

The CMVH Introduction to Military Medicine Course - Gestation, delivery and postnatal period

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Abstract

Tri-service post-graduate vocational education in Medicine has not previously been available in the Australian Defence Force (ADF). *Introduction to Military Medicine* (IMM), originally designed as an introduction to the practice of medicine in the military, ran for the first time in 2008 as an on-line postgraduate course in the Master of Public Health (Defence) program provided by the Centre for Military and Veterans Health.

This paper recommends that the course should be a core component of the MPH (Defence) Program for Medical Officers, rather than an elective; however, greater opportunities to develop IMM exist in blending it into existing programs to train new military Medical Officers to a deployable standard (Competency Level 2). *Introduction to Military Medicine* also supports military clinical supervisors to apprentice new Medical Officers facilitating their passage through civilian vocational training towards becoming competent and confident military and civilian general practitioners. A broader student scope is also recommended to accommodate military medicine training needs for Reserve Force and Civilian Contract Medical Practitioners.

Improvements will now require expansion of the teaching staff and exploration of new delivery methods in closer collaboration with the ADF.

Introduction

Tri-service post-graduate vocational education in Military Medicine has not previously been available in the Australian Defence Force (ADF). An introduction to the practice of medicine in the military was run as an on-line postgraduate course by the Centre for Military and Veterans' Health (CMVH) at the University of Queensland in both semesters of 2008. This paper will review the course development, conduct and future.

The Course

Introduction to Military Medicine has originally been designed as an elective course in the Master of Public Health (Defence) program provided by the Centre for Military and Veterans Health. It has been constructed by experienced serving members of the ADF, writing and teaching in their area of expertise within Military Medicine. The course aims to provide an introduction to students at the entry level of military medical practice based on the Australian Defence Force model.

The University course (UQ - PUBH7119) is provided online, however, is also provided to the students on CD-ROM to ensure access. The CD includes the learning guide and learning materials, or further readings. The learning guide is a road map to guide

the student through important concepts in the field of Military Medicine and is written by those practicing in the course key areas. Important points are illustrated by hyperlinked readings that are divided into required, recommended or reference reading. Readings include definitive reviews, original papers, operational descriptions and personal experiences from international scientific, definitive texts and ADF policy. One of the major logistic tasks in developing the course was to include suitable readings some of which required declassification before inclusion.

The course is modularised. Students are initially introduced to the structure and function of defence (and veterans') health services using comparisons with civilian systems and other Defence health services. The student is guided through the distinctive aspects of defence health services beginning with discussions of leadership and medical administration. Some aspects of specific ADF clinical policy (injury management, fertility and pregnancy management) are used as an illustration of how the clinical approach in the context of military practice, rather than as a discussion of disease processes and their medical care.

Subspecialty areas practiced in the military including occupational and environmental health, aviation medicine, underwater medicine, tropical medicine, chemical, biological and radiation defence and

operational health support are introduced in modules designed to lead into existing specific courses. Ethical issues of military medical practice are examined to stimulate an on-line discussion to ensure the student considers these dilemmas prior to operational exposure. Discussions conducted during the course are a formative assessment. Summative assessment includes multiple short clinical cases, mid-semester, and long cases at the end of semester.

Deciding the teaching method

The teaching method “selected” was determined by a host of internal and external factors, some of which have changed in light of the first two semesters of the course conduct and now partly direct further development.

Many experienced military medical practitioners offered their practical assistance to develop the course. Without these people the course would not have been developed or conducted. They are gratefully acknowledged (Table 1).

Wind Commander Rosemary Vandenberg
Lieutenant Colonel Isaac Seidl
Lieutenant Colonel David Ward
Professor Niki Ellis
Dr Ian Gardner
Squadron Leader David Taplin
Captain Andrew Robertson (RANR)
Dr Kate Manderson
Wing Commander Leona Down
Lieutenant Colonel Peter Leggat
Lieutenant Scott Squires (RAN)
Dr Michael Naughton
GPCAPT Tracy Smart
COL Rob Miller

Table 1. Contributors to the Introduction to Military Medicine Course

All contributors recognised the need to fill the gap in military Medical Officer vocational education. Most support was received from contributors without financial reimbursement for effort and included writing, reviewing and facilitating resources to be made available, including the body of clinical policy existing in the ADF. Reserve Days were made available – not for running the course, but developing the curriculum. Conduct of the course was administered by the Professional Development Administration Officer at CMVH and supported by the Director Health Services, South Queensland.

In practice, external factors most shaped the teaching method. The first years of the service for Medical

Officers are crowded with both military and civilian courses and programs. Delivering the course on-line and over two semesters accommodated the need for flexibility within the military training program.

Course review

On review using a well-accepted model for curriculum planning¹, *Introduction to Military Medicine* is relatively well balanced and integrated, though has some obvious opportunities for further development.

The course is mostly student-centred. A more teacher-centred basis would be possible with a residential component or block delivery. The latter approach was considered less attractive given the crowded training program for new Medical Officers. The course has a balance between problem-based learning and assessment, and information gathering. Information in the form of policy gathered through the course provides a residual effect to learning by establishing a body of reference material on military medical practice.

While the course appears to be modularised and subject based, it actually integrates these topics horizontally in the context of a tri-Service approach and vertically integrates towards veteran’s health. The course specifically addresses the balance of clinical experiences by assisting medical officers in their transition from hospital-based to community-based practice within the military. It is quite prescriptive and could be more elective-based by adding Single Service-specific annexes to modules.

The course is very systematic in delivery. Nevertheless, it was designed to be a teaching framework or recipe for clinical supervisors of new Medical Officers apprenticing in military practice as occurs in the Australian General Practice Training Program.

Did the course meet expectations?

So what did the students think? *Introduction to Military Medicine* was subject to the standard University of Queensland TEVAL (teaching evaluation). As response rates were not high, students and senior military medical officers were informally asked their opinion directly during reviews of the course at the Chapter of Military Medicine meeting, the AMMA Conference and the Asia Pacific Military Medicine Conference.

The Statements of Intent in the *Introduction to Military Medicine* course are in the form of aims and learning objectives. The aims were:

“. . . to introduce new military medical officers and civilian medical practitioners working in military environments to military medical practice.”

In practice, while the majority of students were

new Medical Officers, some had served for several years and enrolled in the course to determine whether they had developed a rounded education understanding and to gain credit points towards their Masters program. Nursing Officers and a Senior Non-Commissioned Officer Medical Technician also enrolled with the widening of the pre-requisites for students. No civilian medical practitioners working in military practice enrolled, however, negotiations are on-going with contract health practitioner companies to support their staff with professional development utilising this course.

Of the students new to military practice, the overwhelming feedback was that the course did assist in preparing them for their new practice environment. Feedback from senior Medical Officers was also favourable regarding whether the course successfully introduced Medical Officers to military practice.

The learning objectives of the course were:

“After successfully completing this course you should be able to:

- 1 Describe the elements and objectives of a military health system including under operational conditions,
- 2 Describe the concepts of fitness within the military, and
- 3 Understand the application of medical practice within the military environment.”

All students to date (n=20) have passed the assessments. Assessments were specifically tied to learning objectives. A marking scheme was produced prior to receipt of assessments and defined in advance the minimum assessment standard. All assessments were marked by a single examiner and subsequently reviewed independently confirming that the course has achieved the learning objectives.

In practice, students and reviewers have indicated that one of the valuable outcomes of the course has been directing the reading and compilation of useful contemporary policy for practicing in the military setting.

The sequencing of topics has been well received by students in completing assignments after working through related subjects. Additionally, comments provided by students in formative assessment regarding military medical ethics, which was placed at the end of the course to allow basic understanding of practice issues, indicate a broad understanding enabling involvement in the discussion.

The emphasis of the course on a tri-Service model has been particularly mentioned as appropriate for the

current climate of Defence Health Service practise. Several recommendations were to incorporate more depth into single Service issues within the context of the tri-Service emphasis.

So where does the course fit?

In the MPH (Defence)

On the broader curriculum level, the course is part of the Masters in Public Health (Defence) Program. The course remains *an elective* in this program. One Defence-specific course (*Occupational and Environmental Health*, Adelaide University) has now been accepted as a core course in this Program. *Biostatistics* is another core course in the MPH (Defence), however, it has been less well accepted by Medical Officer students in terms of applicability to their daily practice. *Introduction to Military Medicine* should be considered to be one of the four core courses, perhaps replacing *Biostatistics* for Medical Officers (and remaining an elective for other students meeting pre-requisites). In this role the course is more appropriately sequenced in the Masters Program.

ADF training goodness of fit

The *Introduction to Military Medicine* curriculum has articulated well into other (Australian) Defence specific courses, particularly, Aviation, Underwater, Occupational and Environmental Medicine courses. This has been appreciated in responses from students and coordinators of these courses. Initial training programs for new Medical Officers are crowded, yet there has been prior to this course no tri-Service introduction to practice in the military. For the ADF and other regional Defence health services, the flexibility and breadth of the *Introduction to Military Medicine* course most suitably addresses the need for an introductory course, as represented by the IMM, to become part of the Competency Level 2 requirements for a deployable Medical Officer. In proposals to facilitate this requirement, it will be necessary to cross-map curricula in order to blend the IMM with existing Single Service requirements as addenda to modules.

To meet the training needs of new Medical Officers in a practical way, other modes of delivery will be required recognising the need for flexibility, proximity and sequencing, and accommodating other military training. The ability to claim University credit will be retained, however, the course will not be primarily delivered for this purpose. After a number of years and a circuitous pathway, this realigns the *Introduction to Military Medicine* back to its initial concept.

Other recommendations from senior health staff have included the incorporation of mental health

policy and practical examples more into the different modules to match current practice and experience in the ADF. Broader student catchment has also been recommended to expand IMM to meet other training requirements of ADF. These include delivery to Contract Health Practitioners beginning practice with the ADF; delivery to Reserve Medical Officers in a manner suitable for the time commitment available to these members; and consideration of wider availability to other Health Officers.

Discussions regarding the success of non-Medical Officer students lead to the view that another course borrowing content from IMM is a better solution for other Health Officers, leaving IMM to meet the needs of introducing Medical Officers to practice in the military.

The Australian Defence Medical Officer Competency Level (CL) system defines an MO at CL3 as able to deploy in an unsupervised specialist Medical Officer role.

For an ADF MO specialising in primary health care, CL3 is achieved by completing military health courses and training in the Australian General Practice Training (AGPT) Program. The AGPT program includes the award of Fellowship in either the Royal Australian College of General Practice or the Australian College of Rural and Remote Medicine marking attainment of a standard of competent (civilian or military) practice. The AGPT policies, including sections on ADF Registrars, were updated in 2008 and the *Introduction to Military Medicine* course was reviewed against these.

The AGPT policy require that ADF Registrars gain necessary experience to practice competently during **and** after their military career, but no specific training in military clinical practice is outlined in the policy to achieve this standard. The clear niche for *Introduction to Military Medicine* is to facilitate the transition from civilian hospital practice into military clinical

practice by providing an apprenticeship curriculum structure for supervisors to use with new medical officers. Learning guides and materials are available for civilian GP Registrars and their supervisors in the Program. *Introduction to Military Medicine* provides a curriculum map, a learning guide and learning materials for the military practice component for ADF GP Registrars.

Conclusions

Introduction to Military Medicine has had a successful if modest debut as a University course in 2008. The place of the course should be reconsidered as one of the core components of the MPH (Defence) Program and expansion of the teaching methods used in delivery of the course should be explored. However, real opportunities to develop IMM exist in blending the course into CL2 programs for direct delivery to meet current training needs for new military Medical Officers and Reserve Medical Officers. Additionally, the course should be considered as a basic training requirement for introducing Civilian Contract Medical Practitioners to Tri-Service military practice. *Introduction to Military Medicine* also supports military clinical supervisors to apprentice new Medical Officers facilitating their passage through civilian vocational training towards becoming competent and confident military and civilian general practitioners.

The IMM course thus appears to have established a place in military medical education. Improvements will now require expansion of the teaching staff and exploration of new delivery methods in closer collaboration with the ADF.

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