>
<tr>
<td>Management</td>
<td>Familiarity with DMS structure, hierarchy and responsibilities</td>
<td>Specific deployed ICM equipment</td>
</tr>
<tr>
<td></td>
<td>Enduring DMS audit and data collection process, aeromedical evacuation chain and movement processes</td>
<td>Role of the Deployed Medical Director</td>
</tr>
</tbody>
</table>

CCAST, critical care air support team; CPD, continuous professional development; CPNB, continuous peripheral neural blockade; DMS, Defence Medical Service; ICM, intensive care medicine; PCA, patient-controlled analgesia; PTSD, post-traumatic stress disorder.

milk machines in service: the Anaesthetic Machine Light (Triservice Anaesthetic Apparatus) and the Anaesthetic Machine Heavy (Drager Fabius Tiro (Drager, Telford, Panama). This allows candidates the opportunity to familiarise themselves with Defence anaesthesia equipment with consolidation of this knowledge occurring later in the course with fully immersive simulation scenarios.

Damage control resuscitation

Using the principles of damage control resuscitation (DCR) that were developed during Op TELIC and Op HERRICK, small group workshops and lectures discuss how this will be conducted in the contingency environment with limited resources and uncertain supply chain. This must still occur within the guidance of the Surgeon General’s Policy Letter on Massive Transfusion17 and the Clinical Guidelines for Operations.18 Discussions also cover modern concepts of complex trauma management including acute coagulopathy of trauma19 20 and the use of near point-of-care testing (RoTEM) to provide the ability to conduct an individually tailored haemostatic resuscitation.19 These concepts are also consolidated during whole trauma team fully immersive simulation scenarios.
there is always the possibility for a 48-hour holding period for any casualty, particularly in the maritime environment and so this section serves as a good revision for those who do not regularly have critical care in their job plan.

G. Imaging: An overview is given on the imaging options that are available in the deployed environment with worked examples.

Focused workshops and discussions
A. Mass casualty: A focused discussion is conducted on the Military Major Incident Medical Management and Support Course, with reference to contingency operations.

B. Role 4 (Queen Elizabeth Hospital, Birmingham): This is where our servicemen and women will be ultimately transferred to and there are discussions on how Role 4 operates and the specifics of critical care at Role 4 including the Joint Theatre Clinical Case Conference (JTCCC).

C. Ethics in contingencies: Several case study examples are used to demonstrate difficult ethical dilemmas in contingencies and a specific ethical tool is introduced for the deployed environment. The role of the Deployed Medical Director or Clinical Director for smaller groups is discussed.

Fully immersive simulation scenarios
Using a wireless mannequin, there is the opportunity to rehearse in the teams that are deploying together in fully immersive scenarios. As far as possible a trauma bay is recreated with deployed military equipment that would be available and a background contingency operation story is briefed. The scenario setup allows a manipulation of timelines to evacuation and so drive the scenario to promote discussions around limited resources, human factors and decision-making. Following each scenario there is an immediate video-assisted debrief focusing on technical and non-technical skills.

Defence Anaesthesia Simulation Course
The Defence Anaesthesia Simulation Course is currently a two-day course held at the Centre for Simulation and Patient Safety based at Aintree Hospital in Liverpool, a regional high fidelity simulation centre. The course is designed for anaesthetists and operating department practitioners and allows demonstration of competence with many of the key items of military anaesthetic equipment. For many years, the Triservice Anaesthetic Apparatus (Anaesthetic Machine Light) has been the anaesthetic machine of choice for entry operations or as a backup to the Anaesthetic Machine Heavy (currently the Drager Fabrio Tiro, Telford, Panama). Candidates undertake realistic scenarios in the trauma bay and a field operating theatre setting; common problems with the equipment are explored and military anaesthetic techniques are discussed, including use with paediatric casualties. The use of video allows an immediate debrief with an additional focus on human factors in contingencies.

Military APLS Course
This is a one-day addition to the APLS Course and is also currently held at the Centre for Simulation and Patient Safety in Liverpool. Lectures, workshops and fully immersive simulation scenarios explore key challenges faced when caring for children in an operational environment. Scenarios allow familiarisation and use of the paediatric equipment module and specific adaptations of equipment required to treat children, such as administering a massive transfusion. Difficult cases from previous operational deployments are raised to promote reflection and ethical discussions.

ADDITIONAL COURSES
Medical Emergency Response Team Course
This course is held at the Tactical Medical Wing at RAF BRIZE NORTON and by using a combination of lectures, workshops, simulations and actual flying serials, candidates focus on in-flight DCR. Enhanced interventions include prehospital rapid sequence induction of anaesthesia, blood transfusion, the management of traumatic cardiac arrest and thoracotomy. Scenarios also focus on additional medical problems that could occur in the contingency environment.

Chemical Biological Radiation and Nuclear Course
Held at Winterborne Gunner in Salisbury, UK, this week-long course, using lectures, workshops and fully immersive scenarios, provides an in-depth look at the Chemical Biological Radiation and Nuclear Clinical Course
Location: Winterborne Gunner, Salisbury.

Targeted Resuscitation using Echocardiography
Location: Kings College Hospital, London.

Medical Emergency Response Team Course
Location: Tactical Medical Wing, RAF Brize NORTON.

<table>
<thead>
<tr>
<th>Course</th>
<th>Royal College of Anaesthetists CPD Matrix Codes</th>
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<tbody>
<tr>
<td>Core courses</td>
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<td>Military Operational Surgical Training Course</td>
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<td>Location: Centre for Simulation and Patient Safety, Health Education North West, Liverpool.</td>
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<td>Location: Centre for Simulation and Patient Safety, Health Education North West, Liverpool</td>
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<tr>
<td>Additional courses</td>
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<tr>
<td>Chemical, Biological, Radiation, Nuclear Clinical Course</td>
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<td>Location: Winterborne Gunner, Salisbury.</td>
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<td>3A10, 3A11, 3A14</td>
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</tbody>
</table>
Box 1 The new Higher Military Module of the Royal College of Anaesthetists

Knowledge

Prehospital care
- Explains military triage assessment and categories
- Explains military major incident management
- Recalls physiological hazards of transporting patients by air
- Recalls aircraft features and aircrew procedures likely to impact on patient safety
- Describes Medical Emergency Response Team equipment
- Recalls casualty reporting systems
- Describes prehospital resuscitation options including principles of damage control resuscitation
- Describes military prehospital analgesia

In-hospital resuscitation and field anaesthetics
- Recalls relevant trauma scoring systems and military audit projects
- Explains the Surgeon General’s current transfusion policy
- Recalls the logistics of medical resupply and the maintenance of appropriate storage conditions
- Recalls indications for and the safe use of emergency blood donor panels
- Describes field surgical team equipment, including tri-service anaesthetic apparatus (with paediatric adaptions) and operating tables, knowledge of rapid infusion devices, transport ventilators, Broselow bag, regional anaesthesia equipment and PCA
- Explains field stabilisation and clinical waste disposal methods
- Explains understanding of ketamine
- Explains current Military Anaesthesia concepts on dealing with a difficult airway in a trauma setting
- Recalls the principles of anaesthetics for damage control surgery
- Describes the use of near point coagulation testing RoTEM and its use in damage control resuscitation
- Management of the traumatic pelvis
- Describes current concepts in the management of traumatic cardiac arrest
- Describes Military Anaesthesia for severe burns
- Describes Military Anaesthesia for head injuries
- Describes concepts of blast and ballistic injury in terms of Military Anaesthesia
- Recalls the current methods for management of acute pain in the field including field hospital analgesia ladder, early prophylaxis of neuropathic pain

Critical care
- Explains the capabilities and limitations of field critical care
- Recalls preparation of patients for handover to an aeromedical transfer team
- Explains the role of the AELO in the evacuation process
- Recalls specific deployable medical assets such as field haemofiltration teams
- Discusses the management of blast lung
- Knowledge of CBRN in the context of anaesthesia and damage control resuscitation
- Explains the repatriation process for KIA including appropriate liaison with SIB and UK coroners

Battle casualty rehabilitation
- Recalls the casualty reception process in the UK
- Explains the rehabilitation process
- Recalls the chronic pain management options for battle casualties

Deployed military hospital management
- Describes a working knowledge of Joint Warfare Publication 4-03—Medical Support to Operations
- Recalls Clinical Guidelines for Operations
- Explains the structure and responsibilities of the Defence Medical Services, Joint Medical Command, Surgeon General’s Department, Land, Fleet and Air Commands
- Recalls the procurement process for new medical equipment
- Explains the role and responsibilities of a Field Hospital Clinical Director and the Commander Medical
- Explains the role of host nation, friendly force medical facilities and non-government organisations
- Explains the role of UK Role 2 (light manoeuvre) and sea-based medical facilities
- Explains the operational medical entitlement matrix
- Describes medical communication systems
- Recalls the field hospital major incident plan
- Overview of key issues around contingency operations, decisions when resources are limited and the key ethical decisions required by the Deployed Clinical Director
- Describes military clinical governance structure
Nuclear course aspects required for contingency operations.

**Targeted Resuscitation Using Echocardiography Course**
The Targeted Resuscitation Using Echocardiography Course is an intensive one-day practical course for clinicians with some basic echocardiogram ability, held at Kings College Hospital in London. It focuses on using transthoracic echocardiogram for volume resuscitation in critically ill patients and involves a high fidelity echo simulator and practical echo in a clinical environment on the critical care unit.

**EXERCISES**
It is important that the medical planners of contingency exercises are now proactive and look to map the clinical aspects of ‘in-situ’ simulation scenarios to the Level 3 CPD Matrix.5 Previously exercises have focused on the validation of deployed units, looking at the processes of casualty movements, paperwork and communication with external organisations. To not include clinical teaching into contingency operations will lead to wasted opportunities and prevent clinicians the chance to earn CPD points towards their appraisal.

**JOB PLANNING**
For the past year, the DMAPCC have been proactive in annually reviewing the job plans of regular consultant anaesthetists, led by the Defence Consultant Adviser (DCA) aiming to ensure that clinical work in base NHS hospitals is sufficient to maintain clinical currency to deploy. There are four work strands available to clinical consultants: clinical anaesthesia, critical care, academia and PHEM of which an individual should only be undertaking a maximum of two within a 10-programmed activity (four hours) job plan. Placing consultant anaesthetists in one of the 26 MTCs or Collaboratives50 in the NHS will allow the trauma aspect of their currency to be maintained and there are partnerships with universities and Air Ambulance Trusts to allow currency in academia and PHEM.

**TRAINING AS A MILITARY ANAESTHETIST**
During the early stages of anaesthetic training, all core trainees (years 1 and 2) must complete basic training modules51 and pass the Primary Fellowship of the Royal College of Anaesthetists (FRCA) exam; following this, trainees then complete intermediate training (specialty training years 3 and 4).52 Achieving the award of FRCA is compulsory before entering higher and advanced training (specialty training years 5–7).

Previously, a higher military module was undertaken by specialty trainees 5–753 and most of this was completed under supervision during an eight-week deployment to Afghanistan as part of the trauma team in the Role 3 hospital at Camp Bastion.54 The stated learning objectives of the higher military module were to equip the trainee with the additional knowledge and skills required to perform appropriate prehospital care, resuscitation, field anaesthetics and critical care within military environments and to gain an understanding of the management of medical support to military operations. Previously, such placements in Afghanistan were supported by the Royal College of Anaesthetists as a ‘out of program training’ and thus counted toward the Certificate of Completion of Training (CCT).
With a move to contingency operations, a review of the higher training module has now been completed and approved by the General Medical Council. The new module has been designed to be completed within the UK and does not require an operational deployment, although one would be desirable. The five key sections of the module still include prehospital care, in-hospital resuscitation and field anaesthetics, critical care, battle casualty rehabilitation and deployed hospital medical management with sections for knowledge, skills and attributes and behaviours (Box 1). Evidence will need to be collected in the trainee’s e-portfolio using the assessment tools of Anaesthesia Clinical Evaluation Exercise (A-CEX), Case Based Discussion (CBD), Direct Observation of Procedural Skills (DOPS), Intensive Care Medicine Evaluation Exercise (I-CEX), Multi-source Feedback (MSF) and Simulation.

To limit disruption to other training, a three-month package has been proposed in a MTC under the supervision of a DMAPCC anaesthetist (Table 3). In addition to attending current military courses it will also permit the shadowing of the trauma team leader and bespoke visits that include:

- Royal Centre for Defence Medicine for awareness of the Role 4 infrastructure and to allow attendance at a JTCCC.

- The Defence Medical Rehabilitation Centre, Headley Court, where UK servicemen and women currently undertake rehabilitation and the opportunity to attend a chronic pain clinic.

- An Air Ambulance Trust, to complete a day shadowing the helicopter emergency medical service crew on call and attend a clinical governance meeting.

- The DMAPCC Special Interest Group in Equipment meeting as a guest to experience how DMAPCC anaesthesia equipment is reviewed and procured.

- The Defence Anaesthesia Specialty Board and shadow the DCA who is Chair of the meeting.

There is a close relationship between the DMAPCC and the Royal College of Anaesthetists. The DCA is the Military Anaesthesia Regional Advisor but delegates responsibilities to two Deputy Regional Advisers (CT1-2 and ST3-4 and ST5-7) who attend trainees’ Annual Review of Competence Progression. There is also an annual trainees review panel to consider placements and provide a formal mechanism to support trainees in difficulty.

The new Higher Military Anaesthesia Module will now be compulsory for trainees starting as ST5 from 1 August 2016 and will be required to be completed to be successful at the Armed Forces Consultant Advisory Board. Trainees who are ST6-7 at the moment will be required to show equivalence. The gold standard to complete the module would be to deploy on a contingency operation under supervision and this is currently being explored. Trainees should also be encouraged to attend an exercise during their training as many work-based assessments could be completed during this time.

### REFERENCES


### Table 3 Example of the Military Higher Module available at major trauma centre under the supervision of a Military Consultant

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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<tbody>
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<td>1</td>
<td>Induction</td>
<td>On-call days anaesthesia</td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Military Operational Surgical Training Course</td>
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<td>3</td>
<td>On-call shadow trauma team leader</td>
<td>On-call nights anaesthesia</td>
<td>Headley Court visit</td>
<td>RCDM visit</td>
<td>Equipment group visit</td>
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<td></td>
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</tr>
<tr>
<td>5</td>
<td>MERT COURSE</td>
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<td>Military APLS</td>
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<td>7</td>
<td>On-call shadow trauma team leader</td>
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<td>Clinical Chemical Nuclear Biological and Radiation Course</td>
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MERT, Military Emergency Response Team; RCDM, Royal Centre for Defence Medicine.

### CONCLUSION

With a move to contingency operations, the DMAPCC has been proactive in providing a mechanism for its consultants to demonstrate ongoing CPD for their annual appraisal via the Level 3 Matrix. Current military courses have been redesigned and adapted based on previous experiences, lessons learnt and current best evidence in order to assist Defence anaesthetists to be well prepared for the contingency environment. A new Higher Military Module has been written to allow DMAPCC trainees the opportunity to achieve the competencies to enable CCT as a military consultant in times of peace. A future role of the DMAPCC Special Interest Group in Education will be to review the Level 3 CPD module and military courses aligned to support future operational tempo.

### Contributors

This article is based on the revision of the Military Higher Module and a review of the delivery of training for Defence Anaesthesia. All the authors discussed the contents of the paper at a meeting on 26 August 2016. SJM had the idea for writing the paper and wrote the first draft which was revised by all the authors subsequently.

### Competing interests

None declared.

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