

The increasing prevalence and associated burden of disability requires action. In my presentation, I propose to review recent guidance and emerging evidence in the field to support a comprehensive best practice approach to support management of Defence members with low back pain.

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3. Wu A, March L, Zheng X, Huang J, Wang X, Zhao J, et al. Global low back pain prevalence and years lived with disability from 1990 to 2017: estimates from the Global Burden of Disease Study 2017. *Ann Transl Med*. 2020;8(6):299.
4. Britt H MG, Henderson J, Bayram C, Harrison C, Valenti L, Pan Y, Charles J, Pollack AJ, Wong, C, Gordon J. General practice activity in Australia 2015–16. . Sydney: General practice series no. 40. ; 2015.
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6. Schofield DJ, Callander EJ, Shrestha RN, Percival R, Kelly SJ, Passey ME. Labor force participation and the influence of having back problems on income poverty in Australia. *Spine (Phila Pa 1976)*. 2012;37(13):1156-63.

### Biography:

*Catherine Kelaheer is a fellow of the Australian Faculty of Occupational and Environmental Medicine and also the Royal Australian College of General Practitioners. Catherine worked with Health throughout the COVID-19 pandemic to help organizations to optimally manage risk related to SARS-CoV-2. Catherine served as a Medical Officer in the ARA and now works in Defence as a civilian. She is the Senior Occupational and Environmental Physician working to optimise the health and well being of Australia's Defence Force members, to prevent and manage work place illness and injury to support successful return to work and activity.*

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## Nursing Workforce Shortages: What can the Australian Defence Force Learn From the Rural and Remote Nursing Workforce Experience?

CAPT Catherine Holland<sup>1</sup>

*1 2nd Health Battalion, 2 Brigade*

Similarly to the broader health systems context, the Australian Defence Force struggles to recruit and retain an adequately sized health workforce. The recently released Defence Strategic Review (2023) sets a clear focus for innovative and agile approaches to the recruitment and retention of the Australian Defence Force workforce to meet changing strategic challenges. It is thus imperative that the factors driving challenges with health workforce recruitment and retention within Defence are well understood, and addressed into the future.

To contribute to this undertaking, the author presents the findings of her 2022 structured scoping review paper which examines the perspectives, values and motivations of nurses in the rural and remote workforce in relation to recruitment, retention, and resignation. Nurses represent a substantial proportion of both the national and Australian Defence Force health workforce. Nurses commonly form the backbone of health care provision in Australian rural and remote settings where they are often the only health provider in the community. This is analogous to Australian Defence Force nurses who are also often required to practice remotely as independent practitioners when on deployment or exercise which parallels with the research area in many ways.

In the presentation, the nexus between the findings of this review in the Australian rural and remote nursing context to that of the Australian Defence Force health workforce is explored and important implications for future planning are highlighted. It is argued that, in order to plan strategic actions for strengthening the Australian Defence Force nursing workforce, research that examines the effects of global nursing workforce demand challenges on its own nursing recruitment and retention strategies is needed.

Arksey and O'Malley's methodological framework guided the scoping review drawn on in this presentation, which identified relevant Australian literature published between 2012 and 2022 on the professional values held by rural and remote nurses, and their perceptions and motivations to come to, stay in, and/or leave rural practice. The author synthesised and interpreted the research through

the lens of Cosgrave's Whole-of-Person Retention Framework for addressing healthcare workforce challenges in rural contexts. Six key areas that influence recruitment, retention and resignation were identified and are discussed here in reference to their utility in the Australian Defence Force context.

### Biography:

*CAPT Holland recently completed a Master of Advanced Practice Nursing (Health Professional Education) at the Queensland University of Technology (QUT), in which she wrote a paper for publication on recruitment, retention and resignation of rural and remote nurses. She is an Emergency and Primary Health Nurse who is passionate about education, training, clinical competence and governance, as well as sustaining the current health workforce.*

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## Occupational Audiometric Screening: Contemporary Best Practice For Assessing Noise Exposure in Aircrew and Other Defence Personnel

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Noise-induced hearing loss is a significant concern for aircrew, and aircrew commonly express concern about hazardous noise exposures and the need for improved hearing protection. In reviewing aircrew concerns about noise exposure amongst Hawk aircrew, IAM has identified a number of opportunities for improvement in the way noise exposure and hearing is assessed.

The Defence framework for occupational monitoring of hearing and noise exposure outlines two different audiometric protocols: 'periodic screening audiometry' and 'health monitoring audiometry'. Periodic screening audiometry aims to demonstrate the best-possible level of hearing as part of a periodic health examination, and is conducted after a noise-rest of at least 16 hours. By contrast, health monitoring audiometry is intended to identify a threshold shift that could indicate excessive exposure to noise or inadequate noise-control measures, and should be conducted as soon as practicable after a period of noise exposure. Where a threshold shift has been identified, a comprehensive occupationally-focussed history and examination is required to assess factors that may contribute to excessive noise exposure, including fit and function of hearing protection, exposure to ototoxic compounds or hand-arm vibration, and other additional sources of noise.

Potential confusion with the underlying requirements for periodic audiometric screening and health monitoring audiometry may lead to an ineffective audiometric surveillance program that is insensitive to temporary threshold shift that might be present immediately after exposure to hazardous levels of noise, and fail to provide an adequate surveillance mechanism for inadequate noise controls, ineffective hearing protection, or excessive noise exposure. Without this information, Commanders are unable to assess the effectiveness of existing noise-control measures, and aircrew may inadvertently be exposed to risk of noise-induced hearing loss.

IAM has developed Aeromedical Guidance for AVMOs and aircrew to outline the best practice for periodic screening audiometry and health monitoring audiometry. This presentation will discuss the optimum delivery of a comprehensive aircrew hearing conservation program, to ensure that potential hazardous exposure to noise is detected early enough to make effective changes to aircrew exposure and noise-control measures to minimise the risk of noise-induced hearing loss and optimise health and wellbeing of aircrew as part of our duty of care for Defence personnel operating in a noise-hazard environment.

### Biography:

*SQNLDR Benedict Whalley is a Registrar AVMO at the Institute of Aviation Medicine. He has been a uniformed Medical Officer in the RAAF since 2013. Over the past year, Benedict has been working primarily in the area of aviation safety - including reviewing the processes of how physiological episodes are investigated and reported.*

*Adrian Smith is an aviation medicine specialist with 20+ years of experience in the field, currently working in the role as Principal Advisor for IAM Aeromedical Analysis and Decision Support Flight.*