



# **Veteran Health Epidemiology Research Program**

**Unit of Occupational & Environmental Health  
Department of Epidemiology and Preventive Medicine  
Faculty of Medicine, Nursing & Health Sciences  
Monash University**

**November 2005**

## Contents

Summary	3
Research Projects	4
▪ Australian Gulf War Veterans' Health Study	4
▪ Further analyses and follow up studies of the Gulf War study dataset	4
▪ Health Study of surviving Australian Veterans of the Korean War	5
Our Research Environment	6
Veteran Health Research Staff	7
Key Collaborations	9
Research Training	10
Symposium Organisation	10
Veteran and Military Health Publications and Presentations	11

## Contact

### Principal Contact:

Dr Malcolm Sim  
Associate Professor and Head  
Unit of Occupational & Environmental Health  
Department of Epidemiology & Preventive Medicine  
Monash University

Tel: +61 3 9903 0582      Fax: +61 3 9903 0556  
Email: [malcolm.sim@med.monash.edu.au](mailto:malcolm.sim@med.monash.edu.au)

### Alternative Contact:

Vanessa Murray  
Project Co-ordinator  
PA to Associate Professor Malcolm Sim

Tel: +61 3 9903 0595      Fax: +61 3 9903 0556  
E-mail: [vanessa.murray@med.monash.edu.au](mailto:vanessa.murray@med.monash.edu.au)

### Postal address:

Department of Epidemiology and Preventive Medicine  
Monash University  
The Alfred Hospital, Commercial Road  
Melbourne, VIC 3004  
Australia

## Summary

The Monash University Veteran Health Epidemiology Research Program is based within the Unit of Occupational and Environmental Health in the Department of Epidemiology & Preventive Medicine (DEPM), Faculty of Medicine, Nursing and Health Sciences at Monash.

Over the past 5 years, we have built up considerable expertise and a strong national and international track record in the veteran health research field, having undertaken several epidemiological studies that include the Australian Gulf War Veterans' Health Study, several follow-up analyses of the dataset from this study, and both the pilot study and the main health study of surviving Korean War Veterans.

Through these studies and other research activities, we have:

- established a very experienced multidisciplinary veteran health research team, with expertise in epidemiology, occupational medicine, psychology, exposure assessment, clinical toxicology, biostatistics and database management,
- developed a strong track record in developing rigorous research aims, methodology and instruments to investigate health effects in veteran populations, efficiently recruiting, tracking and collecting data from large populations of veteran and military subjects, managing the resulting large research databases, undertaking data linkages with other health databases and delivering high quality results in agreed timeframes,
- built up extensive links with the relevant veteran communities and developed productive collaborations with researchers based in other national and international research institutions, who have contributed expertise and advice to our research program in specialised areas,
- made a prominent contribution to the scientific literature by publishing a substantial number of veteran health publications in high impact international journals and by giving many oral and poster presentations on our veteran health work at international and national conferences, and
- submitted several research reports to Government, which have been used to develop policy to assist in the prevention and management of health effects related to war deployment and military service.

We have also been active in building research capacity in veteran health research, with three doctoral students involved in this program and have been involved in the organisation of symposia relating to veteran health research to assist in the dissemination of research findings. On the following pages are details about our completed and ongoing veteran health research program, relevant research staff in this program, our research environment, key collaborators, research training, publications and presentations.

## Research Projects

### Australian Gulf War Veterans' Health Study

The Australian Gulf War Veterans' Health Study was the first comprehensive health study of the entire group of Australian War veterans involved in a single theatre of war. The study was conducted by a collaborative research team from the Department of Epidemiology & Preventive Medicine at Monash University, Health Services Australia Ltd, the Department of Public Health at the University of Western Australia, and The Australian Centre for Posttraumatic Mental Health at the University of Melbourne.

The study investigated the physical and psychological health of 1871 Australian veterans of the 1991 Gulf War compared with a randomly sampled comparison group of Australian Defence Force personnel who were operational at the time of the Gulf War but who did not deploy to that conflict (n=2924). Recruitment and data collection for the study commenced in August 2000 and concluded in April 2002. Participation included completing a postal questionnaire and undertaking a comprehensive medical assessment at one of ten Health Services Australia clinics located around Australia. Health effects across several body systems were investigated including psychological health, symptoms and medical conditions, factor analysis of reported symptoms, respiratory health, neurological health, chronic fatigue syndrome, laboratory investigations, reproductive health, mortality and cancer. A cohort was established to measure mortality and cancer incidence into the future. The study also investigated whether health effects were associated with medical, chemical and environmental exposures or stressful military service experiences that may have occurred during the Gulf War deployment.

A final report detailing the results of the study was published and is available online at <http://www.dva.gov.au/media/publicat/2003/gulfwarhs/index.htm> and the Government Response to the Australian Gulf War Veteran's Health Study 2003 and the Report on Progress in Implementing the Study's Recommendations is available at <http://www.dva.gov.au/media/publicat/2003/gulfwarhs/recommendations.htm>

From this study we have published several papers in the peer review international scientific literature in relation to psychological health, respiratory and neurological health, symptoms and medical conditions and factor analysis of symptom reported by veterans (see below).

### Further analyses and follow up studies of the Gulf War study dataset

Following the completion of the Gulf War study report, we have received some additional grants to undertake further research on this valuable dataset. The funded projects are:

- Vaccinations and deployment – investigating the risks. This project aims to compare the risks of vaccination using self-reported and recorded vaccination data, and to investigate the risks associated with individual, numbers and combinations of vaccinations. The results of this study will also assist in developing valid methodology for using vaccination data in future studies.
- Temporal relationships between war deployment and subsequent psychological disorders. This project aims to investigate the onset and temporal progression of psychological disorders following deployments, including the 1991 Gulf War to assist in future Defence and DVA planning for managing these health problems.
- Separation from the Royal Australian Navy 1991 – 2001. This study investigated the association between health and mental health status, as well as demographic and military

### ***Research Projects continued...***

service variables, and separation from service in a group of Australian Defence Force personnel. It also investigated patterns of separation from the ADF over the ten year period between 1991 and 2001, including relationships with deployment and the onset of psychiatric disorders. We collaborated with the Australian Centre for Posttraumatic Mental Health, which was the institution responsible for this study.

- Data mining of three veteran health databases with peacekeeping data, which aimed to develop a profile of the mental health, health service use and quality of life of Australian Peacekeepers. This analysis was used to provide data for a grant application for a more definitive study of Australian Peacekeepers for submission to the Australian Research Council. We collaborated with the Australian Centre for Posttraumatic Mental Health, which was the institution responsible for this study.

Other research proposals have been submitted for:

- Interrelationships between psychological and physical health in veterans of the 1991 Gulf War. This would investigate comorbidity and the relation between psychological and physical health and multiple symptom reporting, including blood test results and other objective measures of physical health,
- Further evaluation of the mortality and cancer incidence among the Gulf War Veterans' Health Study cohort,

and we have assisted the Australian Centre for Posttraumatic Mental Health in developing:

- A study of Peacekeepers' health, health service use and quality of life. A proposal for an ARC Linkage Grant with Department of Veterans' Affairs as the industry partner.

### **Health Study of surviving Australian Veterans of the Korean War**

This is a cross-sectional study of the entire cohort of 7,525 surviving male Korean War veterans who are residing in Australia, and a comparison sample of 2,964 similarly aged Australian men who are registered on the Australian Electoral Roll. The study aims to compare the two populations on measures of current general physical functioning, quality of life including level of life satisfaction, recent hospitalisations, general psychological functioning, anxiety including posttraumatic stress disorder, depression, alcohol disorders and current common medical conditions. Further, the study aims to investigate any association between current health and Korean War deployment characteristics such as Service branch, age and level of rank at deployment, duration and era of deployment, and combat severity (Combat Exposure Scale). The study is funded by the Australian Government - Department of Veterans' Affairs. Recruitment for the study commenced in March 2004 and concluded in September 2004. The final report was submitted to the Minister for Veterans' Affairs in September 2005.

This study was preceded by a pilot study, which was undertaken in 2003 to assess and improve proposed methods to be used in the main study. A report on the pilot study was also submitted to the Department of Veterans' Affairs.

## Our Research Environment

### Department of Epidemiology & Preventive Medicine

The Department of Epidemiology & Preventive Medicine (DEPM) has a staff of about 130 and plays a prominent role in epidemiological research and public health medicine in Australia. The core skills of the department relate to epidemiology (the study of the distribution, risk factors and causes of disease) and its application to problems in clinical medicine and public health. The department has a strong track record in competitive funding, with about \$4.5 million in NHMRC funding in 2005. It is the base for several research centres of excellence including:

- NHMRC CCRE in Therapeutics & Clinical Research
- NHMRC CRE for Patient Safety
- NHMRC Australian Centre for Radiofrequency Bioeffects Research (based at RMIT)
- CRC for Water Quality and Treatment
- Australian Centre for Human Health Risk Assessment (ACHHRA)

Further information is available at the website <http://www.med.monash.edu.au/epidemiology/>

The Unit of Occupational and Environmental Health has a multidisciplinary staff of about 25 and is in the process of being designated a Research Centre at Monash. It is one of the major research Units within DEPM and has developed a strong reputation for undertaking large prospective cohort studies, such as the Healthwise cohort study of aluminium workers (n=14,000) and we have recently taken over the Health Watch study of almost 20,000 petroleum industry workers. The Unit's main research interest is the link between human health outcomes and exposures in the workplace and the general community. Most of our research uses epidemiological methods and we have strong interests in disease registries. In 2005, our research grant funding is about \$1.5 million. The six major areas of the Unit's research activity are:

- Longitudinal and case control studies in industry cohorts to identify occupational risk factors for disease
- Veteran and military health research
- Occupational disease surveillance
- Exposure assessment methodology
- Environmental health hazards and risk assessment
- Occupational musculoskeletal disorders

The Occupational and Environmental Health Unit also has an extensive in-house EndNote library of more than 1700 occupational and environmental health related references, and approximately half of these are veteran and military health related publications. We keep this reference list up-to-date by undertaking regular searches of Medline and other relevant databases of publications. We also receive regular notification from international veteran health collaborators on current issues, topical publications and international developments.

Further information about the Unit of Occupational and Environmental Health is available at our website <http://www.med.monash.edu.au/epidemiology/oeH/>

## Veteran Health Research Staff

The core members of our Veteran Health Epidemiology Research Program at Monash University, including details of relevant veteran health expertise and interests, are:

**Associate Professor Malcolm Sim**, Head, Unit of Occupational and Environmental Health, *BMedSc, MB BS, MSc (Lond), GDipOccHyg, PhD, FAFOM (RACP), FAFPHM (RACP), FFOM (RCP)*

Malcolm Sim is an Occupational Physician/epidemiologist who leads a team of about 20 research staff in the Unit of Occupational and Environmental Health. Apart from his other research interests, Malcolm was the Principal Investigator for the Australian Gulf War Veterans' Health Study and the Health Study of the Australian Veterans of the Korean War. He is also a co-investigator on the Peacekeeper Grant application and the proposed Longitudinal Health Study of Defence Force Personnel. Malcolm is a member of the Research Advisory Group of the Australian Centre for Posttraumatic Mental Health and a member of the Occupational Medicine Consultative Group for the Department of Defence. He is also an Associate Editor of the journal, *Occupational and Environmental Medicine*.

**Dr Helen Kelsall**, Senior Research Fellow, *MB BS, MPH, MHlthSc(PHP), FAFPHM*

Helen Kelsall is a Public Health Physician who was a Senior Research Fellow on the Australian Gulf War Veterans' Health Study and took major responsibility for the clinical and preventive medical measures aspects of the study. In 2002, she was awarded an NHMRC Public Health Postgraduate Scholarship and has recently completed her PhD on the respiratory and neurological health, symptoms, medical conditions and chronic fatigue syndrome in Australian Gulf War veterans. Her research interests include physical health indicators and the relationship between physical health and psychological health in veterans.

**Associate Professor Andrew Forbes**, Head, Biostatistics Unit *BSc (Hons), MSc, PhD*

Andrew Forbes was a chief investigator for the Australian Gulf War Veterans' Health Study and the Health Study of surviving Australian Veterans of the Korean War, and has been responsible for overseeing the statistical analyses in these studies. He has interests in methodological research in applied statistics, and undertook and published the factor analysis of symptoms in the Gulf War Veterans' Health Study.

**Mr Dean McKenzie**, Research Fellow, *BA(Hons)*

Dean McKenzie has a long background in psychiatric and psychological research and was a biostatistician on the Gulf War Veterans' Health Study and the Korean War Veterans' Health Study. His particular interest is in psychological screening instruments and has many publications in this area. He is currently undertaking a Staff PhD within the Department of Epidemiology and Preventive Medicine, based on prior and continuing research into the development of psychological screening and diagnostic tests using classification methods, including application in veteran populations.

**Mrs Jillian Blackman**, Research Fellow, *BA(Psych), GradDipBHlth, PhD scholar*

Jill Blackman (Ikin) is a psychology graduate who has taken a major role in the psychological aspects of the Gulf War Veterans' Health Study, including development of the Military Service Experiences questionnaire. She is also an investigator on the Korean War Veterans' Health Study. At the end of 2004, Jill was awarded a NHMRC Public Health

### ***Veteran Health Research Staff continued...***

Scholarship to complete her PhD on 'War stressors, mental health and well-being outcomes in Australian veterans and service personnel' and expects to complete her PhD in 2007.

**Dr Deborah Glass**, Senior Research Fellow, *MA, MSc, PhD, Grad Cert Dip Ed, DipOccHyg, COH, MAIOH*

Deborah Glass was a research fellow with the Gulf War Veterans' Health Study and took prime responsibility for the exposure assessment aspects of this study. She is an occupational hygienist whose main research interests are in the field of exposure assessment for epidemiology, having completed her PhD in 1999 based on the benzene exposure of members of a case-control study of leukaemia in workers in the Australian petroleum industry (Health Watch study). Deborah was also a member of the Scientific Advisory Committee for the health study of aircraft deseal-resealers at Amberley Air Base (SHOAMP study), her main role being to advise on the exposure assessment in this study.

Other academic members of the Department of Epidemiology & Preventive Medicine have been actively involved in particular aspects of the military and veteran health research program according to their area of expertise. They include:

**Professor Michael Abramson**, Deputy Head of Department & Head, Clinical Epidemiology Unit, *MB BS(Hons), BMedSc, PhD, FRACP, FAFPHM*

Michael Abramson is a specialist physician in respiratory medicine at the Alfred Hospital in Melbourne and worked on the respiratory health aspects of the Gulf War Veterans' Health Study. His current research program covers the epidemiology of asthma and chronic obstructive pulmonary disease, including genetic and environmental risk factors such as air pollution, asthma mortality, patient education and adherence to asthma management plans.

**Professor John McNeil**, Head of Department, Head, Preventive Medicine Unit, *MB BS, MSc, PhD, FRACP, FAFPHM*

John McNeil was appointed as the head of the Department of Epidemiology and Preventive Medicine at Monash in 1986. His principal interests include cardiovascular epidemiology, drug safety and toxicology. John has been a member of the Scientific Advisory Committee for the three studies of Korean War veterans, investigating cancer, mortality and long term health effects, and was also a member of the Scientific Advisory Committee for the Dapsone study in Vietnam Veterans. He is also Chairman of the Sir Edward Dunlop Medical Research Foundation, which has a strong veteran health focus.

**Dr Karin Leder**, Head, Infectious Disease Epidemiology Unit, *MB BS(Hons), FRACP, MPH*

Karin Leder is an infectious diseases physician who worked on the infectious disease, chronic fatigue, immunological and laboratory investigations aspects of the Gulf War Veterans' Health Study. Her other specific areas of interest include traveller's health and vaccinations, health issues in immigrants and refugees, and waterborne infections.

## Key Collaborations

We have a close relationship with the Australian Centre for Posttraumatic Mental Health at the University of Melbourne and, in particular, with the Director, Professor Mark Creamer.

**Professor Mark Creamer**, Director, Australian Centre for Posttraumatic Mental Health, and Professor of Psychology, Department of Psychiatry, University of Melbourne, *BA(Hons), MA(Clin), PhD, FAPS*

Mark was a co-investigator and provided specialist advice on psychological health aspects of the Gulf War Veterans' Health Study. He has also been co-author on several papers to come out of this study.

We have also developed strong collaborative links with researchers based at other institutions, who have contributed specialist expertise to our veteran health research program. They include:

**Professor Alexander McFarlane**, Professor of Psychiatry, Head of the University of Adelaide Node of the Centre for Military and Veterans' Health, *MB BS (Hons), MD, Dip.Psychother., FRANZCP*

Sandy McFarlane is a psychiatrist who is a recognised international expert in the field of posttraumatic stress disorder. He was a member of the Scientific Advisory Committee for the Gulf War Veterans' Health Study and has since contributed to a number of papers, further analyses and research proposals that have come out of this study. His professional affiliations and responsibilities include Specialist Adviser to the Australian Centre for Post Traumatic Mental Health and Chair, Mental Health Consultative Group for the Australian Defence Force.

**Associate Professor Lin Fritschi**, Head, Epidemiology Unit, Viertel Centre for Research in Cancer Control, Queensland Cancer Fund, *MBBS, PhD, FAFPHM*

Lin is a cancer epidemiologist who was involved in the cohort study of cancer and mortality for the Gulf War Veterans' Health Study. She has been a principal investigator on several other major occupational cohort studies of cancer and mortality including studies of workers in the aluminium (Healthwise), petroleum (Health Watch), textile and meatworking industries.

**Associate Professor Richard Macdonell**, Deputy Director Neurology, Department of Neurology, Austin Health, *MB BS, MD, FRACP*

Richard Macdonell is a specialist physician in neurology, with interests that include peripheral neuropathy and multiple sclerosis. He provided specialist advice on the neurological health aspects of the Gulf War Veterans' Health Study and is co-author on the paper based on this aspect.

**Professor Andrew Mackinnon**, Deputy Director, Centre for Mental Health Research, The Australian National University, *BSc (Hons), PhD*

Andrew Mackinnon is a psychologist who provided expert advice on the factor analysis of symptoms for the Gulf War Veterans' Health Study and is a co-author on the paper that was based on this analysis. His areas of interest include quantitative aspects of mental health research; including development and analysis of psychometric measures, screening and diagnosis tests, modelling longitudinal data, and the conduct and analysis of controlled trials and interventions in mental health.

### **Key Collaborations continued...**

**Professor Margaret O'Connor A.M.**, Inaugural Vivian Bullwinkel Chair in Nursing, Palliative Care, School of Nursing & Midwifery, Monash University, *DN (La Trobe), MN (RMIT), B.Theol (MCD), RN, FRCNA, AIMM*

Margaret's appointment to this Chair in 2003 has enabled her to combine her experience in clinical issues with research and education roles, in an effort to bring practice and theory closer together. The Chair encompasses three clinical partners – Peninsula Health, Peninsula Hospice Service and the Royal District Nursing Service - where Margaret is actively involved in developing staff research projects. Margaret has concentrated on 3 main areas of research: -service development, policy and ethical issues in end of life care. A current research project "End of Life Care: A study of the palliative care needs of veterans to improve their dying" currently being undertaken, has helped establish a link through a common interest in veteran health with the Department of Epidemiology & Preventive Medicine.

### **Research Training**

We have had a strong emphasis on building research capacity in veteran health research, including higher degree training in veteran health research methods. We have been successful in obtaining two NHMRC Postgraduate Scholarships for Helen Kelsall and Jill Blackman to undertake PhD degrees. Helen Kelsall has recently been awarded her PhD, based on her work on several aspects of the Gulf War Veterans Health study. Jill Blackman has recently enrolled for her PhD, which will be based on psychological aspects and war stressors in Gulf War and Korean War veterans. In addition, Dean McKenzie is undertaking a staff PhD, based in part on his work on the psychological aspects in the Gulf War study.

### **Symposium Organisation**

We have strong links with the Sir Edward Dunlop Research Foundation, through Prof John McNeil being Chair of the Foundation's Research Committee. John assisted in the development of the program for the Inaugural Veteran Health Symposium held by the Foundation in November 2004 and Malcolm Sim was an invited speaker on the Gulf War study at this symposium. Our group is more involved in 2005 in developing the program for the second Symposium to be held in November 2005.

We also organised a Veteran Health minisymposium at the 14<sup>th</sup> International Symposium on Epidemiology in Occupational Health (EPICOH 2004), which we hosted in Melbourne in October 2004. Malcolm Sim had been successful in winning the bid to hold EPICOH in Australia in 2004 and was Chair of the organising committee and several members of the OEH Unit were on the Scientific Committee. The Veteran Health minisymposium involved three overseas speakers. To view abstracts, visit:

[http://oem.bmjournals.com/content/vol61/issue11/#ELECTRONIC\\_PAGES](http://oem.bmjournals.com/content/vol61/issue11/#ELECTRONIC_PAGES)

## Veteran and Military Health Publications and Presentations

### Published, in press, submitted and invited veteran health journal articles

Ikin JF, Sim MR, Creamer MC, Forbes AB, McKenzie DP, Kelsall HL, Glass DC, McFarlane AC, Abramson MJ, Ittak P, Dwyer T, Blizzard L, Delaney KR, Horsley KWA, Harrex WK, Schwarz H. War-related psychological stressors and risk of psychological disorders in Australian veterans of the 1991 Gulf War. *British Journal of Psychiatry*, 2004; 185:116-126.

McKenzie DP, Ikin JF, McFarlane AC, Creamer M, Forbes AB, Kelsall HL, Glass DC, Ittak P, Sim MR. Psychological health of Australian veterans of the 1991 Gulf War : An assessment using the SF-12, GHQ-12 and PCL-S. *Psychological Medicine*, 2004; 34:1419-1430.

Kelsall HL, Sim MR, Forbes AB, McKenzie DP, Glass DC, Ikin JF, Ittak P, Abramson MJ. Respiratory health status of Australian veterans of the 1991 Gulf War and the effects of exposure to oil fire smoke and dust storms. *Thorax*, 2004; 59:897-903.

Kelsall HL, Sim MR, Forbes AB, Glass DC, McKenzie DP, Ikin JF, Abramson M, Blizzard L, Ittak P. Symptoms and medical conditions in Australian Gulf War veterans: relationship to immunisations and other Gulf War exposures. *Occupational & Environmental Medicine*, 2004; 61:1006-1013.

Forbes AB, McKenzie DP, Mackinnon AJ, Kelsall HL, McFarlane AC, Ikin JF, Glass DC, Sim MR. The health of Australian veterans of the 1991 Gulf War: factor analysis of self-reported symptoms. *Occupational & Environmental Medicine*, 2004; 61:1014-1020.

Kelsall HL, Macdonell R, Sim M, Forbes A, McKenzie D, Glass D, Ikin J, Ittak P. Neurological status of Australian veterans of the 1991 Gulf War and the effect of medical and chemical exposures. *International Journal of Epidemiology*, 2005; 34: 810-819.

Ikin JF, McKenzie DP, Creamer MC, McFarlane AC, Kelsall HL, Glass DC, Forbes AB, Horsley KWA, Harrex WK, Sim MR. War zone stress without direct combat: The Australian naval experience of the Gulf War. *Journal of Traumatic Stress*, 2005; 18: 193-204.

Glass DC, Sim MR, Kelsall HL, Ikin JF, McKenzie DP, Forbes AB, Ittak P. What was different about exposures reported by male Australian Gulf War veterans during the 1991 Gulf War compared with exposures reported for other deployments? *Military Medicine* [in press].

Kelsall HL, Sim MR, McKenzie DP, Forbes AB, Leder K, Glass DC, Ikin JF, McFarlane AC. Medically evaluated psychological and physical health of Australian Gulf War veterans with chronic fatigue [submitted 2005].

Creamer MC, Carboon I, Forbes AB, McKenzie DP, McFarlane AC, Kelsall HL, Sim MR. Psychiatric disorder and separation from military service: A 10 year retrospective study. *American Journal of Psychiatry* [in press].

Sim MR, Kelsall HL, Ikin JF, Glass DC, McKenzie DP, Ittak P, Forbes AB. Reproductive health in male Australian Veterans of the 1991 Gulf War. [submitted 2005].

McKenzie DP, McFarlane AC, Creamer MC, Ikin JF, Forbes AB, Kelsall HL, Clarke D, Glass DC, Ittak P, Sim MR. Hazardous or harmful alcohol use in Royal Australian Navy veterans of the 1991 Gulf War: Identification of high risk subgroups [submitted 2005].

Sim MR, Kelsall H, McFarlane AC, Forbes A. Invited Editorial for the *Medical Journal of Australia* on the Gulf War study, to be published in late 2005.

Sim MR, Glass D. Invited article, Exposure Assessment in Gulf War health studies, for a special edition on Gulf War Illness for the journal *Philosophical Transactions of the Royal Society*, to be published in early 2006.

Sim MR, Kelsall HL. Invited article, Gulf War Illness – A view from Australia, for a special edition on Gulf War Illness for the journal *Philosophical Transactions of the Royal Society*, to be published in early 2006.

## Published abstracts

Kelsall HL, Sim MR, McKenzie DP, Forbes AB, Leder K, Glass DC, Ikin JF, McFarlane AC. Medically evaluated chronic fatigue and chronic fatigue syndrome in Australian veterans of the 1991 Gulf War. *Australasian Epidemiologist* 2005; 12(3): 51.

Ikin JF, Sim MR, McKenzie DP. Combat severity, low rank, and Army service associated with psychological ill-health in Australia's Korean War veterans five decades after return from the war. *Australasian Epidemiologist* 2005; 12(3): 48-49.

Glass DC, Sim MR, Kelsall HL, Ikin JF, McKenzie DP, Forbes AB, Ittak P. What was different about exposures during the 1991 Gulf War compared to other deployments? *Australasian Epidemiologist* 2003; 10(3):30.

Kelsall HL, Sim MR, Forbes AB, Glass DC, McKenzie D, Ikin J, Abramson MJ, Blizzard L, Ittak P. Symptoms and medical conditions in Australian veterans of the 1991 Gulf War: relationship to immunisations and other Gulf War exposures. *Australasian Epidemiologist* 2003; 10(3):28.

Glass D, McKenzie D, Forbes A, Kelsall H, Ikin J, Ittak P, Sim MR. What was different about exposures during the 1991 Gulf War compared to other deployments? *Tijdschrift voor toegepaste Arbowetenschap* 2004; 2(Suppl):78.

Kelsall H, Abramson M, Sim MR, Glass D, Ikin J, McKenzie D, Ittak P, Forbes A. Respiratory health status of Australian Gulf War veterans and the effects of oil well fire smoke and dust storm exposure. *Occupational & Environmental Medicine* 2004; 61:e27.

## Reports

Sim MR, Ikin JF. Australian Korean War Veterans' Pilot Health Study. Report to the Commonwealth Department of Veterans' Affairs, December 2002.

Sim MR, Abramson M, Forbes A, Kelsall H, Ikin J, McKenzie D, Glass D, Ittak P, Leder K, McNeil J, Creamer M, Fritschi L. The Australian Gulf War Veterans' Health Study 2003 Volumes 1,2 & 3. Report to the Commonwealth Department of Veterans' Affairs, February 2003.

Creamer M, Carboon I, Forbes A, McKenzie D, McFarlane A, Sim M. Separations from the Royal Australian Navy 1991-2001: Information from the Gulf War Veterans' Health Study. Report to the Australian Department of Defence, August 2004.

Sim MR, Ikin J, McKenzie D. The Korean War Veterans' Health Study. Report to the Commonwealth Department of Veterans' Affairs, August 2005.

## Awards

2005 Victorian Public Health Award for Research Excellence for the Australian Gulf War Veterans' Health Study.

## PhD Thesis

Kelsall, HL. Respiratory and neurological health, symptoms, medical conditions and chronic fatigue syndrome in Australian Gulf War veterans. Submitted December 2004. Accepted in fulfillment of the requirements of the degree of Doctor of Philosophy August 2005.

## Conference Presentations

Sim MR, Abramson M, Creamer M, Fairley C, Forbes A, Fritschi L, Glass D, Kelsall H, Ikin J, McKenzie D, McNeil J, Pincus M. Australian Gulf War Veterans' Health Study. Poster presentation at the International Conference on Illnesses among Gulf War Veterans: A decade of scientific research. Washington DC, USA, January 2001.

***Conference Presentations continued...***

Sim MR, Abramson M, Creamer M, Fairley C, Forbes A, Fritschi L, Glass D, Kelsall H, Ikin J, McKenzie D. Australian Gulf War Veterans' Health Study. Oral presentation at the Australian Defence Health Symposium. Sydney NSW, July, 2002.

Sim MR, Ikin J, McKenzie D, Creamer M, Forbes A, Glass D, Kelsall H, Ittak P, Horsley K, Schwarz H, McFarlane A. Psychological Disorders in Australian Gulf War Veterans. Oral presentation at the Annual Scientific Meeting of the Royal Australasian College of Physicians, Hobart, May 2003.

Creamer M, Sim MR, Ikin JF. The mental health consequences of the Gulf War on Australian veterans. Oral presentation at the annual conference of the International Society for Traumatic Stress Studies, Chicago, USA, October 2003.

Kelsall H, Sim M, Forbes A, Glass D, McKenzie D, Ikin J, Abramson M, Blizzard L, Ittak P. Symptoms and medical conditions in Australian veterans of the 1991 Gulf War: relationship to immunisations and other Gulf War exposures. Oral presentation at the Australasian Epidemiological Association (AEA) Annual Meeting, Perth, Western Australia, September 2003.

Glass D, McKenzie D, Forbes A, Kelsall H, Ikin J, Ittak P, Sim M. What was different about exposures during the 1991 Gulf War compared to other deployments? Poster presentation at the Australasian Epidemiological Association (AEA) Annual Meeting, Perth, Western Australia, September 2003.

Kelsall HL, Sim MR, Forbes AB, Glass DC, McKenzie DP, Ikin JF, Abramson MJ, Blizzard L, Ittak P. Symptoms, medical conditions, hospitalisations and functional impairment in Australian veterans of the 1991 Gulf War: relationship to immunisations and other Gulf War exposures. Oral presentation at the Australian Military Medicine Association 12th Annual Scientific Conference, Adelaide, South Australia, October 2003.

Sim MR. The psychological impact of the 1991 Gulf War on Australian Defence Force veterans. Invited speaker at the 13<sup>th</sup> World Congress on Disaster and Emergency Medicine, Melbourne, Victoria, May 2003.

Creamer M, Sim M, Ikin J, Glass D, McKenzie D, Forbes A, Kelsall H. The mental health consequences of the Gulf War on Australian veterans. Oral presentation at the Asia Pacific Military Medicine Conference, Brisbane, Queensland May 2004.

Glass D, McKenzie D, Forbes A, Kelsall H, Ikin J, Ittak P, Sim M. What was different about exposures during the 1991 Gulf War compared to other deployments? Oral presentation at the Exposure 2004 conference, Utrecht, The Netherlands June 2004.

Sim MR. Post-deployment effects in Australian Gulf War veterans. Invited speaker at the Centre for Military and Veteran Health Deployment Health Think Tank, Brisbane, Australia, October 2004.

Kelsall H, Abramson M, Sim M, Glass D, Ikin J, McKenzie D, Ittak P, Forbes A. Respiratory health status of Australian Gulf War veterans and the effects of oil well fire smoke and dust storm exposure. Oral presentation at the 17<sup>th</sup> International Symposium on Epidemiology in Occupational Health, Melbourne, Victoria, October 2004.

Sim MR. What was the real impact of the 1991 Gulf War on Australian veterans? Invited speaker at the Sir Edward Dunlop Foundation Veteran Health Symposium, Melbourne, Australia, November 2004.

McKenzie D, Ikin J, McFarlane E, Creamer M, Forbes A, Kelsall H, Clarke D, Glass D, Ittak P, Sim M. Psychological health of Australian veterans of the 1991 Gulf War: An assessment using the CIDI, SF-12, GHQ-12 and PCL-S. Oral presentation at the Annual conference of the Australasian Society for Psychiatric Research Conference, Perth, WA, December 2004.

Sim MR, Ikin J, McKenzie D. The long term health effects of Korean War Service. Invited address to the 2<sup>nd</sup> Annual Symposium of the Sir Edward Dunlop Medical Research Foundation, Melbourne, November 2005.

Kelsall HL, Sim MR, McKenzie DP, Forbes AB, Leder K, Glass DC, Ikin JF, Macfarlane AC. Medically evaluated chronic fatigue and chronic fatigue syndrome in Australian veterans of the 1991 Gulf War. Oral

presentation at the annual Australasian Epidemiological Association conference, Newcastle, NSW, October 2005.

Ikin JF, Sim MR, McKenzie DP. Combat severity, low rank and Army service associated with psychological ill-health in Australia's Korean War veterans five decades after return from the war. Oral presentation at the annual Australasian Epidemiological Association conference, Newcastle, NSW, October 2005.

Ikin JF, Sim MR, McKenzie DP. War deployment factors associated with poor health five decades later – results from the Health Study 2005 on Australian veterans of the Korean War. Oral presentation at the Australian Military Medicine Association 14<sup>th</sup> Annual Scientific Conference, Launceston, Tasmania, October 2005.

Kelsall HL, Sim MR, McKenzie DP, Forbes AB, Leder K, Glass DC, Ikin JF, Macfarlane AC. Medical evaluation of the physical and psychological health of Australian Gulf War veterans with chronic fatigue. Oral presentation at the Australian Military Medicine Association 14<sup>th</sup> Annual Scientific Conference, Launceston, Tasmania, October 2005.