

Postgraduate education for health professionals working in Defence

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In 2007-2008, Defence Health Service (DHS) personnel and the growing band of contracted health providers cared for 53,140 permanent Australian Defence Force (ADF) members and 24,885 reserve ADF members¹, not including the initial care of families accompanying members deployed abroad and other eligible civilians. Health providers in the Defence setting include medical assistants with various levels of advanced training as well as health professionals, predominantly medical practitioners and nurses, but also some other health disciplines, such as pharmacists, physiotherapists and health administrators. DHS personnel and contracted health providers require various levels of training to operate in different postings and sites within Australia and overseas. This training is usually done through a combination of in-house courses and through various programs of external educational institutions.

While some countries enjoy the benefits of a dedicated university for military health, such as the Uniformed Services University of the Health Sciences in the United States², many countries now have dedicated military and/or veterans' health academic programs in partnership with existing university structures. The Centre for Military and Veterans' Health (CMVH) with various University nodes across Australia is a good example of this (see Table 1). The CMVH has a dedicated Master of Public Health (in Military Health) as part of its offerings.

University	Website*
University of Queensland	http://www.uq.edu.au/cmvh/
University of Adelaide	http://health.adelaide.edu.au/school_phcp/cmvh/
Charles Darwin University	http://www.cdu.edu.au/gshp/cmvh/

* All URLs accessed 25 July 2009

Table 1. Australian Nodes of the Centre for Military and Veterans' Health

These initiatives are also a good illustration of the development of cross-service training and education programs, where military health programs will most likely continue to invest. In addition to programs offered by the CMVH, there remains a network of universities and professional organisations that will

continue to provide the bulk of postgraduate training of health professionals working within Defence.

Future ADF and civilian health education and training will necessarily be closely tied to the relevance they have to core Defence business and deployments. Training and experience of ADF health personnel in some of the key specialties with direct relevance to combat casualty care, such as emergency medicine, general surgery, orthopaedics, anaesthesiology and intensive care, will continue to be required³⁻⁵. Other specialties such as tropical medicine⁶, public health, aeromedical retrieval, underwater medicine, medical administration and psychiatry will also continue to find relevance in military deployments, whether for combat or humanitarian purposes. For humanitarian missions, the range of specialty areas required expands tremendously as well as involving some level of disaster health management training^{3-5,7}. Pre-deployment specialty education and training will continue to focus on preventive health, occupational health, injury prevention and chronic disease prevention and management. Post-deployment, there will be a continuing need for expertise in areas such post-deployment health, mental health and rehabilitation. Civilian specialists continue to contribute greatly to pre- and post-deployment health, but are playing an increasing role in contracted health services abroad in military areas of operations. Indeed, there remains a heavy reliance on civilian specialists in their reserve capacity for deployments abroad.

Health operations are increasingly being led by generalist military officers, both of medical staff streams (such as general service officers in the Royal Australian Army Medical Corps) and logistic streams. There is little to prepare these officers for the challenges of true health management, particularly in the areas of clinical governance, health care ethics and law, health economics and indeed, the mystical medical hierarchy (which transcends military rank structures). Many such officers undertake postgraduate training in health management and this is to be commended. However, until such training is given advanced standing or at least some recognition towards the Australian Command and Staff College qualification, health professional officers will continue to tread the usual path and forsake the optional paths. Conversely, it is essential that health

professionals have a broader understanding of the strategic environment in which they will operate, in order to contribute effectively to the military centre of gravity. Such an imperative is difficult to address within the current suite of courses that health professionals (particularly reserve specialists) attend, and might be addressed by continuing professional development, perhaps through an online discussion forum under the auspices of either a military or a tertiary educational institution.

The teaching-learning and training environment of today is markedly different from that of 15-20 years ago. The delivery of military programs today enjoys the benefits of web-based and distance learning⁸, as well as block mode teaching, where required. This is especially useful for uniformed personnel when posted around Australia and overseas. The availability of short courses, such as the Early Management of Severe Trauma (EMST) course, as well as improved technology for producing simulations, has enhanced many facets of military and military medical training, which could not simply be obtained from direct patient care⁹. In addition to educational simulations not involving computer technology, such as table top disaster exercises and more complex systems, such as the Emergo Train System,^{10, 11} there are various categories of medical simulation using technology, which include personal computer-based multimedia, digital mannequins, virtual workbenches and total immersion virtual reality,¹² providing for a relatively risk-free teaching-learning environment for a spectrum of medical skills training ranging from first aid through to advanced trauma surgery.¹² As well-summarised by De Lorenzo, "An optimal training

environment benefits from all strategies used, in combination or separately".⁹ (p824)

Aside from the whiz-bang gadgetry outlined above, there is also a role for more cognitive simulation. The complexity of ethical challenges for the military physician has been well described recently with the challenges of Abu Ghraib and Guantanamo Bay.¹³⁻¹⁵ Training for military medical professionals must include the opportunity to discuss (even, 'war-game') how to approach such challenges in a non-deployed environment, a kind of pre-inoculation where mistakes are not fatal (much like a range shoot on a simulation system). The university sector, which encourages debate and discussion, favours this over the hierarchical military environment.

In recent years, it has been recognised that training opportunities in Defence must be closely aligned to critical civilian milestones at postgraduate level, in addition to providing operational military and military medical training. This is overtly demonstrated by the implementation of the Medical Officer Career and Salary Structure,¹⁶ where Competency Levels are attained by uniformed medical officers and assessed by a Medical Officer Professional Career Development Committee against the established criteria (see Table 2). None-the-less, the seniority and posting structure within Defence, as well as perceived differences in comparative professional and other rewards, has been restrictive in retaining both uniformed and civilian health professionals. It is important that continuing efforts are made to ensure that clinical roles can be preserved for senior health professionals in Defence in addition to administrative postings, especially for uniformed personnel.¹

Competency Level (CL)	Operational Capacity	Examples of Training Required
CL1	Directly Supervised	Residency training
CL2	Remotely supervised/ deployable	Military training; military medical training, medical training (incl. EMST); additional training
CL3	Unsupervised/Supervisor, Primary Health Care	Military training; military medical training, medical training (e.g. specialties such as general practice or rural and remote medicine)
CL4	Unsupervised/Supervisor, Force Protection	Military training; military medical training, medical training (e.g. normally specialty training in areas such as occupational medicine, public health medicine, tropical medicine, medical administration, sports medicine)
CL5	Unsupervised/Supervisor, Procedural Specialist	Military training; military medical training, medical training (not clear, but possibly procedural specialties, e.g. surgery, emergency medicine, anaesthetics and related specialties)

Table 2. Competency Levels, Operational Capability and Examples of Training Required¹¹

Improved linkages between civil and military training of health professionals also has much to offer in terms of health services support for both sectors. Two strong illustrations of this are disaster response/humanitarian aid and trauma care/ aeromedical retrieval.

Humanitarian issues are likely to be a component in the early phases of any operation.¹⁸ The services needed during humanitarian intervention are different, with a primary care focus consisting primarily of women and children,^{18, 21} rather than battlefield care. From the civilian perspective military models are instructive examples of strong pre-planning. They have clearly defined mission statements, roles and objectives and a strong chain of command,²² coupled with measures of effectiveness and end-points.²⁰ However, while services may seem complementary the civilian-military interface and the promotion of closer ties between civilian and military units need further development.^{23, 27} Training can be seen as part of the solution. While training together may not produce agreement, it can help produce mutual understanding.¹⁸

Military medical personnel also have little peacetime opportunity to practice trauma skills as military medical centres do not routinely receive trauma patients. In contrast, civilian trauma centre staff care for injured trauma patients regularly.^{28, 29} A collaborative approach to training has the possibility to enhance skill sets of military personnel while

also providing a much needed infusion of manpower to help care for injured patients in civilian trauma centres.²⁸

There are also multiple additional benefits to a collaborative approach including increased and reciprocal recognition of training in both sectors, avoiding duplication of training services between sectors, but perhaps most importantly allowing the opportunity for services to train together promoting cultural awareness and cross fertilisation of ideas. The building of bridges and networks between civil and military health providers may act not just as an opportunity to provide a formal career structure, but also to retain staff in which a training investment has been made and enhancing recruitment to specialist health reserves.

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