

'Military Health Support' in the Australian Defence Force

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Introduction

This article follows previous papers by the author, regarding occupational and environmental medicine in the ADF.^{1,2,3,4,5,6,7,8,9,10}

These papers, as well as a 2019 Productivity Commission inquiry,¹¹ indicate that high workplace illness and injury rates confirm the need to improve the management of hazards associated with ADF workplaces, with better emphasis on prevention. To this end, a submission by the Royal Australasian College of Physicians to the aforementioned inquiry advocated that this would best be achieved by basing the ADF's health services on a systems-based occupational health strategic model.¹²

Doing so would require reassessing the fundamental inputs to capability (FiC)¹³ for both Joint Health Command (JHC) and Defence's Work Health and Safety Branch. The current state of the ADF's occupational and environmental health services, and the small number of civilian specialist practitioners within the Australasian Faculty of Occupational and Environmental Medicine (AFOEM), suggest that a mature holistic and sustainable model would take 10–15 years' sustained effort.

This article expands on these papers regarding health support for ADF operations. As such, it can also be considered a summary thereof.

Definitional clarification

The term 'operational health support' typically refers to the health services that enable *deployed* ADF missions. However, this article demonstrates the need for a term that *also* refers to the health services that enable *non-deployed* ADF operations and the personnel, training, engineering, logistics and other elements *currently* deemed 'non-operational' that facilitate them. Pending an alternative that better describes the necessary health services to support *all* these activities, this paper uses the term 'military health support' (in quotation marks) to recognise the fact that, irrespective of whether they deploy or not, *all* ADF commanders have a mission to perform that requires some form of *targeted* health support.

Factors driving 'military health support'

The health services FiC required to provide 'military health support' should be driven by (but not limited to) the following factors.

Population size. This typically refers to the total number of ADF members assigned to each of the units being supported, but may also include allied or coalition military personnel (permanent and reserve) and entitled non-combatants, such as Defence civilians, contractors, family members without access to civilian health services, and those receiving humanitarian aid/disaster relief health services.¹⁴ The nationwide dispersal of the ADF population, and their high level of geographic mobility even within Australia, pose specific challenges for the ADF's health services.

Population demographics. A previous article describes how this factor's importance pertains to how it contributes to disease and non-battle injuries.¹⁵ The demographic features of most importance to providing health support for ADF members compared to civilians include (but are not limited to) the following:

- Younger working age (31% aged less than 25 in 2015, compared to 12.6% of the Australian population aged 15–25 in 2018).¹⁶ The relevance of this factor pertains to the prevention and treatment of (as examples) their sports injuries, mental health disorders and alcohol/other drug abuse¹⁷
- Relatively short periods of service within typical 40- to 50-year working lifetimes (37.6% serve five years or less, much of which is devoted to training),¹⁸ to which can be added posting cycles resulting in up to a third of all ADF members having less than 12-months experience in their current job at any one time. The ensuing lack of workplace experience further increases their risk of workplace-related illness or injury¹⁹
- A predominantly male population (83.5% as of 2017, to be reduced to 80.1% by 2023)²⁰ has important implications regarding the nature and extent of ADF sports injuries and mental health disorders, to which can be added horseplay and

other risk-taking behaviours. Consideration also has to be given to workplace hazards effects on ADF women of childbearing age (88% aged under 50 in 2015),²¹ noting that the ADF Medical Employment Classification system indicates that 634 ADF members were known to be pregnant as of 1 March 2020

It is important to note that combining these population attributes constitute a 'perfect storm' regarding workplace-related illness and injury risks among ADF personnel.

Non-operational workplace hazards. A previous article describes how these include (but are not limited to):

- biological hazards, such as vector-, food- and waterborne infectious diseases
- physical hazards, such as climate extremes (both heat and cold), noise and vibration, and ionising and non-ionising radiation
- chemical hazards, such as heavy metals, asbestos, fuel and diesel exhaust, in the form of dust, mist, fumes and/or vapours
- ergonomic hazards, such as manual handling and uneven or moving working surfaces
- psychosocial hazards, such as excessive, insufficient or purposeless workloads, shift work, fatigue, social/family isolation (especially noting the aforementioned high levels of geographic mobility even without deploying), and various forms of unacceptable behaviour such as bullying and harassment²²

Although many of these hazards can and should be managed by the relevant civilian public health agencies (particularly in the base setting), the ADF also needs to deal with them where and when these agencies cannot or will not do so.

To these can be added environmental hazards associated with the ADF's aviation, diving and submarine capabilities,²³ and the unique combination of these hazards in the maritime environment even in peacetime, such as:

- accidents ranging from slips, trips and falls, to injuries resulting from fire, flooding, electrical hazards, and chemical and non-ionising radiation exposures. Examples of these injuries include noise-induced hearing loss, poisonings and penetrating and blunt trauma
- biological hazards, typically reflecting crowded living conditions that necessitate a high standard of personal and population hygiene to prevent the transmission of gastrointestinal, respiratory and other infectious diseases

- psychosocial hazards secondary to isolation from family and other domestic social supports for extended periods, living in close proximity with other people, long working hours (including shift work and poor sleep) interspersed with periods of boredom resulting in fatigue, and acute and post-traumatic stress in the event of being involved in or witnessing an incident resulting in death, serious injury or near miss²⁴

Current work health and safety legislation imposes a duty of care on commanders to minimise exposures to workplace hazards.²⁵ However, the disproportionate compensation costs of preventable workplace illness and injury that are shifted to the Department of Veteran's Affairs (DVA) by the ADF—compared to civilian employer insurers (even for ADF members who have never deployed)—confirm the need to improve how the ADF reports and manages them.^{26,27,28,29} This paper not only asserts this can best be achieved with an occupational health-based systems model—given how the ADF's workplace hazards are not limited to the deployed setting—but the application of this model should not unduly differentiate between ADF units that deploy and those that do not, as at present.

Operational workplace hazards. In addition to these non-operational workplace hazards, ADF members may also confront hazards posed by weapons such as knives, clubs, small arms, grenades, mortar and artillery rounds, sea and land mines, and sea-, land- and air-launched missiles and torpedoes, to which can be added atypical weapons such as lasers. These can cause death or injury secondary to penetrating wounds, blunt trauma, drowning or near-drowning, blast injuries and/or burns. Nuclear and other radiological weapons pose additional physical hazards, as do biological hazards from weaponised bacteria, viruses and toxins, and chemical hazards from weaponised blistering, choking and nerve agents.^{30,31}

Even without the current work health and safety legislation, ADF combat commanders have always had an obligation to achieve their mission while minimising battle casualties. This obligation extends to the personnel they lead and the superiors whose orders they obey, as well as to the government, family members and the nation in general, in the interests of:

- maintaining unit and national morale and willingness to fight
- maintaining operational capability (including but by no means limited to simply conserving personnel)

- reducing—as far as possible—the costs of postwar compensation and rehabilitation^{32,33}

These objectives are achieved by a range of measures, such as:

- non-medical mission-specific training and exercise preparations, supported by the relevant health-related recruiting, individual readiness, assessment and promotion (i.e. not just treatment) services.³⁴ It should be noted that, in order to maintain operational capability, the non-medical preparations, in particular, should not create their own preventable illnesses and injuries³⁵
- *where* (see above), *what* and *how* the mission (see below) is conducted, likewise supported by the relevant health promotion, treatment, and casualty evacuation services^{36,37,38}
- non-medical post-mission welfare and other services, supported by the relevant treatment, health promotion and surveillance, rehabilitation and compensation services^{39,40,41,42}

These considerations further reinforce the assertion of this and previous papers that to maintain personnel and national morale, facilitate operational capability and contain compensation costs, the plethora of health services required before, during and after ADF operations (deployed or not) are best managed by incorporating them all into a broader occupational-health-based systems model.

Commander's missions. As previously indicated, this article uses the term 'military health support' to acknowledge that, irrespective of whether or not their units deploy, *all* ADF commanders have a mission of some kind to perform.

The range of such missions—and the associated hazards—should not be underestimated. They begin for most ADF personnel with recruit training at *Cerberus*, Kapooka and RAAF Base Wagga, or initial officer training at the Australian Defence Force Academy, *Creswell*, Duntroon and RAAF Base East Sale. They include all those associated with living among strangers in a new and isolated environment, heretofore unfamiliar forms of physical training and other activities, such as weapons handling.

ADF members then undergo further job-specific training before proceeding to their first non-training unit. The hazards associated with some job-specific training can drive the need for dedicated health support. For example, clearance and ship's diver training at the RAN Diving School at HMAS *Penguin* is supported by the co-located Submarine

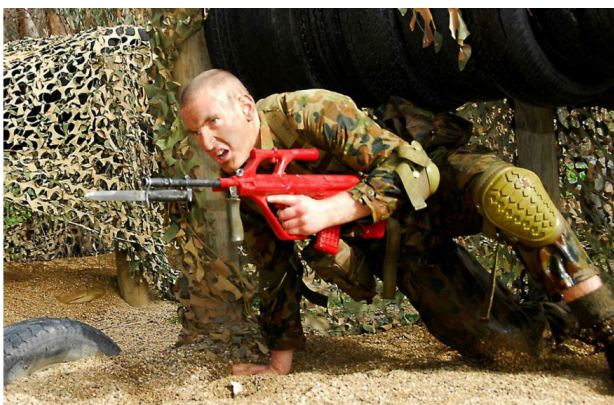
and Underwater Medicine Unit.⁴³ This paper contends that this general principle should extend to less-esoteric training environments, such as chefs learning to handle hot food and cooking implements, mechanics learning to operate and maintain rotating machinery, and electricians learning to deal with uncontrolled electrocution hazards. Even 'box-packer' logistics personnel need to become familiar with warehouse hazards such as side lifters, scissor lifts, forklifts and other stores-handling equipment.

Furthermore, many of these hazards remain extant in their post-training workplaces. Many commanders who lead these workplaces conduct a wide range of non-deployed training activities to prepare them for their operational role, not only at places such as RAAF Base Williamstown near Newcastle (76 and 77 Squadrons) but also remote locations such as RAAF Base Tindal (75 Squadron, all currently transitioning to F-35 Lightnings at the time of writing).⁴⁴ However, even when not deployed—or even preparing to deploy—many other commanders have an operational mission to perform. For example, 92 Wing routinely conducts maritime patrol and surveillance of the oceans around Australia (an area totalling up to 26 million square kilometres) from RAAF Base Edinburgh.⁴⁵

Other commanders have as their mission the direct support of units that conduct operations from their base as a matter of course: besides Edinburgh itself, other examples include the Fleet bases at *Kuttabul*, *Cairns*, *Coonawarra* and *Stirling*, and RAAF bases such as Amberley regarding 36 Squadron (C-17 Globemasters), and Richmond regarding 37 Squadron (C-130 Hercules). Still other base commanders perform this role on an occasional basis, additional to their primary mission. For example, besides supporting 2 Flying Training School (PC-21 trainers) and 79 Squadron (Hawk 127 fighter-trainers), RAAF Base Pearce also supports 92 Wing's Indian Ocean operations when required.

Therefore, this paper asserts that the health services provided for ADF commanders should not only reflect those who deploy but *all* the missions of *all* commanders. This assertion is premised on the extent to which the health services required for (as examples) headquarters such as Russell Offices, Joint Operations Command or Anglesea Barracks are not the same as that required for training establishments such as *Watson*, Kapooka or East Sale, or support bases such as *Stirling*, *Laverack* or *Williamstown*. This premise simply acknowledges the extent to which each of these locations has its own unique combination of workplace hazards, for which commanders require occupational *health* (not just *safety*) support.

However, such support is not provided at present by either JHC or the Defence Work Health and Safety branch. This was referred to by the previous SGADF, who, among other issues, referred to commanders complaining that ADF health staff were not considering their duty of care obligations per the 2011 *Work Health and Safety Act*.⁴⁶ This further reinforces the assertion of this and previous papers that the plethora of health services required to support ADF commanders and their missions in the non-deployed and deployed setting is best accomplished with an occupational-health-based systems model.



Bayonet assault course, Kapooka, 2006⁴⁷
The purpose of this image is to demonstrate the injury potential associated with non-operational infantry training, even with a simulated weapon. The scope of 'military health support' for activities such as these includes the prevention—or at least limiting—of the more egregious forms of eminently avoidable injuries, as well as their timely assessment (not only clinical, but also employability/ deployability), treatment, rehabilitation and compensation.



Touch rugby game, Japan, 2019⁴⁸
While acknowledging some of the physical and morale benefits of sport, there is also a need to better recognise the cost to operational capability associated with the ensuing injuries, especially those that are eminently avoidable.



Aircraft loading ramp, RAAF Base Amberley, 2020⁴⁹
This image demonstrates the extent to which, although clearly non-deployable, bases such as Amberley directly support ADF operations. In this instance, besides those associated with aircraft flight lines in general, readers may also like to consider the workplace hazards associated with preparing and loading these pallets onto the scissor lifts used to load the aircraft. The scope of 'military health support' extends beyond treating injuries from such tasks and facilitating their prevention, as well as rehabilitation and compensation.



Ship's galley, HMAS Adelaide, 2020⁵⁰
This image illustrates how the scope of cookery training (in this instance) is not limited to food preparation but also the safe use of the associated equipment. Hence, the scope of 'military health support' is not limited to treating injuries when trainees get it wrong, but also supporting their prevention, as well as rehabilitation and compensation.

Access to civilian health services. The ADF's size precludes its ability, or indeed the need, to provide health services in total isolation from those provided for the civilian community, especially for ADF units based in or near the nation's major

population centres. On the other hand, the ADF routinely deploys operational units with organic health services, and even dedicated health units, to locations within Australia and overseas, where civilian health services either do not exist, or do not provide a level of care deemed acceptable to the ADF or the Australian civilian community.

Even so, it is also essential to appreciate the extent to which the treatment services provided for Australian civilian communities—even in the major centres—only constitute a baseline level of health support for ADF personnel and their commanders. In particular, they have no remit to:

- support ADF workplace operational capability by preventing workplace injuries or enabling their early return to work after such injuries by timely treatment and rehabilitation
- facilitate the eventual return of all ADF members to the civilian community at the end of their permanent and/or reserve service.⁵¹ As previously indicated, the 2019 Productivity Commission inquiry has identified a range of shortfalls to this end within both Defence and DVA⁵²

Besides the aforementioned workplaces that require bespoke health services to support the ADF's aviation, diving and submarine capabilities,⁵³ previous articles have explained why all ADF workplaces require additional health services that are not readily available in the civilian community.^{54,55,56,57,58,59} Furthermore, the nationwide distribution of ADF workplaces explains why its casualty evacuation requirements are not limited to its deployed personnel, but include ADF workplaces in remote locations within Australia, and ADF members such as reservists on course, who became ill or injured away from home.⁶⁰ This paper asserts that these additional health services can best be provided as part of an occupational health-based systems model.

Conclusion

With ADF personnel arguably exposed to the most diverse range of occupational and environmental hazards of any Australian workforce, high rates of

preventable workplace illness and injury indicate the need to improve the management of occupational and environmental health hazards, with better emphasis on prevention than treatment.

Since the late 1970s, the ADF has undergone substantial changes in how it is organised to deploy and how its deployed elements are supported.⁶¹ With these changes has come an assumption that the scope of the ADF's health services can be limited to supporting its deployed elements while contracting out the rest, rather than enabling *all* the relevant missions of *all* ADF commanders. This paper explains why the scope of providing health support for non-deployed ADF commanders and their personnel extends beyond simply providing treatment services. In fact, although the depth of the health services they require varies according to the mission(s) being supported, their overall scope is exactly the same as for their deployed counterparts. In addition, this paper describes why the plethora of missions conducted by ADF commanders from a multiplicity of locations within Australia precludes a 'one-size-fits-all' solution to providing efficient as well as effective targeted health support.

These considerations support the contention that the ADF's health services should be premised on an occupational health-based systems model, with revised FiC leading to a range of genuinely holistic, sustainable and fit-for-purpose health services over the next 10–15 years.

Disclaimer

The views expressed in this article are the author's and do not necessarily reflect those of the RAN or any of the other organisations mentioned.

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