



- What men know about the symptoms and treatment of prostate cancer: a study comparing ADF and civilian men
- A Woman At War: The Life And Times Of Dr Phoebe Chapple MM





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Journal of Military and Veterans' Health

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STATEMENT OF OBJECTIVES

The Australasian Military Association is an independent, professional scientific organisation of health professionals with the objectives of:

- Promoting the study of military medicine
- Bringing together those with an interest in military medicine
- Disseminating knowledge of military medicine
- Publishing and distributing a journal in military medicine
- Promoting research in military medicine

Membership of the Association is open to doctors, dentists, nurses, pharmacists, paramedics and anyone with a professional interest in any of the disciplines of military medicine. The Association is totally independent of the Australian Defence Force.

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Journal of Military and Veterans' Health

Inside this edition

Sixty-eight years ago, on 15 August 1945, hostilities with Japan officially ended at 12 noon. When His Royal Highness Duke of Gloucester made the announcement in Canberra, three flags were flown. They were the flag raised by Australian troops at Villiers Bretonneux in the First World War, the flag worn by HMAS SYDNEY when she sank the Italian cruiser Bartolomeo Colleoni, and the flag which was flying on Government House, Darwin, when the Japanese attacked the port in February 1942. Commodore J. A. Collins signalled the Royal Australian Navy: 'I wish to congratulate every officer and man of His Majesty's Australian Squadron on his share in our final victory announced by the Prime Minister of Great Britain this morning. I rejoice with you that the Japanese have been forced to surrender. We have every reason to be proud of the part played by the RAN during six years of war across the seas of the world, and I say again to all hands 'Well done'. Let us always remember with sad pride our lost ships and their companies and thank God that their sacrifice was not in vain'.

As a Journal dedicated to military and veteran's health, we need to constantly remember the sacrifices made by our veterans; the health lessons learned from the various conflicts, both recent and historical, and the new techniques, methods and research that can make us better practitioners in this field. While our submissions have picked up, we always are looking for more good military and veterans' health articles.

As we move towards full Open Access, authors may like to consider the wider exposure that publication will bring to their articles, particularly as publication is peer-reviewed and without any authors fees or other costs. We are also interested in operational articles, highlighting the issues and lessons learned in the field, which we will put through an accelerated peer review process.

In this issue, we have a range of excellent articles, including original articles on prostate cancer knowledge in the ADF and attitudes to the Medical Employment Classification Review. We also have review articles on terrorism and nurse practitioner roles on Exercise, and two historical articles on military health care in the First World War, including the life of Dr Phoebe Chapple, as an Australian Doctor on the Western Front.

As we move through 2013, we have further themed issues and ask prospective authors to consider whether they may have suitable articles for these themed issues. In particular, we are very keen to get articles for our special 100th World War One issue in April 2014. Other military and veterans' health articles are always very welcome and we would encourage all our readers to consider writing on their areas of military or veterans' health interest.

Dr Andy Robertson, CSC, PSM
Editor-in-Chief

President's message

Welcome to the latest edition of the Journal of Military and Veterans' Health. This edition has a wide variety of topics from the prostate to suicide, and they not only relate to medical officers but nurse practitioners and those in preventive health. I would also like to take this opportunity to thank members and the wider international health community for their contributions to the Journal and would ask that continuing contributing and encourage others especially our junior members.

Plans are well advanced for "innovations from the battlefield" conference at the Adelaide Exhibition and Convention Centre, 1st – 3rd Nov. The number of registered delegates is strong given the financial constraints that we all are finding. In my mind, this confirms the importance of the conference to health professionals in the area of military and veterans' health. For those of you that haven't booked your place there is still time.

We are delighted to have MAJGEN John Cantwell AO DSC, COL Timothy Hodgetts CBE OSTJ (UK) as

our keynote speakers this years. The broad range of topics and quality of speakers are sure to inform and entertain delegates. Furthermore, Dr Brendan Nelson, Director of the Australian War Memorial; former president of the AMA and, Federal Minister, will deliver the RADM Graeme Shirtley Oration. This year, the organising committee is, once again, value adding to the experience by holding pre-conference workshops on Musculoskeletal and Sports Medicine and Aviation Medicine which we hope will be of interest to members and delegates.

The conference will start with a Welcome to Adelaide reception on the Thursday night and the conference will be opened by the South Australian Governor His Excellency RADM Kevin Scarce AC, CSC, RANR. Adelaide has really put out the welcome mat for our delegates, so I hope to see as many as possible at the Adelaide Convention Centre.

Greg Mahoney
President

What men know about the symptoms and treatment of prostate cancer: a study comparing ADF and civilian men

Rosemary Sanderson BVSc, Sanjiva S Wijesinha FRACGP, Kay M Jones PhD

Abstract

Background: In 2010, prostate cancer was found to be the fourth leading cause of death in Australia. Studies indicated that Vietnam veterans reported up to twice the incidence of prostate cancer compared to the general population.

Purpose: To compare ADF men with civilian men regarding their awareness and knowledge of (1) symptoms, (2) screening and (3) treatment of prostate cancer.

Material and methods: An anonymous questionnaire comprising 12 questions was distributed to adult men at an ADF defence barracks in Melbourne and at the Monash University Clayton campus. Six questions were single answer and six allowed for multiple choices.

Results: A total of 250 completed questionnaires were analysed (51 ADF and 199 civilians). Overall, little difference was found in the responses from the two groups. Of the total sample, more than 75% had seen their GP within the last six months and 90% had heard of prostate cancer, yet few had discussed the topic with their GP, had ever been checked, or knew someone with prostate cancer. Overall knowledge was low about symptoms, tests, treatment options and outcomes of prostate cancer. Concern about having prostate cancer varied, with around half indicating a small amount of concern.

Conclusion: With increasing incidence rates and poor awareness, combined with misconceptions and a failure to discuss the topic with their GP, men's knowledge about prostate cancer is of concern. Information is now available online via the ADF and with the growing interest in social media and online campaigns; increased public awareness may lead to more men being tested even when they feel well and have no symptoms.

Key words/phrases: Prostate cancer awareness, Australian Defence Force (ADF), Symptoms, tests, treatment

Conflict of Interest: There is no conflict of interest.

Introduction

In 2010, prostate cancer was the fourth leading cause of death in men, with 3235 men losing their lives¹. Although prostate cancer is rare in men under 40² and mortality rare under 60³⁻⁵, men as young as 23 have undergone initial biopsy for prostate cancer⁶. Incidence rates for prostate cancer have increased in Australia in recent years, from 79.7 cases per 100,000 men in 1982 to 189.5 cases per 100,000 in 2008⁷.

Australian Defence Force (ADF) personnel are required to maintain a high level of physical fitness and conform to medical standards to ensure they are able to meet the rigorous demands of service life. This includes a comprehensive periodic health examination (PHE), the frequency of which is based on age and service⁸. Defence personnel of the regular

force and reservists on full time service have free access to medical care and support is provided for wounded or ill members⁸.

While no studies could be found for the wider ADF personnel regarding prostate cancer rates, two studies were found about the morbidity and mortality of Australian Vietnam veterans. The Australian Vietnam veterans health study found of 40,030 veterans surveyed, 428 reported they were diagnosed with prostate cancer⁹. The follow-up validation study validated 212 of the 428 cases of prostate cancer^{10,11} and reported that, when compared to the wider Australian community, the results suggested that Vietnam veterans had a 'significantly higher prevalence than in the wider Australian community'¹⁰. A second study of ADF men who had served in Vietnam found that although there was a doubling of prostate cancer risk when

compared to the wider community, the findings were not statistically significant¹¹. However, this may have been due to the increased rates of screening in the post-PSA (prostate specific antigen) era.

A study of cancer incidence in the United States of America military population also found that prostate cancer rates were twice those in the general population¹². One possible causative factor for the increase in the military population studied is the exposure to herbicides in Vietnam. During the three decades that Australian and American forces were deployed to Vietnam, particularly in the years from 1962 to 1971, personnel were exposed to chemicals including herbicides known as Agent Orange¹¹ and depleted uranium (material used in armour penetrators)¹².

Nonetheless, in Australia, population-based screening for prostate cancer is not currently recommended because it is said that there is insufficient evidence to support routine screening^{5,13}. The most recent Royal Australian College of General Practitioners (RACGP) guidelines for general practitioners (GPs) do not recommend PSA screening⁵. However, screening was recommended in the past^{14,15} and is currently recommended by the Urological Society of Australia and New Zealand (USANZ) – “... to be offered to men in the 55-69 age group under certain circumstances, ... and to men as young as 40 who have concerns, having a single PSA test and digital rectal examination (DRE) performed to stratify their risk and develop a personalised screening monitoring plan”¹⁶.

Outcomes from the Australian Vietnam Veterans Health study⁹ include the publication of a booklet about prostate cancer which is available online¹⁷. The Men's Health Peer Education (MHPE)¹⁸ was also set up online in 2007 to raise awareness about men's health issues and in recognition that Vietnam veterans were reported as having a higher incidence of certain conditions including prostate cancer¹⁸. This raises the question of where do men find accurate information about the symptoms and treatment of prostate cancer, given that men find the topic embarrassing¹⁹ and/or incorrectly thinking that symptoms for prostate cancer are the same as those for benign prostatic hyperplasia^{3,19,20}. An emerging source of information, other than the GP, is through discussions on social networking sites such as Facebook or Twitter, which are available to the wider community and are rapidly increasing in popularity²¹. Another avenue is via campaigns such as Movember²², which has a significant link to the ADF as one of the founders had a career in the Australian army and is now CEO of Movember²³.

This aim of this study was to compare ADF men

with civilian men regarding their awareness and knowledge of (1) symptoms, (2) screening and (3) treatment of prostate cancer.

Methods

A questionnaire comprising 12 questions was developed following consultation with the literature and it was tested for reliability by six GPs from the Department of General Practice, Monash University. Of the 12 questions, six required a single response and six provided for multiple responses²⁴. The completed questionnaires were presented anonymously.

Participants

Men over the age of 18 from (a) ADF men at a Defence Barracks Melbourne and (b) civilian men at Monash University Clayton Campus were invited to complete the questionnaire by members of the research team (KJ and RS).

Data Collection

All men who appeared to be over the age of 18 were approached by a member of the research team (KJ, RS) and invited to anonymously complete the questionnaire. If the men agreed to participate, they were provided with the explanatory statement and the questionnaire to complete in isolation. Selection bias was avoided as much as possible by the researchers approaching all men who appeared to be over the age of 18. Informed consent was implied when the anonymously completed questionnaire was handed to the researchers.

Data analysis

All data was entered and analysed in SPSS19 for descriptive results only²⁵.

Funding: There was no funding for this research.

Ethics: was approved for this project through Monash University HREC.

Results

A total of 250 completed questionnaires were returned from ADF men (n=51) and civilian men (n=199) at Monash University, Clayton campus. Results are reported for the full cohort (n=250 = 100%), and for the purpose of making some comparison between the two groups, results are also reported for ADF men (n=51 = 100%) and civilian men (n= 199 = 100%)

Demographics: Men were asked their age only. There was little difference in the two groups for all age brackets, with more than 75% of the cohort in both groups being under 40 years of age (Figure 1). This is important, as men in this age range are

rarely included in studies about prostate cancer^{2,20} and are under the age when prostate cancer testing is recommended by USANZ^{16,26}. However, because the spread in both groups across the age range is similar, outcomes for both groups can be compared.

The majority of participants (92% ADF/86% civilian) had heard of prostate cancer, but more than two-thirds (67% ADF/68% civilian) indicated they did not know anyone who had prostate cancer. ADF men were more likely to have seen a GP in the past six months (55% ADF/44% civilian); but this may be because of ADF requirements¹⁸. Whether ADF men

included their annual medical check as a visit to the GP is not known, nor is it known whether the ADF men saw a GP in addition to ADF medical checks¹⁸. The majority of men (92% ADF/88% civilian) had contact with the medical profession over the past two years, thus there was an adequate opportunity for prostate cancer to be discussed^{4,20,21}. Yet less than a quarter of the men (20% ADF/21% civilian) had discussed the topic with their GP and fewer (16% ADF/19% civilian) had been checked for prostate cancer (Figure 2).

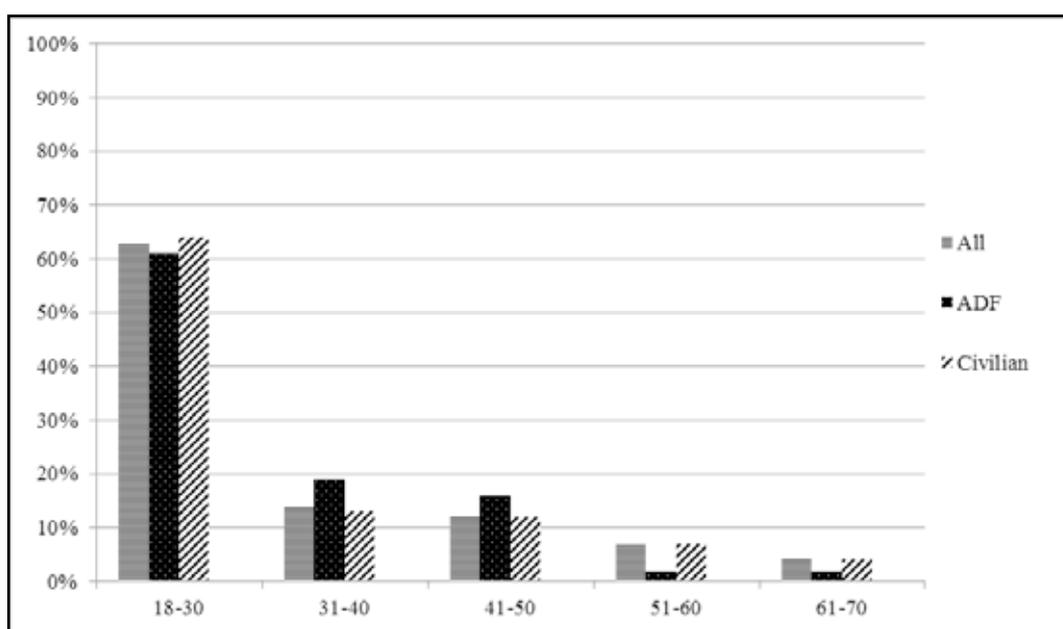


Figure 1: Age across age ranges for ADF and civilian men (n = 250; ADF n = 51 / Civilian n = 199)

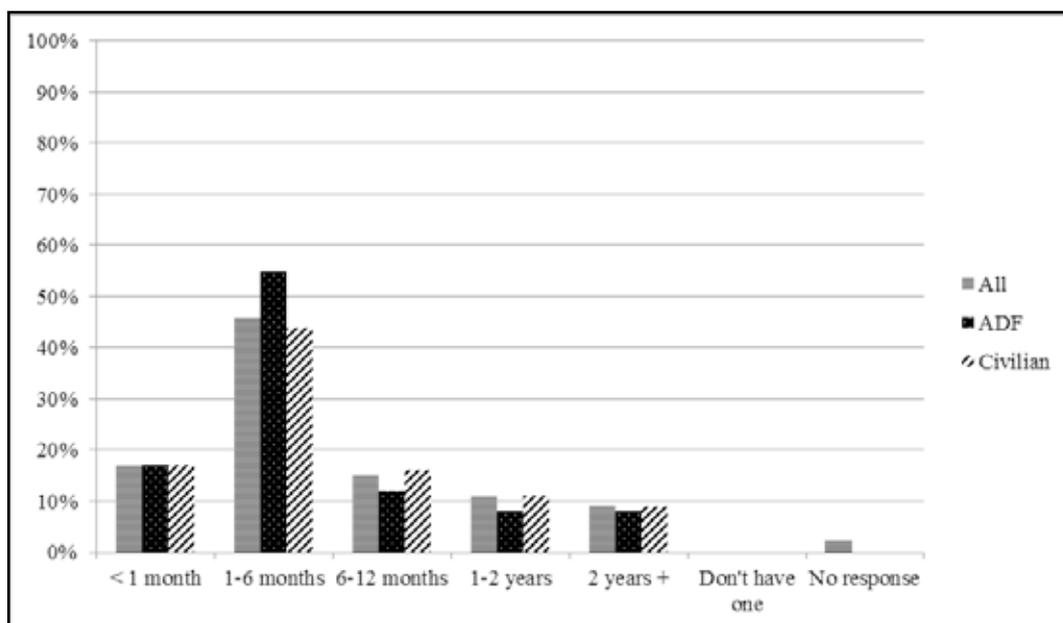


Figure 2: When did you last see a GP

Although prostate cancer is a common cancer for men in Australia², only around a third (29% ADF/30% civilian) indicated they, or someone they knew had prostate cancer. Regarding symptoms, ADF men were slightly more likely to indicate 'no symptoms' (22% ADF/16% civilian) but civilian men were more likely to be unsure (20% ADF/32% civilian) despite the fact that prostate cancer rarely has symptoms^{2,14}. The high percentage in both groups who selected "trouble urinating" (63%) is consistent with literature that suggests many men do not understand the difference between prostate

cancer and benign prostatic hyperplasia¹⁹, the latter not generally associated with an increased risk of prostate cancer⁵ (Figure 3).

Regarding tests to check for possible signs of cancer, ADF men were less likely to be unsure than civilians (12% ADF/29% civilian), but slightly more aware of digital rectal examination (DRE) (84% vs. 61%) and blood tests (59% vs. 53%), suggesting that ADF men may be accessing information provided by Veterans Affairs^{17,18}. Few indicated 'there are no tests to check for the possible signs of cancer' (0% ADF/2% civilian) (Figure 4).

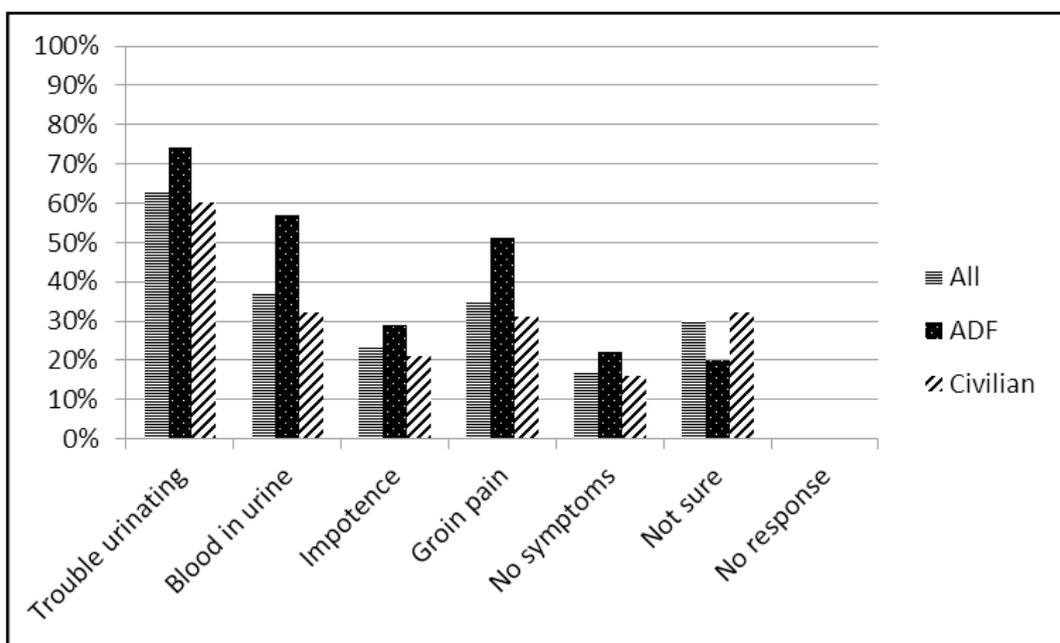


Figure 3: Symptoms for early prostate cancer

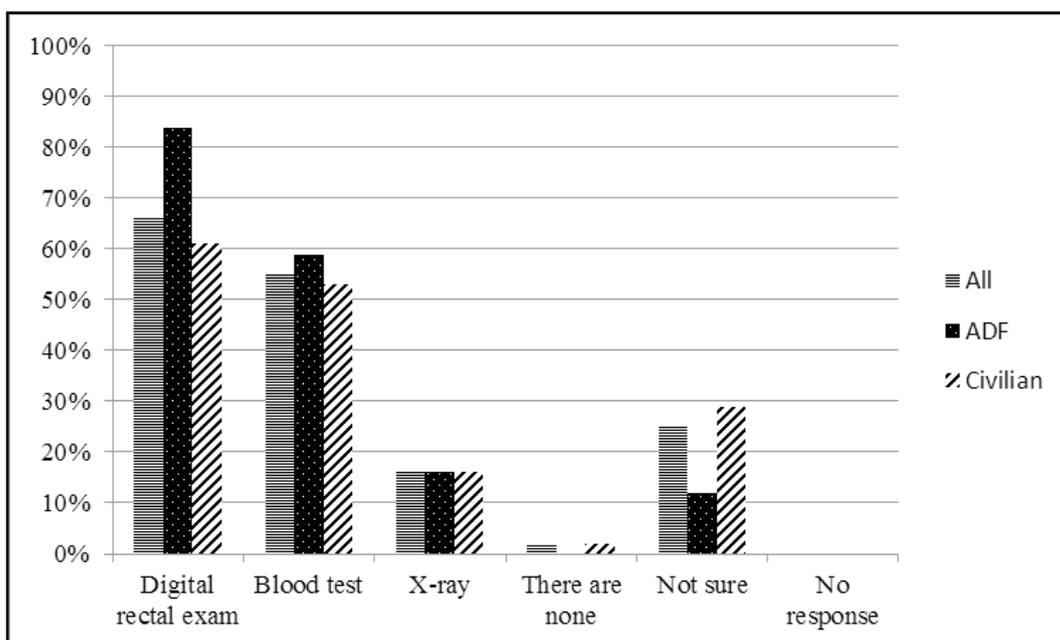


Figure 4: Tests to check for possible signs of cancer

Over a third of the men (35% ADF/36% civilian) indicated that a digital rectal examination (DRE) would make them so uncomfortable they would avoid being tested. Few felt a blood test (4% ADF/10% civilian) or an x-ray (2% ADF/6% civilian) would stop them from being tested. Around a quarter (25% ADF/27% civilian) were not sure, or wrote and ticked 'none of these' (29% ADF/21% civilian), or did not respond to the question (8% ADF/4% civilian) (Figure 5). Whether or not educating men about the

tests available would impact on their decision to be tested or not because of discomfort is not known.

All treatment options listed are options for prostate cancer, depending on the patient^{5,16-18}. Around two-thirds of the men indicated they were aware of surgery (78% ADF/69% civilian) or radiation (69% ADF/55% civilian) as treatment options. Fewer indicated awareness of hormone therapy (14% ADF/13% civilian), high intensity focused ultra

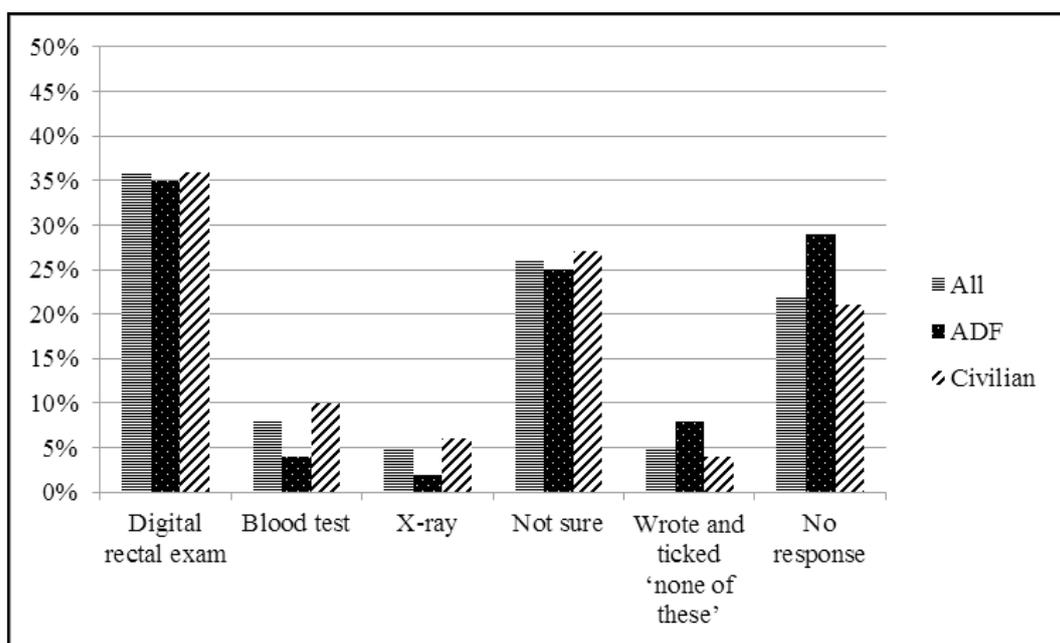


Figure 5: Which of these tests (if any) would make you so uncomfortable that you would avoid being tested

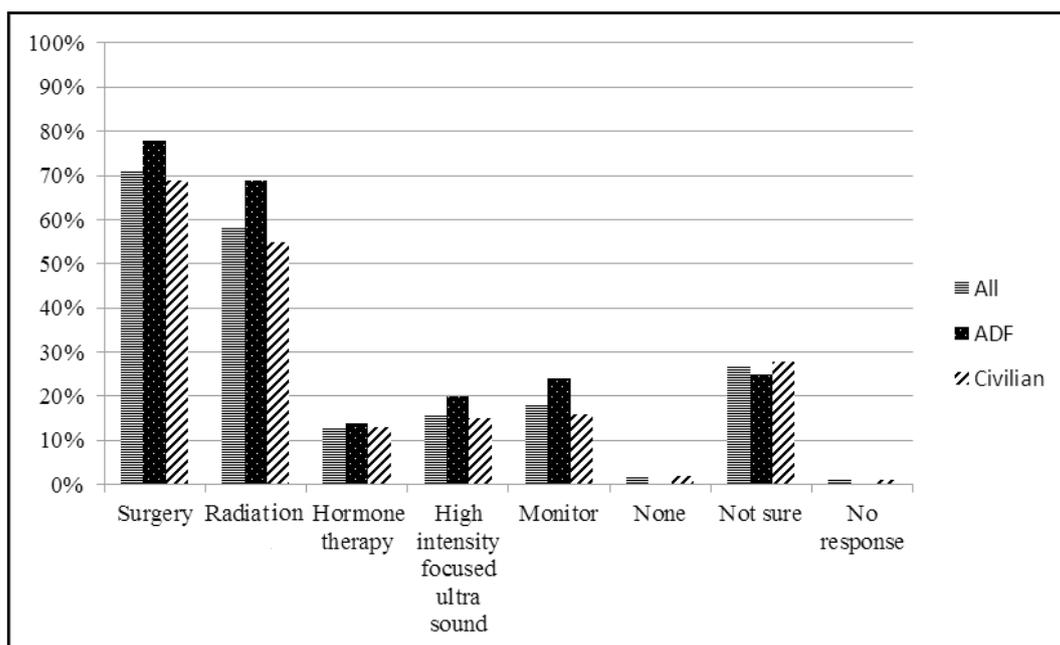


Figure 6: Treatment options for prostate cancer (can be more than one)

sound (20% ADF/15% civilian) or monitoring (24% ADF/16% civilian). Of note, around a quarter (25% ADF/28% civilian) were unsure of treatment options (Figure 6).

The level of concern participants had with regard to prostate cancer affecting themselves varied. Around half (41%ADF/46% civilian) indicated a small amount, with around a quarter of the men indicating no concern (33% ADF/25%) or moderate concern

(24% ADF/25% civilian). Few (25% ADF/5% civilian) indicated high concern (Figure 7).

Few men thought the outcome of prostate cancer was benign (13% ADF/18% civilian), with around half thinking the outcome was either full recovery (40% ADF/45% civilian) or lifelong treatment (42% ADF/31% civilian). More than half thought that death was the outcome of prostate cancer (57% ADF/71% civilian) (Figure 8).

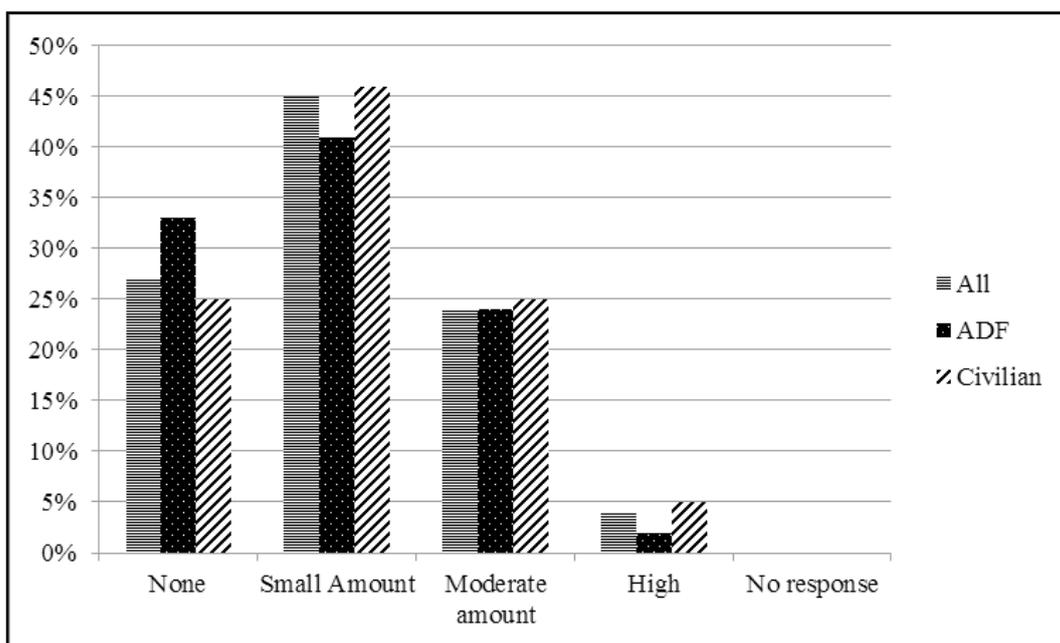


Figure 7: What level of concern do you have with regard to prostate cancer and yourself

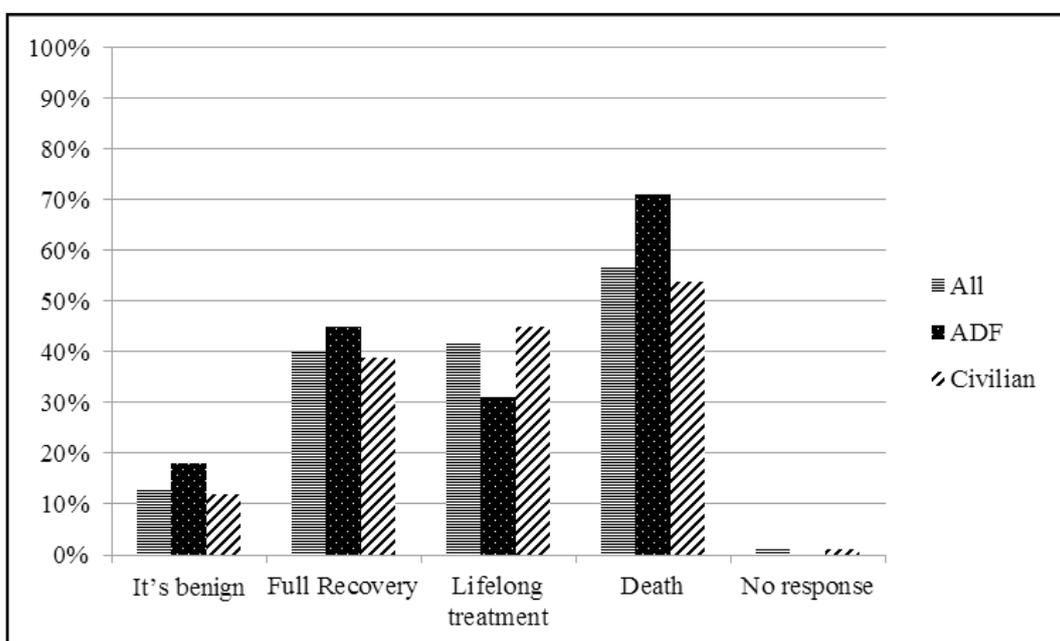


Figure 8: What do you think the outcome of prostate cancer can be

Discussion

The results from this study indicate that awareness of and knowledge about the symptoms, screening and treatment of prostate cancer was similar in both groups. Given the resources provided for ADF men by the Department of Veterans Affairs^{17,18} as a result of the research into Vietnam veterans health^{9,10}, it was surprising that there was little difference in ADF men's knowledge and actions to be checked for prostate cancer, when compared with that of civilian men. Although previous research suggested that Vietnam veterans may be twice as likely to be diagnosed with prostate cancer than men in the wider community⁹⁻¹¹, the results of this research suggest that ADF men have a similar level of knowledge about the symptoms and treatment of prostate cancer as those in the wider community. Whether Australian Vietnam veterans' exposure to herbicides was the primary link for these men to develop prostate cancer is unclear^{9,11}; the lack of difference in knowledge may also reflect an indifference to this disease.

While the majority of the cohort had seen a GP within the last two years, RACGP guidelines (which were developed for use by GPs in Australia), do not recommend screening unless the man specifically raises the topic⁵. Thus, if men do not raise the topic of prostate cancer, and if GPs follow the RACGP's Guidelines, it is possible that no one will raise and discuss it. This is of concern given that there was a high percentage of men in the cohort who had never raised the subject with their GP, particularly when men with a family history are at an increased risk of developing prostate cancer². If the topic is discussed, doctors can individualise the risk for their patients¹, rather than leaving these men potentially with limited knowledge and/or awareness of the symptoms, screening and treatment options.

As prostate cancer is a common cancer in men in Australia, with incidence rates increasing in recent years^{7,27} it was surprising that nearly 70% of the cohort did not know of someone who had prostate cancer. This outcome is significantly higher than previously reported³. This suggests poor public awareness of prostate cancer and/or men not discussing the issue with other men or their GPs possibly because of a lack of knowledge, or because they are embarrassed¹⁹. Not discussing the topic can result in men not having knowledge about symptoms, although there are rarely symptoms in the early stages of prostate cancer^{2,14,22,23,28}. While the disease most often originates in the prostatic glandular acini², there is a common misconception that urinary signs occur with prostate cancer and that prostate cancer would be likely to cause impotence³. Because

of misconceptions, lack of knowledge, feeling well and/or having no symptoms, men may not undergo prostate cancer testing, even though feeling well and not having symptoms does not indicate they are free of prostate cancer^{2,3,20,23}.

Sources of information for prostate cancer are available online via Veterans' Affairs^{17,18}. In addition, information is available via social media such as Twitter and Facebook which are growing in popularity²¹. The increasing use of online fora to access information in general may result in men accessing information about prostate cancer²¹. Campaigns such as Movember^{22,23} also provide information to raise awareness of men's health issues including prostate cancer; the campaign also aims to raise money for prostate cancer research and to become a global communication conduit for raising awareness of men's health issues²¹.

There were a number of limitations in this study including the generality that the results may be limited by the relatively small numbers (250 participants) and that the ADF men were not asked to clarify whether they had seen a GP in the community or interpreted their annual medical check as seeing a GP. While the study questionnaire did not differentiate between seeking a GP in the community or seeing an ADF medical officer, as medical officers who serve in the ADF are trained in the wider community along with their colleagues who practise in the community, this lack of differentiation should have little impact on results. However, it is important to note the high number of participants who reported limited awareness and knowledge about the symptoms and treatment of prostate cancer.

Although the two groups were not purposively matched for age, results indicate that the percentage of participants in each age group was similar. As the majority of participants were 40 years or younger (77%), this research is important given this cohort's limited knowledge and their interaction with social media which suggests that men under 40 years of age are actively using social media to seek information about health issues including prostate cancer^{21,23}.

Conclusion

There was little difference found between either group regarding their awareness and knowledge about symptoms, screening and treatment options for prostate cancer and this, may be of benefit to men now and in the future. For ADF men, attendance at parade nights provides a unique opportunity for specific health issues to be addressed, an opportunity not available to men in the wider community. For all men, more open discussions with GPs about

all aspects of their health would assist men to make better informed decisions. The increasing use of social media provides a forum for accessing information, particularly when the information available is accurate. For medical personnel, clear and unambiguous guidelines^{5,16}, particularly for the treatment of prostate cancer, would be of benefit to all.

Acknowledgements

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Tony Sutherland for arranging access to the ADF and assisting with data collection, and Brady Gentle for being the inspiration for Rosemary wishing to improve men's health.

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Defence Medical Officer Attitude Survey: The Medical Employment Classification Review (MECR) System

Neil Westphalen, RAN, MBBS MPH, DA_vMed FRACGP FACAsM FAFOEM

Introduction

The key functions of military health services* include assessing military suitability for military service. This information is used by personnel managers, commanders and supervisors to minimise the impact of:

- medical condition(s) of members which affect their ability to undertake normal workplace duties, and
- the opposite, i.e. normal workplace duties affecting their medical condition(s).

The process used for this function by the Australian Defence Force (ADF) is at Defence Instruction (General) – Personnel (DI(G) PERS) 16-15 *ADF Medical Employment Classification (MEC) System*, the latest version of which was released on 01 July 2011¹. The updated DI(G) necessitated the development and release of a training package for all uniformed and civilian Defence MOS².

Description of the ADF MEC System

DI(G) PERS 16-15 requires the medical suitability of every ADF member for employment and deployment to be summarised by:

- A Medical Employment Classification (MEC) alphanumeric code, related to their primary military occupation;
- A specific Specialist Employment Classification (SPEC) alphanumeric code for aircrew, divers, parachutists and submariners, and
- employment restriction or 'R-codes', which amplify the member's allocated MEC/SPEC by highlighting specific employment limitations.

Local ADF health staff are responsible for managing ADF members with short-term employment restrictions (typically less than 28 days) in accordance with DI(G) PERS 16-21.³ These cases do not require MEC Review (MECR).

However, ADF members with medium- or long-term employment restrictions (typically more than 28 days), require MECR using a process described in accordance with DI(G) PERS 16-15. There are two types of MECR:

- **Unit MECR (UMECR).** As a general rule, UMECRs are required for personnel who are unable to deploy or be employed without restrictions in the

* *The functions and roles of military health services include the following:*

- *Operational Health Support. The primary reason for the existence of military health services is to provide health support for military personnel wherever and whenever they operate.*
- *Medical Evacuation. The fact that military personnel could end up in isolated places means that they may need evacuation if they are ill or injured.*
- *Humanitarian Aid / Disaster Relief. This may be a primary role, or a subset of operational health support, possibly using different facilities according to the needs of the potential recipient(s).*
- *Military Medicine Capabilities. These include aviation, underwater and CBR medicine.*
- *Assessing Medical Suitability for Military Service. Military health staff need to ensure that personnel managers, commanders and supervisors are aware of the health status of those for whom they are responsible.*
- *Occupational and Environmental Health. There is a need to ensure that military workplaces are not permitting preventable illness or injury.*
- *Health Promotion. There is a need to ensure that processes are in place to maximise the general health and wellbeing of military personnel.*
- *Treatment Services. This refers to the provision of primary, secondary and tertiary level care, in both the deployed and non-deployed (garrison) setting.*
- *These functions and roles are ranked such that, as one goes up this listing, so the level of military-specific expertise required to undertake them increases.*

medium term (typically 28 days to 12 months). UMECRs may be confirmed by local confirming authorities. These are Defence MOs who are credentialed for the role based on their experience and expertise with the ADF MEC System.

- **Central MECR (CMECR).** As a general rule, CMECRs are required for personnel who are unable to deploy or be employed without restrictions in the long term (typically more than 12 months). All CMECRs require review by Defence MOs at the MEC Advisory and Review Service (MECARS) in Canberra, pending confirmation by the relevant single-Service MEC Review Board (MECRB).

CMECR Quality. MECARS uses a Medical Administration System (MAS) database, to track MECARS taskings. The MAS database shows that, although the number of MECRBs increased by 6.8% per annum in the five years since 01 January 2007 (Figure 1), the number of MECRB appeals has increased by 31.1% per annum over the same period (Figure 2).

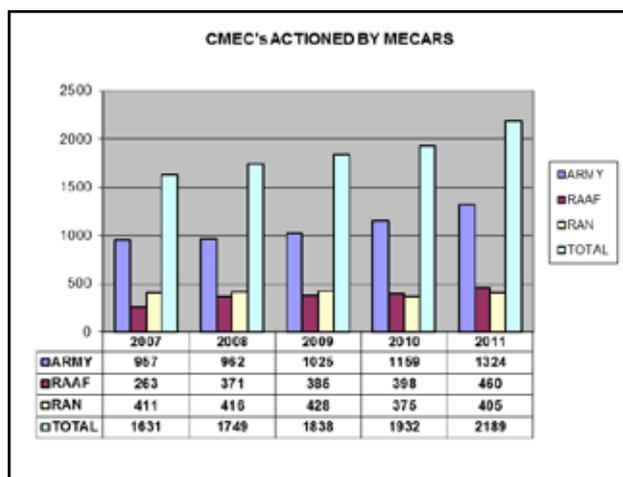


Figure 1: CMECR's Actioned by MECARS

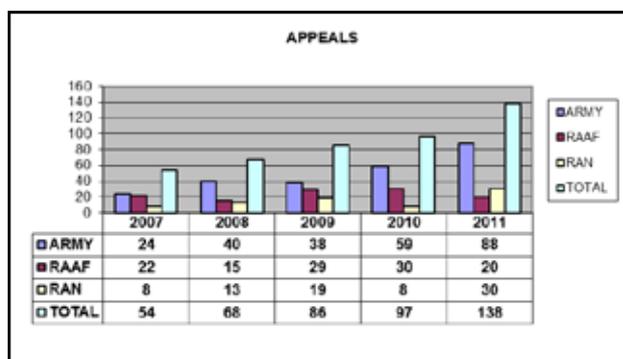


Figure 2: MECRB Appeals Actioned by MECARS

The MAS database was upgraded in September 2012 to include an administrative and clinical quality tool, which was used on 1210 CMECRs received by MECARS between 01 February and 30 September 2012. This tool confirmed that there is considerable variation in the quality of the CMECR documentation received at MECARS (Figure 3).

	Very Poor	Poor	Adequate	Good	Very Good
Number	64	206	412	473	53
Per Cent	5.3%	17.0%	34.0%	39.1%	4.4%

Figure 3: MECARS CMECR Quality Assessment, Feb-Sep 2012

Literature Review Summary - Wynne-Jones et al. (2010)⁴.

It was thought that the variations in the quality of CMECR documentation may be influenced by the attitude of the MOs who participate in the MECR process. Although time constraints precluded undertaking an extensive literature review, this premise is supported by several papers on the attitudes of general practitioners regarding civilian sickness certification, which were summarised by Wynne-Jones et al. (2010).

Wynne-Jones et al. (2010) is a review of 18 papers (predominantly from Scandinavia and the UK) regarding GP attitudes towards sickness certification. These papers include qualitative, quantitative and systematic reviews. They identified three themes in these 18 papers:

- **Conflict.** A third of GPs reported sickness certification to be problematic, with many GPs reporting that the handling of sickness certification was difficult on a weekly basis. Half of the GPs found handling disagreements with patients, decisions about the prolongation of certification, assessing patients' work ability, and the optimum duration of sickness certification fairly or very problematic.
- **Role responsibility.** Many of the papers reported that GPs often found that their roles in the sickness certification process were unclear and conflicting. Responsibility towards the patients and the UK Department of Work and Pensions (DWP) and the Department of Social Security (DSS) generated some divergence when making the decision to issue a sickness certificate. However, the majority of participants in this study felt their responsibility to their patients outweighed that towards the DWP or DSS. This difficulty in handling the various roles that the GPs play leads to concerns about poor practice and despair in the process as a whole, and the role of the GP in particular.
- **Barriers to good practice,** both within and outside the healthcare system. Barriers within healthcare

systems focused on the GPs own competence in certification decisions, in particular judging incapacity for work and the duration of absence required. It was suggested that although certification should be based on physical health, allowing certification on social grounds would improve practice and reduce some of the perceived conflict within the consultation. This was compounded by conflicting advice from other health professionals who suggest to patients that they need to be absent from work when the GP did not agree. Difficulties working with other colleagues were identified as barriers to practice, with GPs feeling undermined by hospital and other colleagues. Furthermore, a large number of GPs would prefer not to be part of the sickness certification system, suggesting the alternative of an authoritative individual to whom they could refer patients.

Wynne-Jones et al. (2010)⁴ concluded that any potential for changing the certification system needed to focus on reducing the potential for conflict, clarification of the roles of all stakeholders, and improving access to specialist occupational health and rehabilitation services.⁵

Garrison MO Attitude Survey. In consequence, it was decided to survey the attitudes of uniformed (Navy, Army and RAAF), Australian Public Servant (APS) and civilian Contract Health Practitioner (CHP) MOs regarding their attitude to the ADF MEC system. It is stressed that the purpose of the survey was not to produce a 'scientific paper', but to inform how the quality of the MEC documentation received at MECARS could be improved.

Aim

The aim of this paper is to report the results of a survey of the attitudes towards the ADF MEC system of uniformed and civilian Defence MOs who work in the Joint Health Command garrison setting.

Materials and Methods

A questionnaire (Figure 4) was developed and distributed to all participants at the 20th Australian Military Medicine Association (AMMA) Conference held in Melbourne in October 2011. Additional questionnaires were also distributed via email through the JHC garrison organisation. Recipients were requested to complete a hard copy of the survey and fax it to MECARS. The results were entered onto an Excel spreadsheet for analysis using SPSS Statistics Student Version 18.

The survey included demographic questions regarding Service / civilian status, full- or part-time



**DEFENCE MEDICAL OFFICER ATTITUDE SURVEY:
MEDICAL EMPLOYMENT CLASSIFICATION REVIEWS (MECRs)**

This survey is for Defence Medical Officers only. Its purpose is to assess their attitudes with respect to how they conduct Medical Employment Classification Reviews (MECRs). Please complete and return to MECARS (fax to 02 6266 2281).

YOUR DEMOGRAPHIC INFORMATION

1. Your Current Defence Affiliation (tick one)
 Navy MC Army MC Air Force MC APS MC Contractor MC

2. Your Current Defence Affiliation by Permanent/Reserve Status (tick one)
 Permanent MC Reserve MC N/A

3. Your Current Defence Employment Status (tick one whether Service or civilian)
 Full time MC Part time MC Not currently working for Defence

4. Your Total Defence Service / Employment Experience (tick one)
 <12 months 1-5 years 6-10 years 11-15 years 16-20 years >20 years

5. Your Current Garrison Health Region (tick one)
 NNSW SNSW QLD VIC/TAS C & W N/A

6. Your Current Role in the MECR Process (tick all relevant)
 Treating MC Confirming MC Other MECR MC Not doing any MECRs

7. Your Current Frequency of Involvement with MECRs (tick one)
 Daily Weekly Monthly > Monthly Not doing any MECRs

YOUR MECR ROLE

8. What do you think is the role played by Defence MOs in the MECR system?

9a. Further to Q8, how would you rate how well you understand the role played by Defence MOs in the MECR system?
 (tick one: 1=very poor, 5=very good)
 1 2 3 4 5

9b. How would you rate the importance of the role played by Defence MOs in the MECR system, compared to their other tasks?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

10. How would you rate your own current level of competency to conduct MECRs?
 (tick one: 1=very poor, 5=very good)
 1 2 3 4 5

11. How would you rate your own level of interest in improving your ability to conduct MECRs?
 (tick one: 1=very uninterested, 5=very interested)
 1 2 3 4 5

YOUR MECR TRAINING

12. Have you received any training in conducting MECRs? (tick one)
 Yes No N/A (not doing any MECRs)

12a. If yes to Q12, how would you rate the quality of the MECR training you have received in the course of your Defence career?
 (tick one: 1=worst quality, 5=best quality)
 1 2 3 4 5

12b. If yes to Q12, how would you rate the importance of MECR training to your work?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

Next page please...

YOUR MECR CLINICAL SUMMARY CONTENT

13. How would you rate the importance of providing a detailed description of how an ADF member first presents with a medical condition requiring MECR?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

14. How would you rate the importance of describing the relevant clinical history, examination and investigations at that presentation?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

15. How would you rate the importance of describing the ADF member's subsequent progress, and their current status, medications and functional limitations, with respect to that particular medical condition?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

16. How would you rate the importance of providing this information for each of the medical conditions that require MECR?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

17. How would you rate the importance of the Member's Health Statement (MHS) when considering your MEC recommendations?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

18. How would you rate the importance of the Workplace Disability Report (WDR) when considering your MEC recommendations?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

19. How would you rate the importance of describing the overall current clinical prognosis and functional limitations (in particular the requirement for clinical monitoring, sudden incapacitation risk, and likelihood of medevac whilst deployed)?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

20. How would you rate the importance of describing the rationale for your MEC recommendations, based on all the above?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

21. How would you rate the importance of providing a clinical summary that reads as a stand-alone document?
 (tick one: 1=very unimportant, 5=very important)
 1 2 3 4 5

22. How would you rate the support you receive from MECARS (previously Medical Services) with respect to your MECRs?
 (tick one: 1=very poor, 5=very good)
 1 2 3 4 5

YOUR MECR CLINICAL SUMMARY TIPS

23. Have you been given any tricks or tips (as opposed to formal training) on how to reduce the time required to write a MECR clinical summary?
 (tick one)
 Yes No

23a. If yes to Q23, what tips or tricks have you been given or are using?

24. Do you routinely keep copies of your MECR clinical summaries, which you update when ADF members return for their next MECR?
 (tick one)
 Yes No

YOUR COMMENTS

25. Do you have any additional comments regarding what you think about the MECR process?

Thanks for your time. Please return this survey to MECARS (Fax 02 6266 2281).

Figure 4: Defence MO MECR Attitude Survey Instrument

status, location by garrison region, and amount of Defence experience. MOs were then asked to use a five point scale to rate their attitude to their MECR role, MECR training, and what were referred to as ‘tips and tricks’ to make writing MECRs easier. Other questions asked them to rate their attitude towards the intrinsic components of a MECR clinical summary, and the support provided by MECARS. Respondents were also provided with an opportunity to make comments.

Although the validity of the survey instrument was not assessed prior to its implementation, the questions reflect the information routinely required by MECARS MOs in order to perform their review

function. As such these questions represent that which should be considered as a matter of course, by treating MOs and confirming authorities during the MECR clinical summary development process.

Ethics approval for the survey was not required, as it was anonymous and did not entail the provision of clinical or other personal information.

Results

Survey Response Rate. MECARS received 82 useable questionnaires. Figures provided by garrison operations indicates that there were 520 MOs who provided garrison health care as of 03 November 2011 (15.8%) (Figure 5).

Region	Navy	Army	RAAF	Total ADF	APS	CHP	Total Civilian	Total	Responses	Per cent
QLD	2	21	10	33	10	55	65	98	25	25.5%
NNSW	5	16	18	39	13	50	63	102	14	13.7%
SNSW	31	39	7	77	62	46	108	185	14	7.6%
VIC/TAS	1	12	3	16	8	24	32	48	6	12.5%
C&W	4	19	12	35	7	45	52	87	16	18.4%
	43	107	50	200	100	220	320	520	75	14.4%
Responses	5	19	4	28	2	52	54	82		
Percent	11.6%	17.8%	8.0%	14.0%	2.0%	23.6%	16.9%	15.8%		

Figure 5: Defence MO MECR Attitude Survey - Response Rates⁶

Demographics. Of the 82 responders, 19 (23.2%) were permanent ADF members, 21 (25.6%) were reservists, and 41 (51.2%) had no uniformed affiliation. In addition:

- 67.1% of valid responders (55) were full time.
- Seven responders (8.5%) had less than 12 months experience of working for Defence; 19 (23.2%) had 1-5 years, 19 (23.2%) had 6-10 years, 10 (12.2%) had 11-15 years, nine (11%) had 16-20 years and 18 (22%) had over 20 years.
- 68.3% of responders (56) undertook their MECR role at least daily, and another 24.4% (20) at least weekly.
- 46 responders (56.1%) did so as treating MOs and 22 (36.8%) as MECR confirming authorities.

MECR Role. The responders rated the following as either ‘good’ or ‘very good’:

- Personal understanding of the MECR process: 82.9%.
- Personal importance of their MECR role: 79.3%.
- Personal competence at conducting MECRs: 71.9%.

- Personal level of interest in their MECR role: 70.9%.

MECR Training. With respect to MECR training for garrison MOs:

- 18.3% had not undertaken any MECR training.
- 29.3% considered the quality of MECR training they had received as either ‘good’ or ‘very good’.
- 73.1% rated the importance of MECR training as either ‘important’ or ‘very important’.
- MECR Clinical Summary Content. Garrison MOs rated the following as either ‘important’ or ‘very important’ with respect to MECR clinical summaries:
 - providing a detailed description of how ADF members first present with a medical condition requiring MECR: 80%.
 - providing a detailed description the relevant clinical history, examination and investigations at that presentation: 86.6%.
 - providing a detailed description of the member’s subsequent medical progress with respect to that medical condition: 97.5%.

- providing this information for each of the member's medical conditions requiring MECR: 90.3%.
- the Member's Health Statement (MHS): 54.9%.
- the Workplace Disability Report (WDR): 58.5%.
- describing the member's current prognosis and functional limitations: 91.4%.
- describing the rationale for the recommended MECR: 89.0%.
- providing a clinical summary as a standalone document: 79.3%.

Tips and Tricks. 22% of garrison MOs reported using tips and tricks to reduce the time required to write MECR clinical summaries. However, 83.1% also reported keeping copies of previous MECRs.

MECARS Support. 26.6% considered the support provided by MECARS to be either good or very good, while 37.4% considered MECARS support to be either poor or very poor.

Comments. 76.8% of responders provided comments regarding their MECR role; 28% commented on their MECR training, and 51.2% made general comments on the MECR process.

Discussion

As far as the author is aware, this study represents a first attempt to present information regarding the attitude towards their role of assessing medical suitability for military services of Australian and overseas medical practitioners who provide health services for a military workforce.

Figure 3 shows that 22.3% of CMECRs received at MECARS between February and September 2011 were assessed as either poor or very poor. This represents the provision of suboptimal medical advice with respect to the career management of over 250 ADF personnel – more than a Navy guided missile frigate crew, Army rifle company or RAAF squadron.

Furthermore, variations in CMECR quality has important implications regarding the consistency of UMECR decision-making by confirming authorities at the garrison health unit and regional level, noting that – unlike CMECRs – UMECRs are not subject to oversight by MECARS. This in turn has implications with respect to:

- Ensuring that members with medical condition(s) that do not prevent them from deploying, and are still able to do so. Doing so means more operational strain for other personnel and is likely to affect other personnel management decisions, such as eligibility for courses, posting, promotions, pay and other entitlements.

- Ensuring that people with medical condition(s) that preclude them from deploying *are* prevented from doing so. These personnel do not facilitate achieving the operational mission, and they can pose a threat to themselves if they are unable to receive the medical care they need, or if the operational setting makes their condition(s) worse⁷. Less dramatically, preventing medically unfit personnel from deploying also facilitates their rehabilitation and compensation.

Study Limitations. The apparently poor response rate of only 15.8% (Figure 4) precluded the investigation of MO attitudes *within* the various garrison MO sub-populations (in particular by Service / APS / CHP status, and by garrison region).

Discussion with garrison health staff led to the conclusion that the response rate was affected by local MO workload and 'survey fatigue', as apparently indicated by poor response rates to other garrison MO surveys. However:

- There were significant difficulties ascertaining the number of garrison CHPs in particular, given they are provided through third parties, especially if they only work for Defence part-time.
- the number of garrison MOs (520) provided by garrison operations was clearly accurate, noting (for example) the 43 Navy 'garrison' MOs per Figure 5 does not reflect the total number of PN MOs (approximately 40), many of whom are not in fact undertaking garrison duties⁸.

This is confirmed by a review of the MECARS MAS database, which found only 264 garrison MOs who had contributed one or more CMECRs between 01 February and 28 September 2012. Although it is likely that there are additional garrison MOs who have not contributed any CMECRs during this period, eight months is considered an ample timeframe for them to have done so. The MECARS database figure is therefore probably more accurate than the number provided by garrison operations. Using the MECARS database number of garrison MOs results in a response rate of 31%, which is somewhat more respectable.

Even so, a 30% response rate to this survey is perhaps itself indicative that the overall attitude of garrison MOs towards the MECR process may not be particularly positive. Furthermore:

- A greater proportion of the garrison MO workforce are likely to have no uniformed (permanent or reserve) affiliation rather than the 51.2% of responders who so indicated.
- The overall level of Defence experience of garrison MOs is probably considerably less than that indicated.

It is therefore appears reasonable that survey responders may represent a 'best case' with respect to garrison MO attitudes to the MECR process. This premise is supported by the MECARS database review, which found that 180 of the 264 MOs therein participate in the CMECR process only as treating MOs (68.1%), compared to the proportion of survey responders who reported themselves as such (56.1%).

MECR Role. This conclusion is further supported by the proportion of responders who rated their understanding of the MECR process as 'good' or 'very good' (82%). The quality of MECRs and the nature of the queries received at MECARS, makes it very unlikely that the garrison MO workforce possesses anything like this level of understanding. Similar conclusions are drawn regarding the perceived importance of their MECR role, their MECR competence, and their level of MECR interest. This is further supported by many of the responder's comments (see below).

MECR Training. The fact that 73.1% of responders rated the importance of MECR training as important or very important is encouraging. However, despite the MECR training being a mandated requirement prior to undertaking MECRs, 18.3% had still not undertaken such training. Furthermore, only 29.3% of responders characterised the MECR training they had received as good or better. This indicates the need to significantly improve the quality and reach of MECR training for garrison MOs. This conclusion is also supported by many of the responder's comments (see below).

MECR Clinical Summary Content. The high 'important or very important' response rates (around 80% or more) to most of the survey questions related to MECR clinical summaries is also encouraging.

The lowest 'important or very important' response rates were for the MHS (54.9%) and WDR (58.5%). It is noted that, as they are completed by the member and commanding officer respectively, that obtaining them in a timely manner can be problematic. It is also accepted that treating MOs should be aware of the member's attitudes regarding their workplace in any case, as part of the normal doctor-patient relationship.

However, it is unclear how treating MOs can properly assess the MEC status of their patients in the absence of documentation from both *the member and the workplace* regarding their (perceived) level of workplace disability. This in turn suggests that the level of understanding, importance, competence and interest with respect to the MECR is perhaps not as high in practice as was indicated elsewhere in the survey.

Reference is also made to the 22% who reported using tips and tricks to reduce the time required to write a MECR clinical summary. This is clearly far fewer than should be expected, given the level of experience, and frequency with which the responders undertake MECRs (63.3% at least daily).

This suggests that there is considerable wasted effort expended on duplicating clinical summary information that is already available on previous MECRs. This in turn suggests that the level of understanding, importance, competence and interest with the respect to the MECR is perhaps not as high in practice as was indicated elsewhere in the survey. It is also suggested that this highlights deficiencies with the current MECR information technology processes (in particular, access to MECRs done by other MOs). This conclusion is further supported by many of the responder's comments (see below).

MECARS Support. Responders characterised the support provided by MECARS to be poor: the 26.6% who considered it to be either good or very good is exceeded by the 37.4% who considered MECARS support to be either poor or very poor. Furthermore, some of the comments indicated a lack of awareness of the existence of MECARS.

It is accepted that MECARS can be fairly demanding as to what is required from treating MOs and confirming authorities with respect to getting useable CMECRs. Follow up feedback was therefore sought via email regarding what treating MOs, confirming authorities and other stakeholders would like from MECARS in return. These responses indicated more frustration with the MECR process than with MECARS *per se*. Particular reference was made to the timeframes for MECRB determinations, and a new form was used for the MEC process for a short period before reverting to the previous version.

MECARS had previously made representations to undertake a travelling roadshow to address training and enhance communication, however this could not be supported because of resourcing issues. The MECARS website⁹ had also been substantially revised, with a dedicated resources page¹⁰ including PowerPoint presentations, desktop information sheets, and a series of MECR training scenarios.

Respondent Comments. Main respondent comment highlights (good points) included:

- Many respondents are keeping copies of MECRs as a basis for writing the next one. Many comments referred to the need to improve how these are shared between treating MOs.
- There was one (but only one) reference to the improved flexibility of the new MEC system.

Main respondent comment highlights (room for improvement points) included:

- There appears to be a high level of understanding that the MECR process is important, but not actually why it is important.
- Furthermore, some of the 'understanding' is incorrect: particularly the fact that the purpose of the MECR process is to facilitate personnel - not clinical - management.
- There were multiple references to the need for enough time to conduct MECRs properly.
- There were, however, many more references to the need for better MECR training.
- There were also multiple (but fewer) references to the need for better information technology (IT) support.
- There were a few references to variations between the confirming authorities (which supports the view of MECARS staff regarding the variation in the quality of the CMECR documentation they receive, and which led to this study).

Conclusions

- Although the poor response rate significantly reduced the scope of this study, it was still possible to draw some valid conclusions based on the premise that the responders most likely represent a 'best case' with respect to MO attitudes to the MECR process.
- Although the understanding of the MECR process, the importance of the MECR role, their MECR competence, and the level of MECR interest appear generally good among the responders, it appears unlikely that they represent the garrison MO population as a whole.
- There is a need to significantly improve the quality and reach of MECR training for all garrison MOs.
- The lower 'important or very important' response rates for the MHS and WDR suggests that the level of understanding, importance, competence and interest with the respect to the MECR is perhaps not as high in practice, as indicated elsewhere in the survey.
- The low proportion of responders who reported using tips and tricks to reduce the time required to write a MECR clinical summary also suggests that the level of understanding, importance, competence and interest with the respect to the MECR process is perhaps not as high in practice, as indicated elsewhere in the survey. It also suggests that there is considerable wasted effort expended on duplicating MECR information that is already available on previous MECRs, and

highlights deficiencies with MECR information technology processes.

- Followup regarding the perceived poor or very poor MECARS support indicated frustration with the MECR process, rather than MECARS per se. Particular reference was made to the timeframes for MECRB determinations, and the new form used for the MEC process that has since been withdrawn.
- Responder's comments generally supported these conclusions (particularly with respect to training, and variations between confirming authorities). However, they also indicated that the actual level of understanding among responders regarding their MECR role is less than they perceive, while highlighting the need for better IT support, and time to conduct MECRs properly.

In short the attitude survey results suggest that at least 20% of Defence MOs have a 'poor' or 'very poor' attitude with respect to their participation on the ADF MEC system. This finding appears generally consistent with the review paper by Wynne-Jones et al (2010)⁴.

Issues related to CMECR quality should form the basis for further study. However the attitude survey results suggest they are generally consistent with the fact that about 20% of the CMECRs received by MECARS are assessed as either 'poor' or 'very poor'. As an aside, there is a need to assess UMECR quality on comparable terms as the MAS quality assessment tool used by MECARS for CMECRs.

The survey findings suggest that consideration should be given to incorporating MECR quality as a performance indicator for all Defence MOs who participate in the ADF MEC system. Such a 'MECR quality performance indicator' should form part of the performance appraisal / contract renewal process for treating MOs and confirming authorities.

Respondent feedback reiterates the need to significantly improve the quality and reach of MECR training for all garrison MOs. Such training should highlight why the MEC process is important, and the need to effectively use the information provided in the WDR and MHS. MOs also need more time and improved MEC IT support in order to write better clinical summaries. Consideration should also be given to identifying where the MEC process can be simplified.

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7. Department of Defence, 2007, 'Report of Board of Inquiry into the Death of CAPT Paul Lawton', [online], http://www.defence.gov.au/coi/reports/Lawton_R.pdf, [2012, 02 May]
8. Review of the "Health Service Officer Spreadsheet Dec 10" at DNH found approximately 40 currently serving PN MOs, most of whom were engaged in staff duties, assigned to the Fleet Pool, or undergoing initial entry training. It is therefore estimated that only around ten PN MOs are engaged in garrison health roles at any one time, rather than the 43 per Figure 5.
9. Joint Health Command Directorate of Military Medicine, 2012, Medical Employment Classification Advisory and Review Service (MECARS) [online] <http://intranet.defence.gov.au/vcdf/sites/MECSysystem/comweb.asp?page=79004&Title=Functions>, [2012, 30 Apr]
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Nurse Practitioner Led Health Facility (Role 1) on Exercise Precision Support, 2011: a nurse practitioners observational report

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Introduction

Late in 2011, the Royal Australian Air Force (RAAF) deployed a Role One enhanced health facility in support of Exercise Precision Support. The Role One health facility was deployed to the Shoalwater Bay military training area and tasked with providing 24 hour care during the pre-deployment exercise for Australian forces headed to operations overseas. The Precision Support exercise integrates with air operations, large scale logistic movements and austere base establishment elements, to aid in the preparation, training and sustainment of service personnel for operational roles, both in a conflict environment as well as humanitarian aid roles. The Role One provided this medical support with 2 Emergency Nurse Practitioners (ENPs), Registered Nurses (RNs), Medical Assistants (MAs) and Radiographers. The ENPs took on the role of the senior clinicians during this exercise, competently managing all of the health complaints that presented during the exercise period.

This article will discuss and review the role of the Nurse Practitioner (NP) within a Role One, deployed Defence health facility, build on international evidence whilst supporting the utilisation of NPs in the RAAF Health Service and subsequently more widely in the greater Australian Defence Force (ADF). This article will provide some practical evidence enabling health commanders to recognise, deploy and fully utilise NPs, in order to support current and future ADF operations.

Background

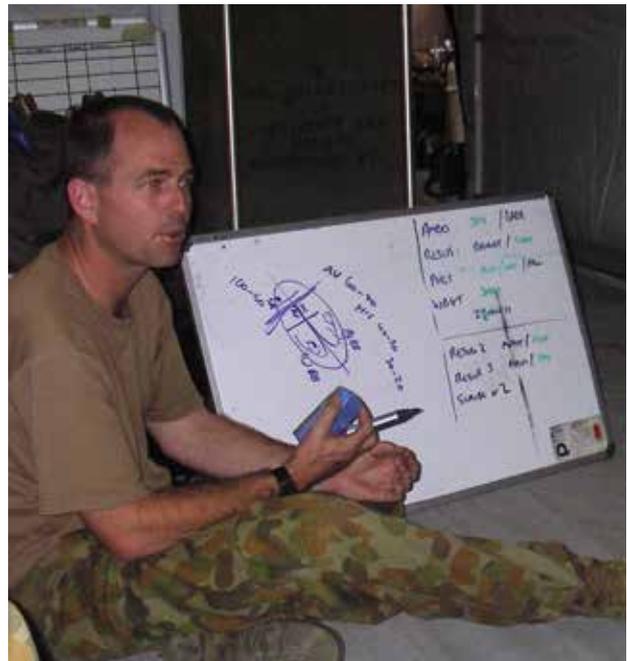
The future of health and its delivery is changing across all sectors, including the military. As the provision of health care evolves globally, so do the influencing factors such as an ageing population, scientific and technological developments, increasing consumer knowledge, awareness and expectations. As a quality provider of health care, the Australian Defence Force will not escape the increasing complexity of health care as well as the opportunities and threats presented by globalisation. The global responsibility of health care provision to those in need, secondary to crises arising from international political unrest and instability, will continue to provide the Royal Australian Air Force with ample opportunity to provide health care in austere and complex environments. Taking onboard these issues, Air Force Health is beginning to embrace the challenges ahead with a well trained and well equipped health care workforce, though there remain further refinements and developments to maintain this force capability. Transformations and reviews in Defence health include the division of garrison from operational health components, the review of

deployable hospital systems and the critical analysis of human resource utilisation, and are continually being conducted to optimise Defence's response to these challenges.

Reviewing changes in health care provider options, distribution and availability, offers a unique opportunity to access options previously not available. This review will inevitably lead to the implementation of new strategies, with a focus on responding to the health needs of the ADF community, while fully utilising the skills and knowledge of experienced, existing Defence Force health care professionals. Within civilian practice new roles are being explored, and innovative models of care, with an emphasis on a collaborative team approach, are being implemented both nationally and internationally. These models are helping to meet emerging health care provision demands and should be equally explored in the military setting to ensure equivalent service provision and professional opportunities. Whilst some work has already begun in the area regarding NPs and Physicians Assistants (PAs) within the Defence Force health workforce, neither path has yet been consolidated nor rolled out across the wider Defence Force.



FLTLT Danny O'Neill Clinical case review



FLTLT Matt Luther Clinical patient education

Nurse Practitioners

The Australian Nursing and Midwifery Council (ANMC) apply the following definition for a Nurse Practitioner:

“A nurse practitioner is a registered nurse educated and authorised to function autonomously and collaboratively in an advanced and extended clinical role. The nurse practitioner role includes assessment and management of clients using nursing knowledge and skills and may include but is not limited to the direct referral of patients to other health care professionals, prescribing medications and ordering diagnostic investigations. The nurse practitioner role is grounded in the nursing profession’s values, knowledge, theories and practice and provides innovative and flexible health care delivery that complements other health care providers. The scope of practice of the nurse practitioner is determined by the context in which the nurse practitioner is authorised to practise.”¹

Whilst nurse practitioners may appear a new asset in the ADF, they are well established in the military setting internationally as well as nationally within the civilian sector. NPs are employed across many specialty streams with a small portion of these already employed in Defence, whilst others utilise their extended clinical role for Defence, yet to be recognised, within a reserve capacity. Coalition forces such as the United States, Canada and the United Kingdom, all utilise NPs in the provision of health care, within the garrison space, in support of exercises as well as on operations. The impact and acceptance of the NP role within civilian and coalition military health care models can be attributed to the robustness of the professional position, flexibility, as well as care coordination functions of the role.

The professional attributes of a NP that recommend it to a Defence application are those that highlighted the role appropriate to fulfil the need for health care options in rural and remote Australia, late in 1990². Extended practise within an autonomous, yet collaborative model, allows the NP to immerse themselves in varied health care environments, complementing the existing structure, whilst bridging the historical gap between nursing and medicine. NPs have filled a service capability gap and acted as a force multiplier, with significant potential, in the military health model.

The robust nature of nurse practitioner accreditation ensures that the Medical Officers (MOs) collaboratively working with an NP, can rely on a competent, qualified and professional health care provider.³ NPs

add to the capability of a health care service rather than straining it further. The role of the NP is not to cover shortfalls in qualified medical officer positions, the role is to augment traditional medicine, support the provision of holistic health care and broaden the health care option for the consumer.

Whilst the human body remains unchanged, intricacies in the application of health care in a military environment provides many and varied examples of why military health is rapidly being recognised as a specialty area. Austere environments encompass contaminated working conditions, poor lighting, little or no environmental control, limited pharmaceutical options, minimal reserve capacity including a prolonged supply chain, clinician fatigue, as well as limited equipment and consumables. The above list aptly describes the Role One operational environment.

Military health facilities are categorised across a range from one to three, denoting their level of capability according to the assets deployed, with the Role One being the foundation of these facilities. Adding components to this base model will ultimately achieve a Role Three facility, capable of sustaining a significant surgical element including recovery of those surgical patients requiring critical care. A Role One is normally established within a complex of tents, in a remote locality, providing health support for a small deployment of personnel. The services provided from a Role One facility include aviation medicine, primary health care, resuscitation and environmental health.

Similar to other streams of health care providers, nurse practitioners are divided into subspecialties according to their training and expertise. When correlating the skill sets of a civilian NP to those required by a primary clinician in a military health facility, a best fit relationship can be found in an Emergency Nurse Practitioner (ENP). An ENP brings specific skills and experience in the acute care setting, mapping across to the identified health professional requirements of a Role One facility including triage, minor injury and trauma, acute minor illness, health promotion, resuscitation and primary health care.^{4,5} Whilst aviation health crosses both the civilian and military spheres, the Role delineated health facility concept is unique to a military setting and specifically takes into account Defence type aviation and its remote locality application. Civilian trained and sustained ENPs can obtain this aviation health specific knowledge through the RAAF's Aviation Nursing/Medical Officer (AVNO/AVMO) course. The care provided in the military health setting by an AVNO qualified ENP is in collaboration with an AVMO in accordance with the Civil Aviation

Safety Regulations 1998 (CASR, 1998) and Defence aviation medicine requirements. This collaboration completes the capability expectations of an Air Force Role One.⁶ Further consideration may be placed on this subject, enabling the appropriately trained and qualified nurse practitioner flexibility to operate collaboratively, yet autonomously, in this aviation field in the federal/commonwealth sphere, rather than the civilian sphere, further empowering the capability.

Whilst this observational report describes the integration of emergency nurse practitioners in the deployed Air Force health model owing to the specialties of the NPs in focus, there are other NP specialties that may also be adaptable to the military model. One of the specialties considered should be primary health care. A Primary Health Care NP (PHCNP) has wide extended-care nursing experience in primary care. Whilst not regularly engaging in the management of trauma and resuscitation, these PHCNPs bring another level of care for those with subacute and chronic health issues. PHCNPs provide individuals, families and groups with health care services such as health promotion, disease and injury prevention, acute and chronic disease management and rehabilitation and support.

Exercise Precision Support Role One

As expected from an extensive operational exercise involving considerable movements of equipment and personnel in a remote environment, the described Air Force Role One within the Shoalwater Bay military training area received significant presentations on a daily basis. The presentations ranged from acute injuries and trauma to minor illness and the ongoing management of chronic conditions/issues. The spectrum of diagnosis included cellulitis, soft tissue injuries and musculoskeletal complaints, upper and lower respiratory tract infections, ophthalmic injuries, abscess, dental trauma, genitourinary as well as gastrointestinal complaints. These presentations were competently managed by the nurse practitioner on duty. The two NPs were permanently on call, providing a wide range of consultative and diagnostic services to the service personnel presenting for treatment during the exercises.

Skills demonstrated in the field by the NPs included bedside ultrasound, incision and drainage of abscesses, radiological interpretation, management of skin infections and minor injuries and trauma, including dental emergencies. Whilst the Air Force does not currently recognise the national authority of NPs to order radiological diagnostic images, the NPs and co-located radiographers integrated well in a collegial

and professionally beneficial environment. Whilst testing the application of newly certified deployable equipment, the radiographers were comfortable with the range of tests theoretically requested by the NPs when presented with acute injuries at the Role One. These requests were recommended and confirmed appropriate with medical colleagues via telemedicine prior to commencement, in order to comply with current arrangements.

The four week exercise demonstrated that an appropriate NP is capable of managing a wide array of primary care and emergency cases in an austere environment. This capability enabled the dependant service members to remain in location, effective towards the exercise goals and mission ready.

During the airfield readiness mass casualty simulation exercise, the nurse practitioners again demonstrated their skill and knowledge in such situations by appropriately triaging and managing all simulated case presentations to the Role One facility. The NPs were split up during the exercise to provide a medical incident site commander and receiving clinician, providing direct care whilst supervising the care provided by the nurses and medical assistants, further demonstrating the flexibility and capacity of this professional extended nursing role. Further to this, the combat support element in location showed strong support and confidence in the services provided by the NP led Role One health team. The NPs also took the opportunity during low tempo periods during the exercise, to provide continuing professional education to their colleagues and health promotion advice to all personnel on site.

Exercise Talisman Sabre, conducted prior to the Precision Support exercise, held in the same location, also provided an opportunity for NPs to demonstrate their suitability for the military clinician role. During this exercise, one of the NPs from the described Precision Support exercise was again the lead clinician within a Role One facility. The NP was highly regarded when working intermittently with United States Defence Force health professionals transiting through the area during the exercise. The NP treated complex lacerations, fractures, acute respiratory distress, spinal injuries and dislocations, as well as the day to day health requirements of the multinational Defence members on exercise. Some of the above critical injuries and acute illnesses required evacuation from the deployed exercise environment to both military and civilian high level health care facilities. These evacuations were achieved successfully within a collaborative framework, where the NP packaged and dispatched the patients on rotary and fixed wing platforms

as well as road assets within both the Air Force aeromedical evacuation system as well as the civilian system embedded in the region.

Participation in significant operational exercises, such as Talisman Sabre and Precision Support, further enhances the ENPs specific military training, helping to bridge the gap between peacetime and wartime practice as described by Yackel et al. in their 2006 study on nurse practitioners in the deployed setting.⁷ Contrasting this US experience, the creation of an Australian military NP model will allow for the allocation of appropriate specialty NPs to be tasked with the provision of combat support. As suggested, a civilian sustained ENP would have the smallest gap to bridge whilst transferring to this unique operational environment. Many US military NPs hold family health specialities, thus role conflict may ensue. The US experience as described by Yackel et al. may be replicated in Australia if alternate speciality NPs, such as PHCNPs, are predominant in the workforce make up.

The US Military experience of nurse practitioners

The United States (US) army has and continues to successfully deploy NPs in the operational environment. During operation Iraqi Freedom eight nurse practitioners were deployed to a Role Three facility of the 28th Combat Support Hospital (CSH). These NPs were recognised by Yackel et al. as providing 'world class' primary health care on operations.⁷ The deployed NPs successfully treated common illness and injury in the build-up phase and then included the management of combat trauma during combat operations. The advanced knowledge of pathophysiology and pharmacology enabled the NPs to teach critical thinking skills as well as assessing, managing and diagnosing many conditions.⁷ Two of the NPs (one Intensive Care NP and one ENP) deployed with the 28th CSH were selected to fulfil a forward deployment. These two NPs continued to provide expert critical assessment and care within a forward operating unit, reinforcing the flexibility of their professional role. The same NPs were further utilised at the Iraqi Tikrit health facility (a 32 bed surgical unit). In this role the NPs led the primary care aspect of the unit redirecting 800 patients per month to their primary care clinic, removing significant pressure off the trauma centre. This demonstrated a measurable effect of the positive impact of NPs within US military organisations, in the roles for which they were educated and trained.⁷

A further US study, by Lewis et al. in 2012, showed NPs effectively provide immediate and lifesaving care during combat operations.⁸ The authors of

this review also noted that the conflicts in Iraq and Afghanistan have seen an increasing number of nurse practitioner deployments in the combat environment. The study elicited the uniqueness of these conflicts and supported the effective use of NPs in roles not normally associated with military nursing.⁸ The study surveyed 50 US Army NPs with deployment experience in order to explore their clinical practice and experience in the combat environment. Over 70% of those surveyed reported seeing more than 11 patients a day with a top three diagnosis spectrum of musculoskeletal/soft tissue (noncombat) damage, spinal pain (mechanical, sciatica), and gastrointestinal complaints.⁸ Over 74% reported having a physician available for collaboration, whilst 50% reported the provision of independent emergency care, with 58% of the NPs treating life-threatening injuries.⁸ The nurse practitioners in the study reported standard credentialing privileges with most of the care provided falling within the civilian equivalent realm. However, a few reported non-traditional roles such as hospital-admitting privileges in the operational setting.⁸ This study adds to the growing body of knowledge on the practice of NPs in the combat environment, demonstrating the professional capability of extended decision making and advanced nursing clinical skills. Nurse practitioners are battlefield multipliers who bring additional skills and abilities to the combat environment.⁸

Discussion

This article demonstrates the successes of the NP-led Role One and the international evidence supporting the increased utilisation of nurse practitioners in the Australian Defence Force. The subsequent assumption of NPs being recognised as a significant health resource in the Air Force would lead to their effective use during peacetime and combat/war like operations. The nursing career structure, morale and retention benefits for Air Force and the greater Defence health community would far out-weigh any initial issues associated with implementing these Military Nurse Practitioner (MNP) positions on a tri-service basis. The beneficial impacts NPs have had on the provision of civilian health care have been thoroughly evaluated and whilst the number of NPs in Australia remains small, the work conducted by this group has been proven to have had a positive

effect on patient outcomes and health care consumer choice. The US military concluded that the versatility of the NPs assigned to the 28th CSH was clearly demonstrated by their ability to function in the varied critical health care provider roles in which they were immersed.⁷ On review, the 28th CSH NPs selected clinical acumen and experience level as important predictors of their ability to transfer their peacetime skill set and perform these critical roles in the combat environment.⁷ Due to the wealth of experience and robust accreditation process, Australian NPs should be held in high regard against these self-imposed criteria.

This observational report has discussed some of the benefits of the nurse practitioner in a deployed environment. As we anticipate future requirements of the health sector of the Australian Defence Force, the NP clearly has a role to play in the provision of ADF health care. The implementation of a Military and/or Flight Nurse Practitioner (MNP/FNP) would have a positive measurable effect on the health capability of the Royal Australian Air Force. It is expected that this implementation would realise cost savings (when related to the NPs medical equivalent) as well as productivity benefits derived from the role. From the international experience, it is envisaged that all major stake-holders in Air Force health would support the rapid recognition of existing NPs and the further employment of NPs within the service. An agreed clinical framework could be rapidly transferred from an existing emergency nurse practitioner model, enabling the immediate deployment of these health care professionals according to legislative requirements. Over time this adapted framework could be further refined, as necessary, to ensure a perfect fit for the role NPs may play within the military specialisation. The United States, United Kingdom and Canada are fully utilising NPs in their military, which has proven to be a success for them.^{8,12} The next step is to recognise and integrate NPs, as the need for their utilisation is clear, allowing the Air Force and the wider ADF health system to immediately benefit from these highly trained, experienced mid-level care practitioners.

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Intrinsic and External Factors and Influences on the Motivation of Suicide Attackers

Gregor Bruce

Introduction

Suicide terrorism is the most extreme example of asymmetrical warfare. It is dramatic, frightening and can be very effective for the terrorist group which employs it. The psychological effects are out of proportion to the damage caused. The individual attackers have a mixture of motivations and the combination of motivators varies between the individual attackers, their groups and their causes.

The terms “suicide terrorism”, “suicide attacks”, “suicide missions” and “suicide bombing” have specific meanings. Pape¹ limits the term “suicide attack” to an attack which is only successful with the death of the terrorist. The terrorist deploys in the expectation of certain death to ensure the success of the mission. “Suicide bombers” are a specific example of this genre as are hijackers who fly aircraft into buildings. “Suicide missions” are carried out by terrorists who realistically do not expect to survive the mission and do not have an escape plan but sometimes survive. The success of the mission is not dependent on their death. Examples are the 1972 attack on Lod Airport and the 2008 attack on Mumbai. “Suicide terrorism” is an all-embracing term that covers all of these events. Participants in suicide attacks have significant differences in their aims, psychological profiles and motivation from those who participate in suicide missions. This paper is specifically directed to the motivation of suicide attackers.

Methodology: A broad internet literature search was performed by entering key words in widely used internet search engines such as Google and Yahoo. Key words used were “terrorism” (plus derivatives such as “terror”, “terrorist, etc)”, “motivation” and “suicide”. This produced a large number of internet references but the vast majority were unusable because they had been published to express a prejudiced point of view in an attempt to influence opinion to favour the group sponsoring the article. Material was used if confirmed as being from its original source and not being published second or third hand in a context that suited the bias of the author.

The search was performed during July 2012.

A search of the printed literature was performed with the assistance of the Charles Sturt University Library using the key words of “terrorism”, “motivation” and “suicide”.

Liberation Tigers Of Tamil Eelam

Richardson² has provided a brief history of modern suicide attacks. Hezbollah in Lebanon used suicide attacks against US and French military personnel in 1983. The attacks were judged very significant by other terrorist groups because they resulted in the withdrawal of the US and French presence from Lebanon and other groups were influenced to copy. In particular, the Liberation Tigers of Tamil Eelam (LTTE) developed suicide bombing to be so unnerving and effective for a vastly outnumbered fighting force, that their methods were studied and copied, notably in the Middle East. Their modus operandi was so influential that it provides some insight into the

motivation of future suicide terrorists. They used men, women, children, animals, boats, trucks and cars, on and off the battlefield. Their suicide bombers killed and wounded Sri Lankan presidents and other national and local politicians. Casualties included thousands of civilians, an Indian former prime minister and moderate Tamil leaders. The effect on the country's political leadership and intellectual elite was severe. They attacked the Sri Lankan top military command, the Sri Lankan navy, oil tankers, oil storage, and major buildings in Colombo. They developed under-garments which carried hidden explosives and enabled them to get close to their targets³.

They developed principles and techniques which have resonated through future groups⁴:

- Glorification of dead bombers with videos, pictures and songs.
- Use of the term “martyrdom” and not “suicide”.
- Use of female bombers.
- Careful selection from many applicants and rejection of those depressed or psychiatrically abnormal.
- Intense physical and psychological training.
- Careful planning by a support team.
- Reconnaissance and infiltration to reach targets.

Prerequisites For Suicide Attacks

There are pre-requisites before a terrorist organisation will resort to suicide attacks. There must be a culture of martyrdom within the organisation or the society which it represents. The group’s social support or pressures can influence the use of suicide. The group itself must make a policy decision to use suicide. It must see sufficient advantages to use the strategy, usually because it is too weak to use conventional methods. There must be a supply of recruits willing to kill or “martyr” themselves. An overabundance of young volunteers can add pressure for them to be deployed by a terrorist group. These factors, 1/ the influence of society or culture, 2/ the terrorist group’s policy, 3/ the psychology or personality of the suicide attacker, all affect the motivation of the attacker.

Psychological Aspects

The psychology of a terrorist will be a factor in his/her motivation to choose the role of suicide attacker. There has been considerable research and publication regarding the psychological profile of suicide attackers, but there is insufficient consistency to establish a workable profile because of the large variety of participants. Bombers have included men, women, villagers, townspeople, unmarried and married people.

“They are young and not so young, educated and not educated, from poor families and from relatively well-off ones. They are not what psychologists call ‘suicidal types’ but are psychiatrically normal, sane and probably logical. They are not depressed, impulsive, lonely, or helpless with a continuous history of being in situations of personal difficulty or economic despair”⁵.

Terrorist groups screen out emotionally unstable people as a security risk⁶.

There is a psychological need for people to have enemies and some of these people are prone to

political violence. Suicide attacks can occur when the circumstances and the individual match.

Terrorists have differing roles within their terrorist group, such as the money launderer, the forger, the organiser of operations, the person who cold-bloodedly shoots someone in the head and the suicide attacker. Each of these roles attracts differing psychological profiles. Bombers may be frustrated and alienated individuals, who have had their identity shaped in extreme fashion by leaders. They can have certain psychological traits, still within normality classifications, which make them more likely to join a terrorist group⁷. “Psychological autopsies” reconstruct the psyche of bombers and reveal personality traits different from other terrorists, such as a weak personality, social marginalisation, rigid thinking and low self-esteem. A possible scenario is that a socially aloof individual joins others at a place of worship. They share a common faith and similar interests. They assume increasingly radical values. Attachment to the group becomes so important that it distorts perceptions and the individual feels obligated to participate in terrorist activity out of loyalty to the group⁸. Individual terrorists may have psychological traits which motivate them to become a suicide attacker in preference to other terrorism options.

Maiese⁹ also considers the psychology of suicide attackers. They see their actions as justified and noble because of their love of their own group and culture which they are protecting. They see their acts as martyrdom, which is heroic and honourable, and not suicide, which is forbidden by Islam and is associated with hopelessness and depression.

Revenge

A very simple summary of motivation for terrorist organisations is “revenge, renown, and reaction”². Suicide attackers frequently claim revenge as a powerful motivator. This information comes from a number of sources such as the attackers’ pre-suicide written or video recordings, and the interrogation of failed or arrested suicide attackers. The Israeli Government has made much of this information available. The revenge motivation may be expressed in very broad terms (eg. anger at the occupation of the Middle East and holy cities by Western nations) or very personal and narrow terms (eg. the death of a relative or an act of personal humiliation). The suicide attacker may be avenging personal grievances or may be avenging perceived grievances against relatives, friends, religion or nation, ie “humiliation-by-proxy”¹⁰. Saleh¹¹ constructed profiles of 67 Palestinian suicide attackers and found almost all had a past history of injury, arrest or death of a

family member by the Israeli Defence Force. The level of desired revenge is extreme and is not limited to simple tit-for-tat. It extends to hatred of the enemy and the need for their total destruction¹².

Religion

Suicide attackers can be motivated by religion when it is distorted to provide the moral justification for immoral acts. They may have been indoctrinated at an early age regarding the virtues and purity of martyrdom and can believe that God has sent them on a mission which will be followed by heavenly rewards in the afterlife. They can have an apocalyptic view that the world is balanced between good and evil, and acting on God's behalf to defend the faith is more important than life⁹. Suicide attackers are not motivated purely by perceived heavenly rewards but mainly by apparent political gains. The heavenly rewards are a consolation or bonus, rather than the prime motivator¹². Religion can remove the normal social, family and other worldly constraints and justify heavenly self-sacrifice¹³.

Religion is not a motivator for all suicide attackers, an example being the LTTE. Also some Middle Eastern groups which use suicide attacks are secular and not Islamic fundamentalists. Pape's¹ opinion is that there is little connection between suicide terrorism and Islamic fundamentalism, or any other religion, but that suicide attacks target specific secular and strategic goals. He writes that religion is rarely the root cause but can be used by terrorist organisations for recruiting and motivation.

Nationalism

Maiese⁹ states that religious ideology and political aspirations such as ethno-nationalism tend to be intertwined as motivators. The attacker finds the situation of political oppression, loss of personal rights and the humiliation of military occupation intolerable, and they believe they will find a better life in paradise, particularly if martyrdom is looked on favourably in their society.

Nationalism is a powerful motivator for suicide terrorists. Pape¹ emphasises the nationalistic motivation for suicide attackers responding to foreign occupation. He describes it as "an extreme strategy for national liberation against democracies with troops that pose an imminent threat to control the territory the terrorists regard as their homeland". Most of the groups that have a strategy of suicide attacks are attempting to gain perceived national rights from an "invader" that is militarily too strong for them. Osama bin Laden cited Western presence in the holy cities of Islam and the Middle East as

a prime motive for his group and, as his group is multinational without frontiers, it was necessary for him to nominate a global enemy such as the US¹⁴. Individuals may join these groups and are motivated to become suicide attackers because of factors such as unquestioning acceptance of leadership, reaction to perceived military oppression, the humiliation of living in occupied territory, a sense of outrage and desperation combined with a belief that suicide attacks are the only way to win the war against oppressors⁹.

Religion and ethno-nationalism as combined motivators has been researched and debated by a number of researchers and there is not agreement on the balance of the two^{1,15,16}. The variables between individuals, groups and geography result in no common profile for all suicide attackers.

Rewards

Additional motivation can consist of economic, social and personal rewards, though these are subsidiary to the prime motivators of religion and ethno-nationalism.

The families of suicide bombers get substantial financial and social support after the death of the bomber. At one stage Saddam Hussein of Iraq was paying US\$25,000 to the families of Palestinian suicide bombers¹⁷. Suicide bombers receive large sums of money and their families' social status and reputation improve¹⁸. The Saudi Committee for the Support of al-Quds Intifada, headed by the Saudi Interior Minister, has paid money to the families of Palestinian bombers¹⁹. Palestinian families get a boost in prestige, gifts of household goods and cash. The knowledge that their family will be compensated can remove an important impediment to an attacker's self-sacrifice²⁰. Suicide attackers believe that martyrs can guarantee a place in paradise for 70 people. However not all families are compensated and some are disadvantaged by confiscation of goods and destruction of houses by the Israeli authorities, and so rewards for family should not be regarded as a prime motivator but rather as a side benefit.

Palestinian suicide attackers are aware that they gain substantial social status during training and on completion of their mission. Like the benefits for their families, this is not a prime motivator but is a side benefit. They secure instant fame spread by Arab based television networks like al-Jazeera and their names become well-known, even to children. Bombers prepare videos which are sent to the television networks on the day of the bombing. Posters and calendars are distributed with a "martyr of the month"⁵. A suicide trainee stated "My social

status was greatly enhanced. I got a lot of respect from my acquaintances, and from the young people of my village”⁶. Committing to suicide terrorism can satisfy desires for participation, action, community acceptance and, after joining, a feeling of power and strength with a clearer purpose in life. The terrorist organisation can persuade them that it is rational to sacrifice their life for a good cause and eventually their beliefs and behaviours conform to the group’s basic principles⁹. Deaths are celebrated after the attack with a festive funeral celebration, video cassettes and statements beyond the grave. There is a “Martyr of the Month”²¹.

Attackers anticipate personal rewards in the afterlife following “martyrdom”. These can include rapid passage to paradise with a higher than usual status on arrival, the right to nominate others for easy access to paradise and a welcome by virgins who are available for their pleasure. The reward of virgins is given excessive significance in Western public opinion.

Potential suicide attackers take inspiration from martyrs in previous jihads and publications such as “The Lover of Angels” by Abdullah Azzam, a spiritual mentor for Osama bin Laden, which describes martyrs who fought the Soviets in Afghanistan. Recruits motivate by watching videos of successful bombings and visiting sites of previous attacks²².

Terrorist Organisations As Motivators

Terrorist organisations have motivations for suicide attacks which have some commonality with the motivations of the individual attackers, but they also have motivations which are strategy or policy driven and are not relevant to attackers’ personal motivations. Continuing the simplification of “revenge, renown and reaction”, “revenge” and “renown” are motivators for both the organisation and the individual. Suicide attacks gain major publicity in the international media for the group and the individual gains personal fame and status. “Reaction”, particularly an excessive reaction, by the target of the attack can be beneficial to the group but is not as relevant to a successful bomber who will be dead and unable to experience the gratification of an inappropriate reaction. Groups can use suicide attacks to sabotage attempts at peaceful resolution, to gain ascendancy over other organisations and for retaliation and provocation¹². The gains for terrorist groups is such that there is value in them influencing and training individuals to become suicide attackers and so the groups themselves can be regarded as a motivating factor for individual terrorists.

There are tactical advantages for terrorist

organisations. It is a simple and low-cost operation requiring no escape route or rescue mission. The bomber can choose the exact time, location and circumstances of the attack. This increases the casualties and damage. Dead bombers do not release important information on interrogation. It makes a big impact on the public and the media because of the “overwhelming sense of helplessness”¹⁸.

Theology

Islam is frequently a motivating factor for suicide attackers when religious ideology persuades them that God has sent them on a mission⁹. Running parallel is the role of Muslim clerics in legitimising the attacks or perverting theology. Suicide is strictly forbidden in Islam and so suicide attackers must be persuaded that they are martyrs. This is done by sympathetic clergy in madrassas in the Middle East or south Asia. Islam has a tradition of the combative martyr who claims the moral high ground against enemies. This can be a motivator or consolation for attackers¹³.

The role of suicide attacks is not universally supported by Muslim theologians. After the 9/11 attacks there were divergent opinions. Some theologians expressed the opinion that suicide attacks such as 9/11 and against Israeli targets were justified, some rejected 9/11 type attacks but supported attacks against Israel and others rejected all suicide attacks. It should be noted that these opinions could be influenced by the background of the theologian with those who supported secular Middle Eastern governments at one end of the spectrum and those involved in fundamental Islamic groups and terrorist training at the other end. The killing of innocent civilians and children is similarly justified by sympathetic clergy legitimising terrorist acts with a fine distinction between “thou shall not kill” and “thou shall not murder”¹⁹. This can be further distorted into an obligation to kill under specific religious circumstances, a distortion which has occurred in all of the major religions including Christianity and Judaism.

Female Suicide Attackers

The first female suicide bomber was 16 years old and attacked in Palestine in 1985. Female attackers have increased in number ever since because they provide advantages for terrorist groups. There is an increase in the number of potential attackers and successful female attackers receive more publicity. There is a greater psychological effect. There are tactical advantages such as the stealth of the attack, the element of surprise, hesitancy to search women, women’s non-violent stereotype and better

accessibility to targets. Initially sectarian groups such as Hamas and LTTE used women while Islam fundamentalists such as al-Qaeda have not been able to reconcile an active role, such as suicide attacks, with the traditional Muslim role for women. There has been discussion as to whether women attackers should be escorted by men. It has been suggested that women have become involved as “a demand for equal status”.

The motivation for women suicide attackers has some similarities with those of men but there are also some differences. They have the same diverse profile or demographics as men and also have the same basic motivation of a nationalistic cause with religious overtones, but frequently the personal loss of a partner, close friend or family member plays a stronger role²³. Dviri²⁴ had the opportunity to interview female suicide bombers, imprisoned by the Israelis, who had either survived their attack or had been detained before activating their weapon. They listed motivations as making amends for a relative who was a collaborator, to escape being a victim of honour killing, a good method of committing suicide for the frail or depressed and to become a heroine at the same time. Many believe they will become chief, or “fairest of the fair”, of the 72 virgins who welcome male martyrs to paradise. Some LTTE female attackers were believed to have been raped by the Sri Lankan army and so could not marry or have children¹. Chechen “Black Widows” expressed a desire to die to take revenge for their husbands and children who were killed in the Chechen war¹². Female suicide attackers deployed by the Kurdish Workers’ Party (PKK) have been “persuaded” by threats and intimidation more so than male attackers and this also appears to be the case within other groups²⁵.

Community Approval

Opinions and attitudes of communities and families will not be prime motivation for suicide attackers but their approval will be a secondary motivator and, conversely, their disapproval or condemnation will be a disincentive for attackers. Generally the local community is supportive for attackers in the Middle East and south Asia. There is social pressure on the local population to celebrate suicide bombers as heroes. They are glorified with cards, poems, songs and images as if they are sports heroes. Children play games, such as mock funerals, glorifying suicide bombers. Palestinian approval for bombings in Israel was 29% in 2005 and had risen to 77% by 2008²⁶. Bombers from the diaspora, such as the London Underground bombers, are supported by other members of the diaspora but not by other

citizens in their country of residence. The vast majority of Indonesian citizens disapproved of the Bali bombings. Community approval adds to the motivation and frequency of bombings.

Family Approval

Similarly family support and approval can influence an individual’s motivation to be a suicide attacker. Family opinions are variable. The typical “party line” expressed by relatives is supportive such as “I am very proud of him and I am even prouder for my children whose father was a hero” (wife of dead attacker) and “I am very happy and proud of what my son did” (father)⁵. Copeland²³ describes relatives wavering between rejoicing and sobbing and a father praising his daughter’s final act. However parents also express distress, disapproval and grief. Mother of dead attacker: “If I could, I would take a cleaver and cut open my heart and take my son and sew him deep inside to keep him close and protect him”²⁷. There are numerous examples where parents have criticised their sons or daughters or have taken an active stand to prevent their suicide attack²⁰. Female attackers get less family approval than male attackers and so tend to be more secretive about their intentions.

Recruitment and Training

Recruitment and training are linked to motivation. The recruiters target potential suicide attackers and their motivation is increased during the training. Ideally the process is started at as early an age as possible. The recruitment process in Palestine starts with the Palestinian Authority fomenting hatred of Jews and a love of death. School curricula, camp activities, TV programmes and religious indoctrination convince children that Jews are sub-human and should be killed. Impressionable children and adolescents are persuaded that “martyrdom” is the most noble of goals²¹.

Training is also an example of motivation occurring as an external influence rather than from the intrinsic ambition or aspiration of the individual. Recruits enter a highly supervised and disciplined regimen of spiritual studies, psychological training and military training which lasts for months. They are trained to see suicide operations as an open door to paradise. Videos show what is about to happen and encourage the attacker to confront death and not to fear it. The final days of training are far more rigorous and spent in near seclusion with other bombers-to-be, immersed in spiritual contemplation and prayer. Once individuals join organizations that share their frustrations, they may undergo a process of indoctrination whereby their beliefs and behaviours are made to conform to the group’s basic principles.

Within these tight-knit communities, individuals' fear of letting down their comrades becomes greater than their fear of dying. Many come to believe that their lives can take on a broader meaning by sacrificing their existence for the sake of the cause⁹.

Summary

Motivating factors which have been identified are

- 1) appropriate prerequisites for the terrorist group,
- 2) a potential attacker with the right background, demographics and psychological profile,
- 3) hatred of the enemy with a desire for revenge,
- 4) an ethno-nationalistic struggle which is asymmetrical,
- 5) religious motivation,
- 6) perceived religious and status rewards for the attacker,
- 7) financial rewards and status for the attacker's family,
- 8) influence applied by terrorist groups because of the strategic and tactical advantages of suicide attacks,
- 9) distortion of theology by sympathetic clergy to make "martyrdom" (ie suicide) acceptable,
- 10) approval by the attacker's community and society,
- 11) influence and cultivation at a very young age and during the recruiting process,
- 12) continuing impetus during training.

Some are intrinsic to the individual attacker and some are external influences. Each attacker has a different mix of this "cocktail" and no single motivating factor is decisive for suicide attackers but it is the combination of factors that results in an "explosive cocktail"²⁰. Gambetta¹³ states:

"Suicide missions show such a diversity of traits as to make the search for an overarching explanation of their

occurrence and patterns seem futile. The wealth of facts and arguments may even leave the reader wondering whether suicide missions should be treated as a single phenomenon rather than several."

Many of the motivating factors, such as revenge, religion and financial reward, can be strong, but normally not strong enough to induce a person to kill at the sacrifice of their own lives. Not all suicide attackers are subjected to outside influence and pressure. The London Underground bombers were substantially self-motivated and female bombers often develop in isolation to avoid family resistance. The factors which appear to be most common across the genre are

- 1) severe repression by dominant regimes,
- 2) asymmetry between the competing forces resulting in feelings of hopelessness and desperation,
- 3) lack of foreseeable opportunities to make a success of future life.

In addition there must be a culture which accepts martyrdom and an individual with the psychology or personality to be a suicide attacker. It is notable that there are exceptions for every motivation for suicide terrorism that has been listed. There is a wide cross section of attackers and many do not fit the predicted demographic or psychological profile or have a religious motive. Some may be recruited and trained at a very young age and others may attack as adults without requiring persuasion or recruitment. Not all families are rewarded and some are punished by the authorities. This lack of conformity and consistency results in difficulties in profiling potential suicide attackers and hinders counter-terrorism measures.

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Will the introduction of the National Broadband Network change the face of preventive medicine?

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Introduction

Aging of the Australian population will increase the demand and provision of health services. Older Australians are significant users of healthcare, which is in disproportion to their number.¹ A large proportion of health utilisation is devoted to managing chronic diseases,² many of which are to a certain degree preventable. Some of the diseases are linked to unhealthy lifestyle factors such as cigarette smoking, excessive drinking, lack of physical activity and excess body weight. In some cases, the progress of the chronic diseases may be slowed and serious consequences (i.e. hospitalisations, moving to nursing home) can be avoided or significantly delayed by timely access to care and/or good disease management.³ Thus, preventive measures may ease the burden on the overloaded healthcare system and decrease the health expenditure.

There is considerable potential for internet-based solutions to play an increasing role in the provision of health services. Their role in the area of preventive medicine is less defined.

There are two key factors that may revolutionise the delivery of health services in Australia in the immediate future. The first is the National Broadband Network (NBN) rollout, delivering high-speed broadband fibre-optic connection to 93% of the Australian population, with the rest having access to wireless and satellite internet. The other is the recently announced health system reform, which will include the introduction and development of e-Health applications.

At present, major metropolitan institutions are linked by fast internet connections. The introduction of the NBN will not greatly change the way they operate. However, many rural and remote areas currently lack fast and reliable internet connections and it is these areas which will most likely benefit from the “communication revolution”. The development of fast, cheap and reliable internet connections will allow good quality two-way interactive communication and will open new opportunities for telehealth, supporting the possible shift in emphasis from curative medicine to a more preventive approach.

The introduction of the NBN will also impact the Australian military, which is in the process of introducing new electronic services. In 2011 the Australian Department of Defence signed a contract to develop and implement an electronic health information system for the Australian Defence Force known as the Joint eHealth Data and Information (JeHDI) system.⁴

In this paper we will provide a short overview of internet-based solutions, which are successful in providing effective primary, secondary and tertiary health prevention to end users. We have concentrated on interventions that are dependent on internet speed and therefore will be potentially enhanced by the introduction of the NBN. Additionally, examples of existing relevant online health services and health initiatives related to prevention are provided.

Existing internet-based solutions in preventive medicine

Primary prevention

Published literature on primary prevention covered topics such as health promotion and education, which also included information, coaching and

relevant interventions to promote healthier lifestyles.

- There was some evidence that videoconferencing may reduce social isolation^{5,6} and interactive online programs may reduce excessive drinking.⁷
- Online programs to reduce smoking are popular and regarded as helpful, but there is little direct evidence of their effect on smoking cessation.⁷

- There was no evidence that online programs increased physical activity, promote wellness or improve nutrition, provided any measurable health effects above offering information. However, interventions used in the studies were not interactive, tailored or sufficiently engaging to the user needs.

Secondary prevention

Published literature on secondary prevention covered topics such as online medical services and internet-dependent screening services for general (previously undiagnosed) populations.

Access to primary health care

Although currently there is no published literature linking online access to primary health care with improved health outcomes, several advanced internet sites developed by governments and private organisations provide online primary care sites. The effectiveness of these programmes in improving access that primary health care may be inferred from their wide use by patients, patient satisfaction and perception of their cost-effectiveness by providers.

Internet dependent screening of general population

There was very limited evidence that:

- Screening for glaucoma using portable devices and semiskilled, ancillary health-care workers and specialists situated off-site is feasible for rural, remote or nursing homes residents;⁸
- Online hearing tests and audiological diagnosis are feasible, may contribute to increased identification and treatment of hearing-impaired subjects and have the potential to provide health-care coverage for rural areas where specialised audiological services are lacking;⁹⁻¹¹
- Screening for lung cancer using a mobile tomography unit is feasible and may identify the disease at an early stage, thus improving quality of life and prognosis;¹²
- Screening for cardiovascular risk using mobile clinics with semiskilled, ancillary health-care workers and specialists off-site is feasible for rural and remote area residents.¹³

Tertiary prevention

Tertiary prevention is focused on prevention of disease progression and attendant disability after a diagnosis has been established. Topics such as screening for eye disease in the diabetic population, home tele-monitoring using automated devices in populations with selected chronic diseases (diabetes, heart failure, COPD), suicide prevention and wound management.

Screening for diabetic retinopathy

Internet-based screening for eye disease in diabetic populations using digital fundus photography performed by auxiliary health workers and a specialist off-site has been applied in rural and/or remote areas of Australia and Canada, and for American Indian and Alaskan Native populations. It is also being developed in the European Union as an international cooperation.¹⁴ The validity of the model has been thoroughly researched. Diagnosis was found to be reliable and accurate.¹⁵ It appears to be cost-effective for rural, remote and forensic populations, but not for urban areas, where a well developed system of screening by optometrists is in existence.^{14,16}

Home telemonitoring

Home telemonitoring of patients with chronic diseases is clinically effective. Clinical benefits appear greater in populations with heart failure and mixed chronic diseases than with those with COPD or diabetes. Evidence on the impact of health services utilisation is more limited. Compared with usual care, the following observations were made:¹⁷

- For patients with diabetes, home telemonitoring provided better glycaemic control and appeared to reduce hospitalisation but increased the use of non-hospital health care.
- For patients with heart failure, home telemonitoring appeared to reduce hospitalisations, but increased the use of non-hospital health care. In numerous small trials, telemonitoring reduced mortality;¹⁷ however, the results were not confirmed by a recent, very large single trial.¹⁸
- For patients with mixed chronic diseases, telemonitoring reduced mortality and health services utilisation.
- Quality of life (QoL) and satisfaction of telemonitored patients were similar or higher in all studies.
- Economic analysis indicates that home telehealth may be cost-saving, although the evidence is limited by the low quality of studies.¹⁹

Home telehealth interventions are becoming an integral part of health care delivery in Canada and with the US Department of Veteran Affairs.^{17,19}

Wound management

Internet-based solutions in wound care, including wound photography and videoconferencing for care management appear to have substantial health benefits, such as improved healing rates, fewer amputations, fewer hospitalisations and a shorter length of hospital stay.^{20,21} They increase

the effectiveness of utilisation of scarce specialist services and present objective health benefits for patients in rural and remote localities; they may result in reduction of costs associated with treatment and transportation. Telehealth-enabled wound management is in the process of being adopted in Western Australia.²²

Suicide prevention

There is very little evidence of direct outcomes (i.e. decrease in suicide rate) resulting from online programs of suicide prevention; most studies investigated intermediate outcomes such a change in mental state, caller satisfaction and session impact. There is some supporting evidence for effectiveness of online -based programs in achieving these intermediate suicide prevention outcomes. There is a reasonable level of evidence of online -based programs demonstrating the effectiveness of online suicide risk assessments and suicide screening.²³

An example of an online suicide prevention program is the United States Department of Veterans Affairs (US VA) online suicide assessment program for evaluations of self-harm in rural and remote sites via videoconferencing and to the home via videophone and in-home messaging devices.²⁴

NBN potential to affect the delivery of preventive medicine

While the NBN has the potential to change the current level of e-Health services available, primarily in areas that currently have poor connectivity such as rural and remote areas, the impact of the NBN on health service delivery is highly dependent on service development and user adoption.

Currently, one of the major problems for any new development of internet-based solutions in Australia is the great variation in connection speed available to users. According to Brad Howarth, author of the book "A Faster Future", many internet services were deliberately throttled back in terms of their bandwidth requirements in order to service the greatest number of people. It is only when the connection speed becomes uniformly high across the country that it becomes profitable for developers to start building applications that actually take advantage of the high network speeds.

In 2010, the Australian Government embarked on a reform of the health system. This reform, outlined in the "Release of Roadmap to Reform" media release, includes many fundamental e-Health initiatives, such as providing Medicare rebates for online consultations from July 2011 and the introduction of Personally Controlled Electronic Health Records (PCEHR) in 2012.²⁵

With the roll out of the National Broadband Network, it is expected that there will be an introduction of technological enhancements into areas of rural and remote Australia not seen before. It may also be assumed that when preventive measures in the area of secondary or tertiary prevention become available, community members will be informed via health services and health professionals. In the area of primary prevention, when suitable online programs become available, the existence of the programs should be advertised to the target community.

Out of the presently available internet-based initiatives in preventive medicine, one of the most positively affected by the introduction of the NBN will be videoconferencing-based health care services. These services may be used to reduce loneliness and bring people together by providing either specialised programs or by fostering communication between the elderly and their distant family members.^{5,6} They can also be used to enable access to primary and specialist health care from the patient's home, with those isolated by distance or age and disease, such as people living in rural and remote areas and the residents of nursing homes who will benefit the most.

Summary

The internet plays an increasing role in the provision of health services directly to the end users. Its role in providing internet-based interventions is well documented, but its role in the area of preventive medicine is less defined.

In this paper we provided a short overview of internet-based solutions which are successful in providing effective primary, secondary and tertiary health prevention to end users. We concentrated on interventions that are dependent on internet speed and therefore will be potentially enhanced by the introduction of NBN.

There were numerous studies providing evidence for the effectiveness of internet-based tertiary prevention measures, such as screening for diabetic retinopathy, chronic disease management by home telemonitoring and tele-wound care. There was less evidence for the effectiveness of internet-based interventions developed for primary and secondary prevention. A number of innovative, commercially available online health services and national health initiatives that are related to prevention, primary health care and disease management were identified.

The introduction of the NBN will improve access to these initiatives for those outside the metropolitan areas and may stimulate the development of new applications. The NBN is a powerful tool that may potentially enable the development of innovative e-Health solutions for the future.

Table 1: Online health services and national health initiatives that are related to prevention, primary health care and disease management

Primary Prevention

Government portals:

- <http://www.healthinsite.gov.au> (Australia)
- <http://www.nhs.uk> (UK)
- <http://www.healthfinder.gov> (USA)
- <http://www.publichealth.gc.ca> (Canada)

Intervention sites:

- Canadian portal website Evolution Health (<http://www.evolutionhs.com/>)
- Stop Smoking Centre (<http://www.stopsmokingcenter.net/>)
- Healthy Weight Centre (<http://www.healthyweightcenter.net/>)
- Alcohol Help Centre (<http://www.alcoholhelpcenter.net/>)
- ElderGym Senior Fitness (<http://www.eldergym.com/index.html>)

Secondary Prevention

Online screening tests:

- Phonak™ offers an online test that measures user ability to hear in the presence of noise.
- Siemens™ offers a test that measures the ability to pick a word out from background noise.
- Starkey™ lets the user listen to tones at different frequencies and compare their hearing curve to the standard ones.
- All these tests can be accessed from the About.com portal at <http://deafness.about.com/od/audiogramsandaudiology/f/hearingtest.htm>.

Online practice of primary medicine:

- Medgate AG (<http://www.epractice.eu/en/cases/medgate>) is a national provider of telemedical services in Switzerland since 2000.
- Online Care For Providers (<http://www.americanwell.com/>), launched in the US in April 2011 by American Well Company, provides nationwide live, on-demand consultations to patients in their homes or workplaces, using two-way video, secure text chat, and/or phone.
- NHS Direct (<http://www.nhsdirect.nhs.uk>) is a large UK national telehealth project, a mix of online/telephone health services and a health portal.

Tertiary Prevention

Home monitoring services:

- Telbios (<http://www.telbios.it/it/pagineOnline/layoutNewHome.jsp?idmenu=29>) is an Italian company providing services such as teleassistance.
- Vitaphone (<http://www.vitaphone.de/en/company/history-of-vitaphone.html>) is a Germany/Middle East company which offers home-monitoring of bio-signals such as blood pressure, weight, glycaemia or ECG.
- Australian home telemonitoring trials will start at two locations in NSW, Armidale and Kiama, after the NBN is rolled out.

Online mental health assessment:

- In Australia, online mental health assessment for anxiety and depression may be obtained via <http://www.anxietyonline.org.au>

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A Woman At War: The Life And Times Of Dr Phoebe Chapple MM (1879-1967), An Australian Doctor On The Western Front

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Introduction

- Dr Phoebe Chapple was one of 15 Australian women doctors who undertook overseas military service during World War I.
- She was the first Australian, and the only female doctor, to receive the Military Medal – awarded for gallantry in the field.
- Despite multiple foreign awards, the military service of these women has been largely overlooked by their own country.
- The only other Australian female doctor to have been so honoured is Carol Vaughan-Evans who was awarded the Medal for Gallantry following the Rwandan Kibeho massacre in 2005.

Background

At the outbreak of World War I (WWI) female doctors were not universally accepted within the profession. The Australian Army, and initially the British War Office, saw no role for female medical officers and refused to entertain the idea of medical women serving in military hospitals. The Australian Army did not appoint a female medical officer until 1943.

Quite undeterred however, and determined to prove their medical skills, at least 15 of the 129 female doctors in Australia at the time found their way to European theatres of war. These women served with the Royal Army Medical Corps (RAMC) and with a variety of “All Women Medical Units” including the War Office-funded Endell Street Military Hospital in London and the Scottish Women’s Hospitals for Foreign Service¹. They served in France, Belgium, Greece, the Balkans and Egypt. They worked under harsh conditions, receiving casualties directly from the frontline. The conditions of their service and their prospects of recognition were however, quite different from those of their male counterparts.

This paper will discuss the wartime contribution of Dr Phoebe Chapple MM, the only Australian and the only woman doctor to be awarded a medal for gallantry during WWI. Her experiences reflect the social and historical circumstances of Australian and British society at the time. Despite numerous foreign awards, the service of Dr Chapple and other Australian women

doctors who undertook military service on the Western Front and elsewhere in Europe, has been overlooked in the official histories of WWI.

Early Years

Phoebe Chapple was born in Adelaide on 31 March 1879, and entered the University of Adelaide aged 16, graduating with bachelors degrees in science, surgery and medicine¹. She came from a privileged background; her father was the headmaster at Prince Alfred College, Adelaide, and five of her seven brothers



Figure 1. Dr Phoebe Chapple, Graduation photograph (courtesy of the State Library of South Australia).

and sisters held university degrees. After qualifying as a doctor, Phoebe sometimes visited her patients in a phaeton, driven by a liveried coachman². Despite this privilege, her career showed a determination for hard work ; she frequently treated the poor and disadvantaged, charging only minimal amounts.

Dr Chapple was actively involved in women's health issues and was appointed to the committee of the South Australian [Women's] Refuge in November 1912. In January 1917, Dr Chapple was called to give evidence in a coronial enquiry into the death of Eva Brokensha, a 33- year-old woman who had died of septicaemia following an illegal abortion by (a notorious and unregistered) Mr Francis Sheridan³. The Brokensha case brought Dr Chapple into the public limelight and revealed a defining trait ; Phoebe was untiring in her work, and entirely professional in the face of public scrutiny.

Outbreak of WWI

When war broke out in 1914, there were calls for volunteers, including appeals in the Medical Journal of Australia for doctors at the front. Phoebe wanted to contribute, but the Australian Army refused to appoint women as doctors. As a result, if Phoebe wanted to be an army doctor and serve with the Allies, she had to go to Britain. "It was an anxiety, leaving my father and mother, but they, unselfishly, urged me to go – and I felt that the larger duty did call me overseas,"⁴ she said.

By February 1917, 40,000 Australians had already died on the Western Front; many thousands more would die in the Battles of Bullecourt, Messines and Passchendaele that year. Frustrated with the Australian Army's refusal to appoint women doctors, she travelled at her own expense to England that month to enlist in the Royal Army Medical Corps (RAMC) where she was appointed as house surgeon to Cambridge Military Hospital in Aldershot with the honorary rank of Captain.

"It was a tremendous experience," she said of her time in Aldershot. "I was in the surgical wards in charge of every variety of war ailment and wound. The convoys arrived continually from France, and more than 1,000 patients were accommodated at this busy centre."⁴ Phoebe's work soon gained recognition and she was the first woman surgeon in the hospital to receive equal status to the men. As a doctor, Phoebe was entitled to officer status, although the British Army did not gazette her rank formally. This situation was common to all of the women doctors during WWI and would have significant consequences for recognition of their service in years to come. As Phoebe noted, "The old country is very conservative, and was only beginning

to consider this step when the armistice was signed."⁴

Later, she was attached to Queen Mary's Army Auxiliary Corps (QMAAC). As members of the QMAAC, women doctors examined the recruits, ran invaliding boards and were in charge of the health of serving women. Their uniforms were those of the nurses and many found it galling, resenting the fact that they were not gazetted with the RAMC. It is for this reason that Phoebe's service, along with that of some other women doctors, has incorrectly been reported as nursing service.

By late 1917, Britain accepted the need to send women to the Front. "In her hour of need, England accepted the offer of her women, and it was found that five women were equal to four men as regarded work,"⁵. It was never intended that women should go into the actual fighting line, but the boundaries between bases and battle zones soon became blurred.

Britain was also struggling to provide medical manpower to the Front and opened a route for women to serve in the European theatres. Chapple was one of the first two women doctors sent to the front, which she "regarded as an honor [sic] for Australia".²

In November 1917, Phoebe arrived in France and found herself in the "centre of the battle zone". The war was at a "terrible pitch", she recalled, with the threat of air raids every night. "They were the worst proposition, we felt so helpless to protect the wounded patients from such attacks. The women all behaved splendidly throughout that awful three months in 1918, when nearly every night bombs would be dropped somewhere in the locality."⁴

Bombardment and gallantry

On 29 May 1918, Chapple was inspecting a QMAAC Camp near Abbeville in France when it came under a German aerial bombing attack. Her actions that night were recognised with the award of the Military Medal (MM). Chapple was the first woman doctor and the first Australian woman to receive such an honour: "For gallantry and devotion to duty during an enemy [action]".²

At the time of the bombardment, she was almost eighteen months into her wartime service. Earlier that day, German planes had been seen overhead. QMAAC Camp 1 accommodated women serving with the Queen Mary's Army Auxiliary Corps, who were working at the British hospital in Abbeville, closely located to the 3rd Australian General Hospital (3AGH).

According to one historian, a lorry was set on fire, close to the camp and "by the light of the flames the Germans were able to drop three bombs."⁶ It is unclear whether the lorry was set on fire deliberately, or was

hit in an earlier raid, but the impact of the three bombs was devastating: one hit a trench where the women were sheltering.

In her account of the night, more than two and a half years later, Phoebe emphasised the practical over the personal. "I think when there are suffering and death at hand, fear absents itself," she said. "Fortunately, the construction of the trench was zig-zag, so the missile was limited in its effect... Out of 40 women, nine were killed outright and a number injured. There was much work to be done then, with limited means, to relieve the sufferers. Even telephone communication with headquarters was temporarily cut off. There were lots more raids, too."⁴

Eight of the nine women died outright; one died later of her wounds. Hampered by darkness and difficulty, and subject to yet more raids, Phoebe worked her way through the trench, tending to the wounded. Finally, at 2 o'clock in the morning, the administrator in charge of the section, a Miss E. Cross, called out the roll. A QMAAC historian wrote: "No-one who was there will ever forget the silence that was only broken by a little gasping sob from someone when a name was called and not answered"⁶

Phoebe was one of the fortunate. She had survived.

Recognition for Gallantry

Her actions that night, during and after the air raid, were soon recognised. She was awarded a Military Medal (MM) and was the first woman doctor to receive it². The citation reads: "For gallantry and devotion to duty during an enemy air raid. While the raid was in progress Doctor Chapple attended to the needs of the wounded regardless of her own safety."

While Phoebe expressed her surprise at the award, and sought to play down her involvement ("I had never looked at my work in that light"⁴), others became concerned, and even angry at the discrimination they felt she had received in not being awarded a Military Cross, which would have been more usual for an Officer.

The issue of Military Medals for female gallantry was contentious in WWI. Some felt that the Military Cross (MC) was appropriate but it was not agreed to as women did not hold commissions and were never formally gazetted as Officers. The award of Member of the Most Excellent Order of the British Empire (MBE) was also considered for women but the criteria were broad and did not specifically recognise acts of gallantry. As a result, the relatively new Military Medal (MM) - instituted in 1916 - was agreed upon as an appropriate award for women who displayed "bravery and devotion under fire".⁷



Figure 2. Dr Phoebe Chapple's Medals including the Military Medal (courtesy of the Australian War Memorial).

This award was initially intended only for men but a supplementary warrant for the MM was quickly issued to recognise women three months later, "under exceptional circumstances, on the special recommendation of a Commander-in-Chief in the Field".²

In the supplementary warrant no restriction was made by nationality or service and the award was made open to foreign women.

A colleague of Chapple's from Adelaide, Dr Helen Mayo, was so incensed at what she saw as discrimination that she noted, many years later, that: "Had [Chapple] been an officer (and a man) she would have received the Military Cross."² Dr Mayo was herself a doctor and educator, specialising in infant health. Like Phoebe, she also pursued her career in Adelaide and sought to advance the status of women in terms of education, equality and opportunity.

For the entire period of WWI approximately 150,000 MMs have been awarded – women represent just 0.1% of that total, making them one of the most exclusive groups within the whole Honours system. The Military Cross was not awarded to a woman until 2006 when British Army medic Private Michelle Norris was recognised for acts of gallantry in the Middle East.

Post bombardment

After the events at the QMAAC camp, Phoebe went on to serve as a doctor with the Women's Auxiliary Army Corps in Rouen and Le Havre (now with rank of Major) until the end of the war. She returned to Adelaide in 1919 and resumed practice.

Dr Chapple also became involved in women's politics. Supported by the Women's Non-Party Association, she stood in Adelaide's municipal elections held in December 1919. In an editorial, the Advertiser newspaper commented on her suitability as a candidate: "She has a wonderfully good record in connection with the war, having displayed administrative talents which should enable her to render excellent service as a councillor if elected. Previous attempts to capture seats in the City Council for ladies have proved unsuccessful, but in principle there is nothing against them; on the contrary, a strong case can be made out in favour of utilising the special gifts of women."⁹ Voters disagreed, however. Phoebe was defeated.

It was the first and the last time that Phoebe stood for election. She remained committed to women's issues, and was an advocate for equality, but she preferred professional practice to politics. However, she continued to work towards removing professional barriers to women and became a founding member,

Dr. Phoebe Chapple Returns

IN addition to taking part in Coronation festivities and visiting clinics in different parts of Europe, Dr. Phoebe Chapple, who returned to Adelaide on Saturday, was also fortunate that her visit coincided with two important medical gatherings.

The first was the conference of women doctors under the auspices of the Medical Women's International Association. This was held at Edinburgh, and Dr. Chapple was the Australian delegate.



DR. PHOEBE CHAPPLE, who returned on Saturday from a seven-months' trip abroad.

"About 300 women from all parts of the world attended," said Dr. Chapple. "All papers were given in both English and French, and I have never known a more efficient secretary than the Englishwoman who translated so quickly from one language to the other. The American women were marvellous, as they not only did they prepare excellent papers (the subjects of the conference were cancer and maternal mortality), but they also illustrated each one with cinematograph films."

The second gathering was the annual meeting of the British Medical Association at Belfast. Nothing which could have added to the comfort of the delegates had been omitted from the preparations. The congress badge was a free pass in the trams, and a special floor had been hired from London at a cost of £300 for the reception and dance in the King's Hall. This incidentally was left for the visit of the King and Queen a week later.

The idea of living on a vessel in port when accommodation is at a premium is evidently becoming popular, as between two and three hundred doctors stayed on the *Almansora* at Belfast, and then later went for a cruise to Norway, described by Dr. Chapple as the most beautiful country in the world.

While on the Continent, Dr. Chapple attended clinics at Berlin, Vienna, and Budapest. Budapest was looking particularly prosperous owing to the great popularity of its artificial baths for rheumatic cases, to which people were flocking from all parts of Europe, she said.

She was particularly impressed in Munich with a remarkable monument erected by Hitler to the 16 pioneers of the Nazi movement, also were killed in the city square. It was in the form of a huge colonnade with the 16 coffins arranged in two rows at both sides of the centre archway. The guard of soldiers with reversed guns is changed every two hours, and every citizen gives the Nazi salute as he passes.

Dr. Chapple was one of the few South Australians to have a seat in the Abbey for the Coronation, a privilege for which she was nominated because of her war service. Every part of the ceremony, even that of the precedence of England's nobility and of the overseas representatives, was easy to follow with the aid of the imposing book, bound in cream calf and embossed in gold with the royal coat of arms, which was given to each person in the Abbey.

"Barley sugar and cheese" was Dr. Chapple's answer when asked how she survived without food for the many hours of waiting both before and after the actual ceremony.

Most of Dr. Chapple's time in England was spent with her three brothers: Mr. Alfred Chapple, and Mr. Ernest Chapple, in Cambridge, and Dr. Harold Chapple, a Harley street specialist. Among the many other South Australians she met was Mr. Stanley Newman, at one time a master at Prince Alfred College, when Dr. Chapple's father was headmaster, and later a well known operative singer. Two of Mr. Newman's sons entered the Air Force, but one was killed in Arabia almost two years ago.

and later President, of the South Australian Medical Women's Society. She also held the role of honorary doctor at the Salvation Army maternity hospital for unmarried mothers from 1910 to around 1940.

Her work also demonstrated an ongoing interest in the 'underbelly' of Adelaide society: as a doctor trusted by the courts, she was called to give evidence in cases involving backstreet abortion and police violence. From 1921 to 1922 she also worked as an Honorary Medical Officer in the night clinic at the Adelaide Hospital, where she treated women with venereal disease, which had become a significant post-war health issue¹⁰.

Phoebe cherished her independence, making six overseas trips during her career in an era when international travel was difficult and arduous. In 1953, she was invited to the Queen's Coronation Ceremony held at Westminster Abbey. She also attended the Medical Women's International Association Conference in Edinburgh and visited clinics in Berlin, Vienna and Budapest¹³.

Phoebe continued to work from her private practice in Norwood, in Adelaide's eastern suburbs, until she was 85. Her later life was marked by involvement in organisations committed to women's welfare, but she received little acknowledgement in the press. Although her life and work were largely defined by her wartime service, she preferred to play down her experiences. She marched each year on Anzac Day, ironically at the head of the nursing units.

Phoebe Chapple died on March 24, 1967 and was cremated with full military honours. Unmarried and with no children, her estate helped to fund a bursary at St Ann's College at the University of Adelaide¹⁰.

Dr Chapple was not the only Australian woman doctor to serve in uniform during WWI, but her service is unique. Until Captain Carol Vaughan Evans was awarded the Gallantry Medal in 2005 following her actions in Rwanda at the Kibeho massacre, Phoebe remained the only Australian woman doctor recognised for gallantry in the field, under fire. As the centenary of ANZAC nears, it is appropriate that Australia recognises the military service of Dr Chapple and her female colleagues who undertook service in military medicine during WWI.

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Figure 3. Dr Phoebe Chapple returns. Adelaide Advertiser, Monday 18th October 1937, p6.

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'Giving the dope': Australian Army Nurse Anaesthetists during World War I

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Abstract

More than 2500 trained Australian army nurses served overseas during World War I. Many were called upon to act outside their normal nursing practice and one new area was that of anaesthetics. Due to a lack of medical officers in the latter part of the war, a number of Australian theatre sisters trained and worked as nurse anaesthetists in Casualty Clearing Stations in France.

The British Army provided three months' training for Australian, British and New Zealand nurses in the use of chloroform and ether. Australian nurses were enthusiastic volunteers as trained nurses at home had already carved out a small but unofficial place for the profession in this role. In addition, Canadian and American army and civil nurses were already trained and used as nurse anaesthetists.

While nurses were successfully used without recorded incident, at the end of the first training course, the Director General of Medical Services, Australian Imperial Force, decreed that the nurses would not be further trained or used. This was out of step with the other countries participating, and this paper examines some possible reasons for the change of heart.

Introduction

While nurse anaesthetists have provided anaesthesia care in the United States for more than 100 years and, today, Certified Registered Nurse Anaesthetists are the primary anaesthesia caregivers in the US military¹, Australia's military nurses have not followed the same advanced practice. This has possibly been the result of a decision in World War I to keep anaesthesia in the hands of doctors.

During World War I, the shortage of doctors due to wear and tear², and the demands on them to operate, generally prevented any opportunity for them to work solely as anaesthetists. On the Western Front in allied Casualty Clearing Stations (CCS), where many operating tables could be in use at the same time³, anyone - including dentists⁴, chaplains and orderlies - could be pressed into service as anaesthetist.

By the latter part of 1917, the lack of medical officers reached crisis point and the British Director General of Medical Services (DGMS), responsible not only for British services but overall for Australian and other colonial forces, began to investigate ways of relieving doctors from their duties as anaesthetists. One solution was to use the services of professional trained nurses working in forward areas. Staff Nurse Elsie Tranter, an Australian Army nurse, noted the scheme called for nurses '.....so as to free Medical Officers for medical and surgical wards. To this end,

two hundred and fifty (250) volunteers have been called for from amongst all the nurses on service⁵.'

The course was open to allied nursing sisters and VADs (Voluntary Aid Detachment workers) considered suitable. Nine members of the Australian Army Nursing Service⁶ were selected and given permission by the Australian authorities to attend the first course in January 1918⁷. Six Australians passed the course. However, contrary to nurses from other nationalities participating, they were then told that they would not be employed as anaesthetists and that no other nurses would be trained⁶. This paper explores the reasons why crossing the boundary into the medical profession's work became unattainable.

Nurse Anaesthetists

Nurse anaesthetists at the time of World War I were not new. In America, small groups of nurses solely practised delivering anaesthesia⁸. As early as the 1890s, the Mayo Clinic, in Rochester, Minnesota saw the potential of developing a nurse into a competent anaesthetist. Helen Clapesattle writes:

'The Mayos' were good businessmen as well as physicians. Their nurse anaesthetists [sic] provided them with superior surgical conditions and did so with an impressively low mortality rate. An additional benefit was that these

nurses were able to perform a broad range of duties beyond anaesthesia⁸.'

The nurse anaesthetists at Mayo also performed larger numbers of anaesthetics than most physician anaesthetists⁸. The most well known nurse anaesthetist of the nineteenth century, the 'mother of anaesthesia' was Alice Magaw who in 1906 documented that she had performed more than 14,000 anaesthetics without a single complication attributable to anaesthesia⁹.

Another nurse anaesthetist was Florence Henderson, who trained in Nebraska, where, unusual for the time, her training program incorporated anaesthetics. Henderson stated that she learned to administer chloroform and ether anaesthetics "in the taking of my nurses training and the three years following that... after my graduation"⁸.

By 1906, numerous papers in Australian medical journals, written by Australian surgeons who had visited the Mayo Clinic, began to record their impressions of the thousands of open ether anaesthetics given by nurse anaesthetists¹⁰. In the US, the practice of training nurses to deliver anaesthesia spread quickly⁸ and Florence Henderson trained others to administer open-drop ether. As a member of the American Red Cross at the start of World War I, she noted, "I was teaching nurses to give anaesthetics to go overseas"⁸.

Some Canadian trained nurses also had experience in giving anaesthesia. As early as March 1915, Nursing Sister M. Parks was giving anaesthetics at No. 2 Stationary Hospital, France. Nursing Sisters O.G. Nicholson and M.C. Stewart were similarly skilled, even employing the intra-tracheal method. By January 1918, seventeen Canadian sisters were trained as army nurse anaesthetists¹¹.

Even poorly trained Russian Red Cross nurses administered anaesthesia but their training came solely 'on the job'. Sophie Botcharsky worked on the Russian Front from October 1914 with Professor Pitroff, a famous surgeon. Extracts from her biography of her first day are quite graphic:

"Pitroff. .. kept the three young sisters to help him operate. Vera was frightened, and exclaimed, 'But we haven't even seen operations - nothing - just little ones!'... Pitroff whistled coolly... 'Well, you must use your common sense!' Pointing a finger at me he said, 'You will give the anaesthetic!' ...a soldier was brought in and arranged on the operating-table. His heavy, limp body was hot with fever, which I could

feel as I put on the mask and started counting the drops... I kept thinking that I knew nothing of what I was doing, nothing; then I remembered that patients died under chloroform and I felt for the pulse... Feeling that the operation was nearing an end I gave less and less chloroform. Pitroff... said, 'Enough.' We knew the operation was over... Pitroff turned back. 'Show me how much chloroform you used, sister,' he said, and seeing that it was very little he nodded. 'Well done, sisters, well done!' "¹²

The Australian Experience

At the time of the outbreak of war, Australian trained nurses had little exposure to administering anaesthesia. In general, it was not part of the training curriculum set by either the Australasian Trained Nurses Association (ATNA) or the Royal Victorian Trained Nurses Association (RVTNA), although the Launceston General Hospital Training School for Nurses listed 'Minor Surgery - Anaesthetics' as a subject in 1904¹³. However, unofficially, in country areas where no other doctor was available, nurses gave anaesthetics under the doctor's supervision^{14,15}. Even theatre nursing as a specialty had only gained momentum from around the turn of the century. Although Brisbane Hospital included 'the operating room' in their nursing staffs responsibilities in 1891¹⁶, it was not until 1912 that Melbourne Hospital, somewhat belatedly¹⁷, created the position of Theatre Sister replacing male Head Attendants¹⁸. Now, every third-year Melbourne trainee was instructed in theatre management and theatre techniques and practical experience was required before final examinations¹⁹. But this did not include anaesthetics.

Nevertheless Australian trained nurses were not unfamiliar with the practice of anaesthesia; many nurses observed the giving of anaesthesia while waiting for their patient to be operated on; and articles in professional nursing publications such as the RVTNAS journal *Una* provided opportunities to learn general details²⁰. Moreover, nurses working as midwives at home births often administered chloroform for the obstetrician^{14,15}. Their hands-on experience certainly increased with war service, even if unofficially. General Fetherston, the Australian acting DGMS, told a story of Australian nurses on a burning ship which he said demonstrated heroism 'typical of the Australian nurse': "Many of the soldiers ...were badly burnt. There was only one doctor on the ship, who with these four nurses started work.

One nurse gave chloroform while another tended to the burns²¹.”

Violetta Thurstan also recorded that nurses unofficially gave anaesthetics in the first few years of the war. A British trained nurse working in France and Belgium, she wrote in her handbook on war nursing: “Chloroform is administered by the open method, a few drops at a time. Sisters on active service may often have to give an anaesthetic themselves in an emergency when there is no anaesthetist available. The surgeon operating is responsible, and his attention should be immediately called if the patient’s condition becomes abnormal in any way²².”

Since many Australian nurses worked in British military hospitals, no doubt they were occasionally placed in this position - Australian nurses were often preferred for theatre work²³ and were placed in charge ‘as they were considered to have more initiative²⁴. Anaesthesia could also be used on the wards. Thurstan recorded that sometimes chloroform was administered when tetanus spasms were severe²¹ and it was not unusual to use anaesthesia to remove old dressings²⁵.

There may have also been favourable reports from Australian doctors at home that encouraged the Australian DGMS to include Australian nurses in the training program. The shortage of medical officers was being felt in Australia because so many doctors had enlisted. Brisbane Hospital brought doctors out of retirement to cope with the reduced numbers of honoraries and residents but there were still difficulties due to the rising number of operations. Although inexperienced medical help was forthcoming when newly graduated doctors were appointed, nurses were taught to give anaesthetics so that operations could continue¹⁶. Often an extra nurse in the operating theatres gave some assistance with anaesthesia¹⁰. Hobart Hospital was even more dependent on its Matron, Miss Adelaide Gluyas, who became a skilled anaesthetist and gave most anaesthetics for major surgery not just during the war from 1917 but up until 1924, a fact that reportedly enabled the hospital to carry on²⁶.

American doctors working in France also encouraged the British DGMS to employ nurse anaesthetists. The American Army fully utilised the services of its nurse anaesthetists during the war, both for administering anaesthesia and training others. Nurse anaesthetist Agatha Hodgins went to France with the American Ambulance group and while there, she taught both physicians and nurses from England and France how to administer anaesthesia⁹. Surgeon Harvey Cushing also had a female anaesthetist, Miss Gerrard, on his surgical team. In September 1917,

Surgeon Cushing told the Commission investigating the wastage of medical officers, “the work done here could be covered by just half the M.O.’s if they would use sisters or orderlies, as our team was doing, to give anaesthesia²⁷. All these experiences helped convince the authorities that training Australian nurse anaesthetists was appropriate.

Anaesthetic Training

In France, arrangements were subsequently made to train nurses. Each course lasted three months and was both theoretical and practical; the first two months in selected hospitals at the base and the last month in casualty clearing stations. The training included subjects such as the observation of patients before operation in order to judge the indications for and the choice of an anaesthetic; the administration of chloroform, ether, nitrous oxide and oxygen; general considerations as to the extent of anaesthesia and posture during an operation; and conduct in emergencies. Seventy-six nurses in 25 different centres attended the first course in January 1918⁷.

Staff Nurse Elsie Tranter was one of six Australians who successfully completed the course. She and two other Australian nurses - Sisters Aitken and McMinn - trained for the first two months with No. 2 American Base Hospital (New York Presbyterian Hospital Unit) in Etretat. They then were sent to No. 29 British CCS at Grevillers (near Bapaume) in mid-March, but due to the German offensive were evacuated to No. 3 Canadian Stationary Hospital at Doullens on 23 March⁶. Elsie recorded much about her training in her diary:

“16 January: Yesterday we received instruction all day in the use and administration of anaesthetics. Our teacher Miss Penland is very nice indeed and does not seem to think us too much of a bother. When she is in America she is Dr Mayo’s anaesthetist.”

“24 January: While in the hall we heard ourselves described as ‘the three Australians who give the dope’.”

“8 February: Sometimes we have to go to the wards- without Miss Penland- to give short anaesthesia for a dressing. We find this work rather a big mental strain...”

“27 February: My anaesthetics now number 49. We have this week been learning about rebreathing apparatus⁵.”

Elsie recorded the long hours and multiple responsibilities she had while working at Grevillers and Doullens, especially the latter:

“2 April: Yesterday we had a very heavy day’s work. I was just getting to bed when I was called back to the theatre and had to give anaesthetics till eight o’clock this morning.”

“14 April: So far I have given 179 anaesthetics and no casualties so far. Although this work occupies about 12 hours at least of each day we are by no means cut off from our other work. We all have a fair share of work in the dressing station - also pre and post operative nursing.”

“24 April: so far I have given 227 anaesthetics. It is very tiring and trying work, for most of the men are badly wounded and give us a lot of anxiety.”⁵”

It was appropriate that the trainee nurse anaesthetists felt nervous. In 1914, Dr R.W Hornabrook, Australia’s first full time anaesthetic specialist¹⁰, had written: “The black list in the nature of deaths a rising during operation or following on the faulty administration of anaesthetics is a very large one, it must total hundreds, if not thousands, of cases, and it stands as a lasting memorial of which the profession can not be proud²⁸.”

So it was appropriate for Elsie Tranter to be proud of her lack of fatalities. However, it did not affect the outcome. After leaving Doullens, the nurses discovered that Major General Howse, the DGMS of the Australian Imperial Force, refused to sanction the employment of nurses who had done the training⁷. Elsie was both disappointed and annoyed. On 24 May she wrote: “After letting us volunteer for special work, pass our examinations and work away for two months during the retreat the ‘Pow-wows’ of the A.I.F. have decided that they will not allow their nurses to give anaesthetics any longer. We are hoping this decision will be revoked - for we found our work although strenuous most interesting¹⁰.”

The decision was not changed but it is not clear why. The British Army continued to use their newly trained nurse anaesthetists, not just in their own hospitals but also in Australian hospitals. From April to September 1918, several additional surgical teams worked with No. 1 Australian CCS as did three British Territorial nurses from No. 54 General Hospital partly trained in administering anaesthetics whom the staff found to be ‘very useful, not only as anaesthetists, but in relieving medical officers for

other duties⁴. It must have added salt to the wounds of those Australian nurses who had been trained but were then not employed!

Discussion

A.G. Butler, the official medical historian for the war, records that General Howse refused absolutely to participate in the scheme for training nurses for anaesthetic work⁴ but gives no reasons for the decision. There is no mention of it in Braga’s biography of Howse, although he may be suggesting that Howse’s decision may have been one expression of his desire for some autonomy from the British medical services²⁹.

Another reason lies partly in the nature of the war on the Western Front. By mid-1918, after the German offensive in March, it changed from stationary trench warfare to open mobile warfare². This led to a subsequent reduction in casualties⁴, and thus demands on the medical staff. However, conditions for the nurses in forward areas under motor mechanised war were considered more difficult, and the nurses were sent to the rear². This may have been a consideration in removing the nurses from their new employment.

Gwen Wilson, in her history of anaesthesia in Australia, argues that the Australian Army had developed more medically qualified ‘specialist anaesthetists’ than the Canadian, American and English armies, which had for the most part used nurses. Therefore, she suggests that the need to train Australian nurses in this role was reduced¹⁰. In June 1918, the development of an Australian innovation, the Forward Resuscitation Team with its specialist anaesthetist¹⁰, led to another consideration. As women could not officially be sent further forward than a CCS, it meant that there was little purpose in training nurses to be the team’s anaesthetist.

Macpherson’s British medical history of the war gives another possible reason, by suggesting that the small number of Australian theatre nurses in France made it difficult to replace their expertise in the CCSs and base hospitals where their high level of competence was required⁷. Given the availability of more trained nurses in Australia, the time already spent on training the six nurse anaesthetists, and the bonus that they also performed normal nursing duties, it seems too convenient to accept this as the reason for the decision. Katie Holmes in her thesis on nursing in World War I says that the AIF’s decision ‘highlights the ideological conflict involved.. in giving women access to a world dangerously close - physically and ideologically - to combat³⁰ so it is more likely that the decision relates purely to gender.

Certainly several senior AAMC officers opposed staffing of hospitals in the forward zone with female nurses²⁴. The decision of the AIF not to employ women doctors to meet their shortfall also related to gender. Although female doctors were available, such as trained anaesthetist Dr Janet Greig at the Women's Hospital, Melbourne¹⁰. Howse was adamant that war was a man's affair²³, and women would be 'a liability, not an asset' anywhere near the Front³¹. Howse's reply to the suggestion that woman doctors be sent across clearly indicated his view on allowing women to take on traditional male roles 'No damned Female M.O.s in the A.I.F My responsibilities are quite big enough with 1200 nurses'^{24, 29}. The only support to Macpherson's argument is that surgeons no doubt were reluctant to lose a key member of their highly trained team.

These however, do not seem the most likely reasons why the nurses were withdrawn. The real explanation appears to lie in efforts to restrict the anaesthetist profession to trained doctors. In the late nineteenth century, the Australian medical profession - represented by the Australian branches of the British Medical Association - had reached agreement that only medical practitioners should give anaesthetics, and discussion and censure had regularly followed discrepancies¹⁰.

Hornabrook wrote: "The duties of the anaesthetist are heavy and exacting. To recognise these he must receive whilst a student proper training, in the same way as the physician or surgeon, and by men who make a special study of this branch of their profession²⁸".

If a nurse could become an anaesthetist, and it required no special skill such as being a doctor for administration, obviously anaesthesia did not have a place in the forward march of medicine. This was at odds with how medical men saw anaesthetics progressing. During the war, anaesthetics had developed with immense benefit to both patients and surgeons.

The increased supply of special apparatus contributed greatly to this result³². Since 1916, specialist anaesthetists had been appointed as additional officers on the staffs of the British CCSs³² so it is likely that doctor anaesthetists, where possible, would now lobby strongly for maintenance of their hard-won position - as a resident member on staff in a hospital (albeit a military one) with all its privileges and status rather than just the underpaid honoraries they had been²⁸. By 1918, those working in the profession could see a rosy way forward. Wilson writes: "One thing seems to have become firmly fixed in most minds; the determination that, with anaesthesia developing as they saw it, anaesthesia in Australia should remain within the realm of the medically qualified person¹⁰.

Conclusion

In conclusion, while other countries used nurse anaesthetists as a matter of course, and others trained nurses in the latter part of the war, Australia's medical profession did not support their employment. The key reason was that Australian doctors decided that anaesthetists could only be qualified doctors; and to maintain this status, excluded nurses. In addition, the changing nature of the war, the lack of trained theatre nurses, and the ability to send women further forward may have been contributing factors. None of the Australian nurses trained in France appear to have administered anaesthesia following their return home, and the ground broken by other allied nurses in this area was not officially pursued in this country. The nursing profession continued to omit anaesthetics from their training curriculum.

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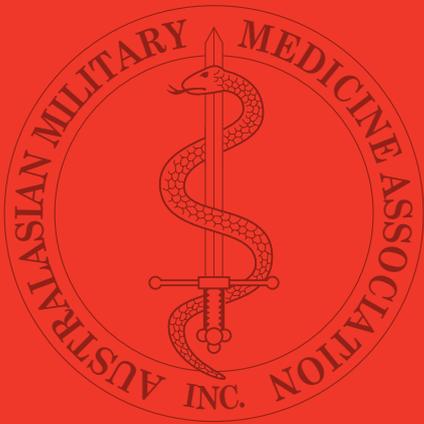
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