The Centre for Military and Veterans' Health

Volume III

The Middle East Area of Operations (MEAO) Health Study:

Census Study Supplementary Material

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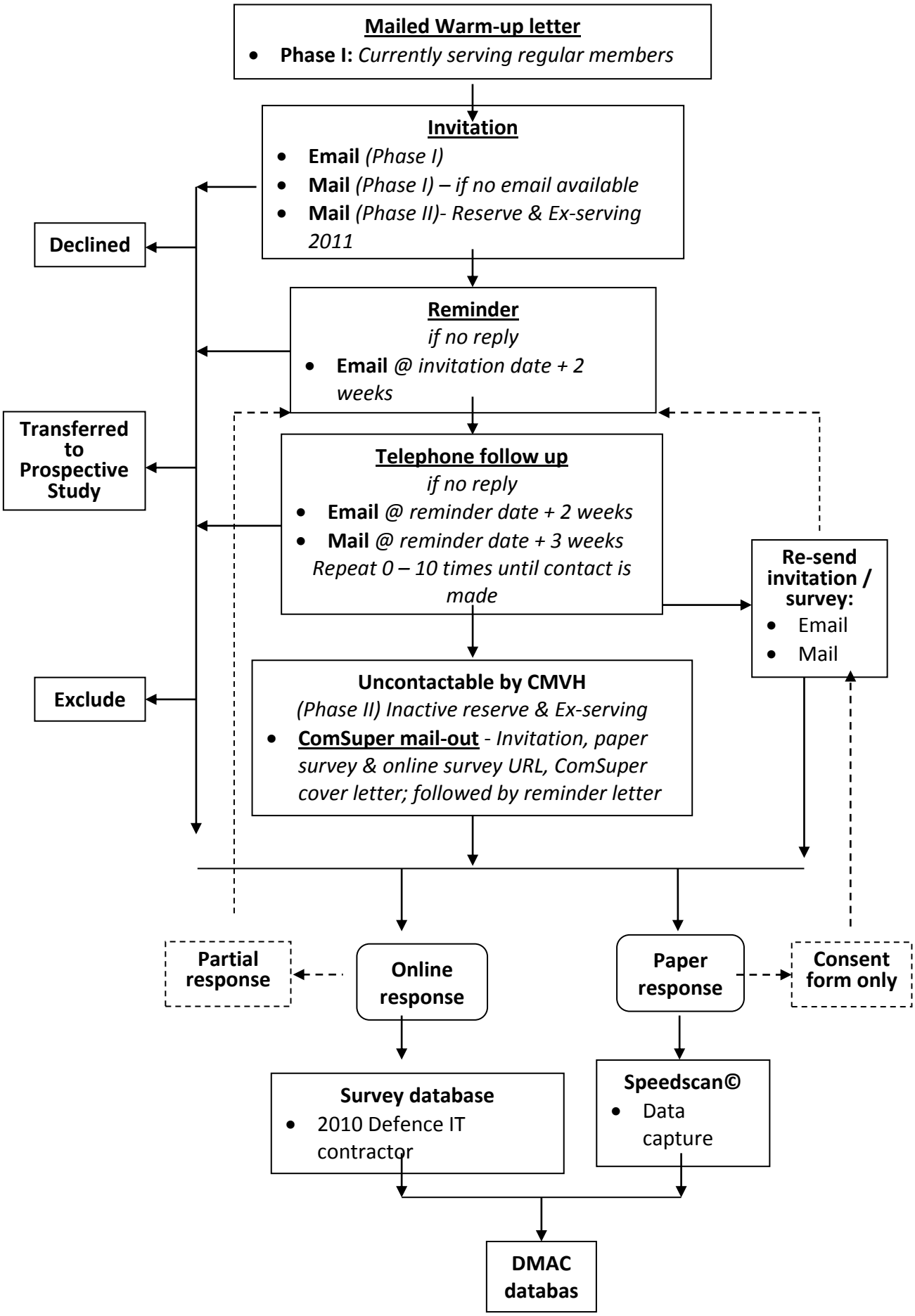
THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

MilHOP
Military Health Outcomes Program

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

MEAO Census Study Workflow



CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Study ID

Middle East Area of Operations (MEAO) Health Study

Part 1: Brief Deployment History & Health Questionnaire

Part 1: Brief Deployment History & Health Questionnaire

This questionnaire is in two parts.

- Part 1 (this booklet) will ask about:
    - Your deployment history, including deployments to locations other than MEAO
    - Your recent health and health-related matters.
- Part 2 (MEAO Deployment Questionnaire) will ask about your experiences during your most recent deployment to the Middle East Area of Operations.

For the purposes of this study, deployment to the Middle East Area of Operations includes:

- Deployment to Iraq or areas supporting operations in Iraq;
- Deployment to Afghanistan or areas supporting operations in Afghanistan.

For more information please refer to the inside front cover of Part 2 of this questionnaire. If you are still uncertain regarding your eligibility to participate in this study, please contact the study team on **1800 886 567**or at milhop@cmvh.org.au

Instructions to complete this questionnaire:

This questionnaire asks about your physical and mental health. All information you provide in this questionnaire will be de-identified and will not be linked to other data we have collected about your health without your consent.

Please complete all sections by following the instructions at the beginning of each question. Please **shade circles**, rather than ticking or crossing them, and write clearly and **in capital letters**.

If you make a mistake and wish to change your answer, simply cross out your mistake and choose the answer that is right for you.

Please use **blue or black pen**, not pencil.

Some questions may seem repetitive, but this is necessary due to the questions being grouped into scales.

There may be some questions in the survey which you find distressing. Should you feel distressed you may wish to discuss this with someone. A list of organisations to contact is provided in the information sheet.

If you have any questions, please call us on **1800 886 567**.

Brief Deployment History

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Brief Deployment History - MEAO

1.1 Have you been on an ADF operational deployment? (war-like, peacekeeping, peace-monitoring or humanitarian support)

○ Yes ○ No - **please skip to question 1.7**

Instructions: Please indicate which of the following major operations you have been deployed on (*please complete as much of this information as you can*).

1.2 Deployments to MEAO

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)
○ Afghanistan or areas supporting operations in Afghanistan	○ OP SLIPPER	○ 2001		
		○ 2002		
		○ 2003		
		○ 2004		
		○ 2005		
		○ 2006		
		○ 2007		
		○ 2008		
		○ 2009		
		○ 2010		

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Brief Deployment History - MEAO

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)
○ Iraq or areas supporting operations in Iraq	○ OP BASTILLE	○ 2002 ○ 2003	☐☐ ☐☐	☐☐ ☐☐
	○ OP FALCONER	○ 2003	☐☐	☐☐
	○ OP CATALYST	○ 2003 ○ 2004 ○ 2005 ○ 2006 ○ 2007 ○ 2008 ○ 2009	☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐	☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐ ☐☐
	○ OP KRUGER	○ 2009 ○ 2010	☐☐ ☐☐	☐☐ ☐☐

Thinking about your most recent deployment to the MEAO:

1.3 Did you feel pressure from your unit to volunteer for this deployment?

- ○ Yes, formal chain of command
- ○ Yes, mates within Unit
- ○ No
- ○ Not applicable

1.4 When you deployed, did you deploy with your parent unit?

- ○ Yes
- ○ No, but I deployed with some members from my Unit
- ○ No, I didn't know anyone I deployed with
- ○ Not applicable, did not have a parent unit

If NO:

a) Did you feel you were treated any differently than members of the host unit?

- ○ No, I was treated the same as the members of the host Unit
- ○ Yes, I was treated better than the members of the host Unit
- ○ Yes, I was treated worse than the members of the host Unit

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Brief Deployment History - Other Deployments

1.5 Other Deployments:

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)
○ Solomon Islands	○ OP ANODE	○ 2003		
		○ 2004		
		○ 2005		
		○ 2006		
		○ 2007		
		○ 2008		
		○ 2009		
		○ 2010		

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Brief Deployment History - Other Deployments

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)
○ East Timor	○ InterFET, OP FABER, OP SPITFIRE, OP WARDEN	○ 1999 ○ 2000		
	○ OP TANAGER	○ 2000 ○ 2001 ○ 2002		
	○ OP CITADEL	○ 2002 ○ 2003 ○ 2004		
	○ OP SPIRE	○ 2004 ○ 2005 ○ 2006 ○ 2007		
	○ OP ASTUTE, OP CHIRON, OP TOWER	○ 2005 ○ 2006 ○ 2007 ○ 2008 ○ 2009 ○ 2010		

Brief Deployment History - Other Deployments

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)
○ Bougainville	○ OP BEL ISI I	○ 1997		
		○ 1998		
	○ OP BEL ISI II	○ 1999		
		○ 2000		
		○ 2001		
		○ 2002		
		○ 2003		

1.6 What other Operations have you been deployed on (war like, peacekeeping, peace-monitoring or humanitarian support), including UN missions (e.g. OP Palate, OP Riverbank), Humanitarian Missions (e.g. OP Pakistan Assist, OP Sumatra Assist), secondments to foreign militaries (e.g. OP Enduring Freedom, OP Herrick), and border protection (e.g. Op Resolute)?

COUNTRY	OPERATION NAME	YEAR(S) DEPLOYMENT(S) STARTED	NO. OF TIMES DEPLOYED IN YEAR	TOTAL TIME DEPLOYED (MONTHS)

Brief Deployment History

1.7 Have you worked in the Middle East in a role outside of the ADF (e.g. as a security contractor or for an NGO)?	○ Yes ○ No

If YES:

COUNTRY (If you do not remember or do not wish to report this please write NA)	COMPANY NAME (If you do not remember or do not wish to report this please write NA)	YEAR(S) STARTED	NO. OF TIMES WORKED IN THIS LOCATION IN YEAR	TOTAL TIME WORKED IN THIS LOCATION (MONTHS)

Health Questionnaire

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Section One: Background Details

1.1 What is today's date? (dd/mm/yyyy) ☐☐ / ☐☐ / ☐☐☐☐

1.2 Are you male or female? ○ Male ○ Female

1.3 What is your date of birth? (dd/mm/yyyy) ☐☐ / ☐☐ / ☐☐☐☐

1.4 Are you currently in a significant intimate relationship?
- ○ Yes - go to question 1.4a
- ○ No - go to question 1.4b

1.4a Are you:
- ○ Married and living together
- ○ Married with unaccompanied spouse (i.e. married partner currently lives elsewhere)
- ○ Living with partner (ADF recognised)
- ○ Living with partner (not ADF recognised)
- ○ In a long term relationship but not living together

1.4b Are you:
- ○ Never married
- ○ Previously married but now divorced
- ○ Previously married but now separated
- ○ Other, please specify:

1.5 Were you in a significant intimate relationship ONE YEAR AGO?
- ○ Yes - go to question 1.5a
- ○ No - go to question 1.5b

1.5a Were you:
- ○ Married and living together
- ○ Married with unaccompanied spouse (i.e. married partner currently lives elsewhere)
- ○ Living with partner (ADF recognised)
- ○ Living with partner (not ADF recognised)
- ○ In a long term relationship but not living together

1.5b Were you:
- ○ Never married
- ○ Previously married but now divorced
- ○ Previously married but now separated
- ○ Other, please specify:

1.6 How satisfied are you with your marriage / relationship?
- ○ Extremely satisfied
- ○ Satisfied
- ○ Neither satisfied or dissatisfied
- ○ Dissatisfied
- ○ Extremely dissatisfied
- ○ Not applicable

1.7 Have you or your spouse / partner ever seriously suggested the idea of divorce or permanent separation within the LAST YEAR? ○ Yes ○ No ○ Not applicable

Section One: Background Details

1.8 Overall, what impact have your military commitments (now, or in the past if you have left the military) had on your:

a) Marriage / relationship?
- ○ No impact
- ○ Positive impact
- ○ Negative impact
- ○ Not applicable

b) Children?
- ○ No impact
- ○ Positive impact
- ○ Negative impact
- ○ Not applicable

1.9 Which category best describes the highest educational qualification you have completed? Choose one.
- ○ Primary school
- ○ Secondary school up to grade 10
- ○ Secondary school grades 11-12
- ○ Certificate (trade, apprenticeship, technicians etc)
- ○ Diploma (associate, undergraduate)
- ○ Bachelor degree
- ○ Post-graduate qualification

1.10 How many hours per week are you in paid employment, when you are not on deployment? ☐☐☐ hours

1.11 To the nearest year, how long have / had you served with the Australian Defence Force: (if less than 1 year, please enter 1)

a) As a regular? ☐☐ years *or* ○ Not applicable

b) As a reservist? ☐☐ years *or* ○ Not applicable

1.12 What is your CURRENT rank or what WAS your rank when you left the military?
- ○ Senior Commissioned Officer (CMDR / LTCOL / WGCDR and above)
- ○ Commissioned Officer (LCDR / MAJ / SQNLDR and below)
- ○ Senior Non-Commissioned Officer (PO / SGT and above)
- ○ Junior Non-Commissioned Officer (LS / CPL and below)
- ○ Other ranks (AB / SMN / PTE / LAC / AC or equivalent)

1.13 In the past THREE YEARS, roughly how many months in total have you been away on Operational deployment? (if less than 1 month, please enter 1) ☐☐ months

If you are still a member of the regular Australian Defence Force, please go to Section Two.

If you are a Reservist or have discharged from the regular Australian Defence Force, please complete the following questions.

Section One: Background Details

1.14 What year did you discharge from the Regular Australian Defence Force?

or

○ Not applicable, I am a Reservist

1.15 Did you discharge to the Reserves or out of the ADF completely? ○ Reserves ○ Out of ADF ○ Not applicable, I have always been a reservist

1.16 What is your current employment status?

○ Paid employment full-time
○ Paid employment part-time / casual
○ Volunteer / community work
○ Student
○ Home Duties
○ Retired
○ Not working due to ill-health / TPI
○ Unemployed
○ Other, please specify:

1.17 Since you separated from the ADF, have you had a period of unemployment greater than 3 months? ○ Yes ○ No ○ Not applicable

If YES, was this period of unemployment primarily due to health problems? ○ Yes ○ No

If YES, please specify type:

1.18 What is your <u>main</u> source of income now? Choose one.

○ Wage or salary
○ Own business or share in a partnership
○ Age Service pension
○ Invalidity Service Pension
○ Compensation benefit under the VEA
○ Compensation benefit under the SRCA
○ Compensation benefit under the MRCA
○ Other government pension / allowance / benefit
○ Child allowance
○ Superannuation / annuity
○ Dividends / interest / income from investments
○ Other, please specify:

Section Two: Recent Health Symptoms

We would like to know about your health in the past month. Please indicate whether or not you have suffered any of the following symptoms in the past month, and if so, please indicate whether your symptoms were mild, moderate or severe in nature.

In the past month have you suffered from:	NO	YES		
2.1 Chest pain	○ No	○ Mild	○ Moderate	○ Severe
2.2 Headaches	○ No	○ Mild	○ Moderate	○ Severe
2.3 Rapid heartbeat	○ No	○ Mild	○ Moderate	○ Severe
2.4 Irritability / outbursts of anger	○ No	○ Mild	○ Moderate	○ Severe
2.5. Unable to breathe deeply enough	○ No	○ Mild	○ Moderate	○ Severe
2.6 Faster breathing than normal	○ No	○ Mild	○ Moderate	○ Severe
2.7 Feeling short of breath at rest	○ No	○ Mild	○ Moderate	○ Severe
2.8 Wheezing	○ No	○ Mild	○ Moderate	○ Severe
2.9 Sleeping difficulties	○ No	○ Mild	○ Moderate	○ Severe
2.10 Feeling jumpy / easily startled	○ No	○ Mild	○ Moderate	○ Severe
2.11 Feeling unrefreshed after sleep	○ No	○ Mild	○ Moderate	○ Severe
2.12 Fatigue	○ No	○ Mild	○ Moderate	○ Severe
2.13 Double vision	○ No	○ Mild	○ Moderate	○ Severe
2.14 Intolerance to alcohol	○ No	○ Mild	○ Moderate	○ Severe
2.15 Itchy or painful eyes	○ No	○ Mild	○ Moderate	○ Severe
2.16 Rash or skin irritation	○ No	○ Mild	○ Moderate	○ Severe
2.17 Skin infections e.g. boils	○ No	○ Mild	○ Moderate	○ Severe
2.18 Skin ulcers	○ No	○ Mild	○ Moderate	○ Severe
2.19 Shaking	○ No	○ Mild	○ Moderate	○ Severe
2.20 Tingling in fingers and arms	○ No	○ Mild	○ Moderate	○ Severe
2.21 Tingling in legs and toes	○ No	○ Mild	○ Moderate	○ Severe
2.22 Numbness in fingers / toes	○ No	○ Mild	○ Moderate	○ Severe
2.23 Feeling distant or cut off from others	○ No	○ Mild	○ Moderate	○ Severe
2.24 Constipation	○ No	○ Mild	○ Moderate	○ Severe
2.25 Flatulence or burping	○ No	○ Mild	○ Moderate	○ Severe

Section Two: Recent Health Symptoms

In the past month have you suffered from:	NO	YES		
2.26 Stomach cramps	○ No	○ Mild	○ Moderate	○ Severe
2.27 Diarrhoea	○ No	○ Mild	○ Moderate	○ Severe
2.28 Indigestion	○ No	○ Mild	○ Moderate	○ Severe
2.29 Dry mouth	○ No	○ Mild	○ Moderate	○ Severe
2.30 Pain in the face, jaw, in front of the ear, or in the ear	○ No	○ Mild	○ Moderate	○ Severe
2.31 Persistent cough	○ No	○ Mild	○ Moderate	○ Severe
2.32 Lump in throat	○ No	○ Mild	○ Moderate	○ Severe
2.33 Sore throat	○ No	○ Mild	○ Moderate	○ Severe
2.34 Forgetfulness	○ No	○ Mild	○ Moderate	○ Severe
2.35 Dizziness, fainting or blackouts	○ No	○ Mild	○ Moderate	○ Severe
2.36 Seizures or convulsions	○ No	○ Mild	○ Moderate	○ Severe
2.37 Feeling disorientated	○ No	○ Mild	○ Moderate	○ Severe
2.38 Loss of concentration	○ No	○ Mild	○ Moderate	○ Severe
2.39 Difficulty finding the right word	○ No	○ Mild	○ Moderate	○ Severe
2.40 Pain on passing urine	○ No	○ Mild	○ Moderate	○ Severe
2.41 Passing urine more often	○ No	○ Mild	○ Moderate	○ Severe
2.42 Burning sensation in the sex organs	○ No	○ Mild	○ Moderate	○ Severe
2.43 Loss of interest in sex	○ No	○ Mild	○ Moderate	○ Severe
2.44 Problems with sexual functioning	○ No	○ Mild	○ Moderate	○ Severe
2.45 Increased sensitivity to noise	○ No	○ Mild	○ Moderate	○ Severe
2.46 Increased sensitivity to light	○ No	○ Mild	○ Moderate	○ Severe
2.47 Increased sensitivity to smells or odours	○ No	○ Mild	○ Moderate	○ Severe
2.48 Ringing in the ears	○ No	○ Mild	○ Moderate	○ Severe
2.49 Avoiding doing things or situations	○ No	○ Mild	○ Moderate	○ Severe
2.50 Pain, without swelling or redness, in several joints	○ No	○ Mild	○ Moderate	○ Severe
2.51 Joint stiffness	○ No	○ Mild	○ Moderate	○ Severe
2.52 Feeling that your bowel movement is not finished	○ No	○ Mild	○ Moderate	○ Severe

Section Two: Recent Health Symptoms

In the past month have you suffered from:	NO	YES		
2.53 Changeable bowel function (mixture of diarrhoea / constipation)	O No	O Mild	O Moderate	O Severe
2.54 General muscle aches or pains	O No	O Mild	O Moderate	O Severe
2.55 Loss of balance or coordination	O No	O Mild	O Moderate	O Severe
2.56 Difficulty speaking	O No	O Mild	O Moderate	O Severe
2.57 Low back pain	O No	O Mild	O Moderate	O Severe
2.58 Night sweats which soak the bed sheets	O No	O Mild	O Moderate	O Severe
2.59 Feeling feverish	O No	O Mild	O Moderate	O Severe
2.60 Tender or painful swelling of lymph glands in neck, armpit or groin	O No	O Mild	O Moderate	O Severe
2.61 Loss of, or decrease in, appetite	O No	O Mild	O Moderate	O Severe
2.62 Nausea	O No	O Mild	O Moderate	O Severe
2.63 Vomiting	O No	O Mild	O Moderate	O Severe
2.64 Distressing dreams	O No	O Mild	O Moderate	O Severe
2.65 Stomach bloating	O No	O Mild	O Moderate	O Severe
2.66 Unintended weight gain greater than 4kg	O No	O Mild	O Moderate	O Severe
2.67 Unintended weight loss greater than 4kg	O No	O Mild	O Moderate	O Severe

Section Two: Recent Health Symptoms

2.68 During your lifetime, did you experience any of the following events?		
Blast or Explosion IED (improvised explosive device)	○ No	○ Yes
RPG (rocket propelled grenade), Land Mine, Grenade, etc.	○ No	○ Yes
Vehicular accident / crash (any vehicle, including aircraft)	○ No	○ Yes
Fragment wound or bullet wound above the shoulders	○ No	○ Yes
Fall	○ No	○ Yes

If NO to all events in 2.68: please skip to question 3.1. Otherwise, continue.

2.69 How many times in total have you experienced each of the following symptoms immediately after any of the events listed above?	
Loss of consciousness / "knocked out"	☐☐ times
Being dazed, confused, or "seeing stars"	☐☐ times
Not remembering the event	☐☐ times
Concussion	☐☐ times
Head injury	☐☐ times

2.70 Did any of the following problems begin or get worse after any of the events listed above?					
Memory problems or lapses	○ No	○ Yes	Irritability	○ No	○ Yes
Balance problems or dizziness	○ No	○ Yes	Headaches	○ No	○ Yes
Sensitivity to bright light	○ No	○ Yes	Sleep problems	○ No	○ Yes

2.71 In the past week, have you had any of these symptoms?					
Memory problems or lapses	○ No	○ Yes	Irritability	○ No	○ Yes
Balance problems or dizziness	○ No	○ Yes	Headaches	○ No	○ Yes
Sensitivity to bright light	○ No	○ Yes	Sleep problems	○ No	○ Yes

Section Three: Your Health Now

This next set of questions ask for your views about your health. This information will help you to keep track of how you feel and how well you are able to do your usual activities.

For each of the following questions, please shade the circle that best describes your answer.

3.1 In general, how would you say your health is? ○ Excellent ○ Very good ○ Good ○ Fair ○ Poor

3.2 The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?	○ Yes, limited a lot	○ Yes, limited a little	○ No, not limited at all
Climbing several flights of stairs?	○ Yes, limited a lot	○ Yes, limited a little	○ No, not limited at all

3.3 During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME
Accomplished less than you would like	○	○	○	○	○
Were limited in the kind of work or other activities	○	○	○	○	○

3.4 During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME
Accomplished less than you would like	○	○	○	○	○
Did work or other activities less carefully than usual	○	○	○	○	○

3.5 During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

○ Not at all ○ A little bit ○ Moderately ○ Quite a bit ○ Extremely

3.6 These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME
Have you felt calm and peaceful?	○	○	○	○	○
Did you have a lot of energy?	○	○	○	○	○
Have you felt downhearted and depressed?	○	○	○	○	○

3.7 During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives etc.)?

○ All of the time ○ Most of the time ○ Some of the time ○ A little of the time ○ None of the time

Section Three: Your Health Now

In general, how would you rate your:	EXCELL-ENT	VERY GOOD	GOOD	FAIR	POOR
3.8 Overall health?	○	○	○	○	○
3.9 Quality of life?	○	○	○	○	○
3.10 Eyesight (with glasses or contact lenses, if you wear them)?	○	○	○	○	○
3.11 Hearing?	○	○	○	○	○
3.12 Memory?	○	○	○	○	○
3.13 Teeth and gums?	○	○	○	○	○

The following questions inquire about how you have been feeling over the last four (4) weeks. Please read each question carefully and then indicate, by shading the circle, the response that best describes how you have been feeling.

	ALL OF THE TIME	MOST OF THE TIME	SOME OF THE TIME	A LITTLE OF THE TIME	NONE OF THE TIME
3.14 In the past four (4) weeks, about how often did you feel tired for no good reason?	○	○	○	○	○
3.15 In the past four (4) weeks, about how often did you feel nervous?	○	○	○	○	○
3.16 In the past four (4) weeks, about how often did you feel so nervous that nothing could calm you down?	○	○	○	○	○
3.17 In the past four (4) weeks, about how often did you feel hopeless?	○	○	○	○	○
3.18 In the past four (4) weeks, about how often did you feel restless or fidgety?	○	○	○	○	○
3.19 In the past four (4) weeks, about how often did you feel so restless that you could not sit still?	○	○	○	○	○
3.20 In the past four (4) weeks, about how often did you feel depressed?	○	○	○	○	○
3.21 In the past four (4) weeks, about how often did you feel that everything was an effort?	○	○	○	○	○
3.22 In the past four (4) weeks, about how often did you feel so sad that nothing could cheer you up?	○	○	○	○	○
3.23 In the past four (4) weeks, about how often did you feel worthless?	○	○	○	○	○

Section Three: Your Health Now

The next few questions are about how these feelings may have affected you in the past four (4) weeks. You need not answer these questions if you answered 'None of the time' to all of the previous ten questions about your feelings.

3.24 In the past four (4) weeks, how many days were you TOTALLY UNABLE to work, study or manage your day to day activities because of these feelings? ☐☐ days

3.25 [Aside from those days], in the past four (4) weeks, HOW MANY DAYS were you able to work or study or manage your day to day activities, but had to CUT DOWN on what you did because of these feelings? ☐☐ days

3.26 In the past four (4) weeks, how many times have you seen a doctor or any other health professional about these feelings? ☐☐ times

3.27 In the past four (4) weeks, how often have physical health problems been the main cause of these feelings?

○ None of the time ○ A little of the time ○ Some of the time ○ Most of the time ○ All of the time

3.28 Please rate the following statements based on how you have felt in the <u>past 30 days</u> using the scale below.

	NOT TRUE AT ALL	RARELY TRUE	SOME-TIMES TRUE	OFTEN TRUE	TRUE NEARLY ALL THE TIME
a) I am able to adapt to change	○	○	○	○	○
b) I tend to bounce back after illness or hardship	○	○	○	○	○

Section Three: Your Health Now

Since returning from your last MEAO deployment, has a medical doctor diagnosed you with, or treated you for any of the following medical problems or conditions?

	YES	NO
3.29 High blood pressure	○	○
3.30 Migraines	○	○
3.31 Bowel disorder e.g. diarrhoea, constipation, bleeding	○	○
3.32 Eye or vision problems e.g. glaucoma	○	○
3.33 Hearing loss	○	○
3.34 Malaria	○	○
3.35 Any other significant infections, please specify type:	○	○
3.36 Arthritis or rheumatism	○	○
3.37 Back or neck problems	○	○
3.38 Joint problems	○	○
3.39 Asthma	○	○
3.40 Bronchitis	○	○
3.41 Sinus problems	○	○
3.42 Hay fever	○	○
3.43 Ear infection	○	○
3.44 Dermatitis	○	○
3.45 Any other skin problem, please specify type:	○	○
3.46 Skin cancer e.g. squamous cell or basal cell skin cancers	○	○
3.47 Any other kind of cancer, tumour or malignancy, please specify type:	○	○
3.48 Anxiety, stress or depression	○	○
3.49 Post traumatic stress disorder	○	○

Section Three: Your Health Now

	YES	NO
3.50 Other psychiatric or psychological condition needing treatment or counselling, please specify type:	○	○
3.51 Any other medical condition, please specify type:	○	○

Section Four: Lifestyle Behaviours

4.1 In the past year, have you used any of the following tobacco products?

	NO	YES
a. Cigarettes	○	○
b. Cigars	○	○
c. Pipes	○	○
d. Smokeless tobacco (e.g. chew, dip, snuff)	○	○

4.2 In your lifetime, have you smoked at least 100 cigarettes (5 packs)?

○ No - **please skip to question 4.9**

○ Yes - **continue to next question**

4.3 At what age did you start smoking? ☐☐ years old

4.4 How many years have you, or did you, smoke an average of at least 3 cigarettes per day (or one pack per week)? ☐☐ years

4.5 When smoking, how many packs per day did you, or do you, smoke?

○ Less than half a pack per day
○ Half to 1 pack per day
○ 1 to 2 packs per day
○ More than 2 packs per day

4.6 Have you ever tried to quit smoking?

○ Yes, and succeeded
○ Yes, but not successfully
○ No

4.7 If you have ever deployed, was your smoking pattern different while on deployment?

○ I have never deployed
○ I did not smoke on deployment
○ I smoked less than usual while on deployment
○ I smoked the same amount on deployment as when not deployed
○ I smoked more than usual while on deployment
○ I began / restarted smoking on deployment

4.8 If your smoking pattern changed during your deployment, what was the main reason?

Section Four: Lifestyle Behaviours

4.9. How often do you have a drink containing alcohol?	Never	Monthly or Less	2 to 4 times a month	2 to 3 times a week	4 or more times a week
	○	○	○	○	○

In answering the following questions, please remember that a standard drink contains 10g of pure alcohol

4.10 How many 'standard' drinks (see above) containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	N/A
	○	○	○	○	○	○

	NEVER	LESS THAN MONTHLY	MONTHLY	WEEKLY	DAILY OR ALMOST DAILY
4.11 How often do you have six or more drinks on one occasion?	○	○	○	○	○
4.12 How often during the last 12 months have you found that you were not able to stop drinking once you had started?	○	○	○	○	○
4.13 How often during the last 12 months have you failed to do what was normally expected from you because of drinking?	○	○	○	○	○

Section Four: Lifestyle Behaviours

	NEVER	LESS THAN ONCE A MONTH	MONTHLY	WEEKLY	DAILY OR ALMOST DAILY
4.14 How often during the last 12 months have you needed a drink in the morning to get yourself going after a heavy drinking session?	○	○	○	○	○
4.15 How often during the last 12 months have you had a feeling of guilt or remorse after drinking?	○	○	○	○	○
4.16 How often during the last 12 months have you been unable to remember what happened the night before because you had been drinking?	○	○	○	○	○

4.17 Have you or someone else been injured as a result of your drinking?	No ○	Yes, but not in the last 12 months ○	Yes, during the last 12 months ○
4.18 Has a relative, a friend, a doctor or other health professional been concerned about your drinking or suggested you cut down?	No ○	Yes, but not in the last 12 months ○	Yes, during the last 12 months ○

4.19 Do you presently have a problem with drinking?	No ○	Probably not ○	Unsure ○	Possibly ○	Definitely ○

4.20 In the next 3 months, how difficult would you find it to cut down or stop drinking?	Very easy ○	Fairly easy ○	Neither difficult nor easy ○	Fairly difficult ○	Very difficult ○	N/A ○

4.21 On an average day, how many 250 - 375ml beverages containing caffeine do you drink (such as caffeine containing energy drinks, coffee, tea, coca-cola)?

○ None ○ 1-2 per day ○ 3-5 per day ○ 6-10 per day ○ 11 or more per day

Section Four: Lifestyle Behaviours

4.22 How often do you currently take any of the following supplements?

a) Body building supplements (such as amino acids, weight gain products, creatine, etc.)

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

b) Energy supplements (such as energy drinks, pills, or energy enhancing herbs)

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

c) Weight loss supplements

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

Section Five: Life Experiences

Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then shade the circle to the right to indicate how much you have been bothered by that problem in the past month.

	NOT AT ALL	A LITTLE BIT	MODERA-TELY	QUITE A BIT	EXTREM-ELY
5.1 Repeated, disturbing memories, thoughts or images of a stressful experience from the past?	○	○	○	○	○
5.2 Repeated, disturbing dreams of a stressful experience from the past?	○	○	○	○	○
5.3 Suddenly acting or feeling as if a stressful experience from the past were happening again (as if you were reliving it)?	○	○	○	○	○
5.4 Feeling very upset when something reminded you of a stressful experience from the past?	○	○	○	○	○
5.5 Having physical reactions (e.g. heart pounding, trouble breathing, sweating) when something reminded you of a stressful experience from the past?	○	○	○	○	○
5.6 Avoiding thinking about or talking about a stressful experience from the past or avoiding having feelings related to it?	○	○	○	○	○
5.7 Avoiding activities or situations because they reminded you of a stressful experience from the past?	○	○	○	○	○
5.8 Trouble remembering important parts of a stressful experience from the past?	○	○	○	○	○
5.9 Loss of interest in activities that you used to enjoy?	○	○	○	○	○
5.10 Feeling distant or cut off from other people?	○	○	○	○	○
5.11 Feeling emotionally numb or being unable to have loving feelings for those close to you?	○	○	○	○	○
5.12 Feeling as if your future somehow will be cut short?	○	○	○	○	○
5.13 Trouble falling or staying asleep?	○	○	○	○	○
5.14 Feeling irritable or having angry outbursts?	○	○	○	○	○
5.15 Having difficulty concentrating?	○	○	○	○	○
5.16 Being "superalert" or watchful or on guard?	○	○	○	○	○
5.17 Feeling jumpy or easily startled?	○	○	○	○	○

Section Five: Life Experiences

5.18 Thinking of the event(s) that you used to answer the questions on the previous page, please list these events and the years they occurred below.

	Event description	Year
1		
2		
3		

5.19 Did this occur while deployed to the MEAO?	O Yes	O No
5.20 **If NO**, did this occur during another overseas deployment?	O Yes	O No
5.21 Is there any <u>other</u> event that has caused you to have similar reactions?	O No O Yes - while deployed O Yes - while NOT deployed	

If yes, what was that event?

Year of event:

Section Five: Life Experiences

5.22 Thinking over the past 4 weeks, shade the circle that best describes the amount of time you felt that way.

	NONE OF THE TIME	A LITTLE OF THE TIME	SOME OF THE TIME	MOST OF THE TIME	ALL OF THE TIME
a) I found myself getting angry at people or situations	○	○	○	○	○
b) When I got angry, I got really mad	○	○	○	○	○
c) When I got angry, I stayed angry	○	○	○	○	○
d) When I got angry at someone, I wanted to hit them	○	○	○	○	○
e) My anger interfered with my ability to get my work, study or other productive activity done	○	○	○	○	○
f) My anger prevented me from getting along with people as well as I'd have liked to	○	○	○	○	○
g) I became angry at myself when I did not perform as well or achieve what I wanted	○	○	○	○	○
h) I became angry at myself when I did not handle social situations as well as I wanted	○	○	○	○	○
i) My anger had a bad effect on my health	○	○	○	○	○

5.23 How often over the last month did you get into a fight with someone and hit the person?

○ Never ○ One time ○ Two times ○ Three or four times ○ Five or more times

5.24 How often over the last month did you threaten someone with physical violence?

○ Never ○ One time ○ Two times ○ Three or four times ○ Five or more times

Section Five: Life Experiences

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS	NEARLY EVERY DAY
5.25 Little interest or pleasure in doing things	○	○	○	○
5.26 Feeling down, depressed, or hopeless	○	○	○	○
5.27 Trouble falling or staying asleep, or sleeping too much	○	○	○	○
5.28 Feeling tired or having little energy	○	○	○	○
5.29 Poor appetite or overeating	○	○	○	○
5.30 Feeling bad about yourself, or that you are a failure, or have let yourself or your family down	○	○	○	○
5.31 Trouble concentrating on things, such as reading the newspaper or watching television	○	○	○	○
5.32 Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual	○	○	○	○
5.33 Thoughts that you would be better off dead or of hurting yourself in some way	○	○	○	○

5.34 If you checked off any of these problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

○ Not difficult at all ○ Somewhat difficult ○ Very difficult ○ Extremely difficult

The next group of questions are about anxiety.

	NO	YES
5.35 In the last 4 weeks, have you had an anxiety attack - suddenly feeling fear or panic?	○	○
If NO: please skip to question 5.50		
5.36 Has this ever happened before?	○	○
5.37 Do some of these attacks come suddenly out of the blue - that is, in situations where you don't expect to be nervous or uncomfortable?	○	○
5.38 Do these attacks bother you a lot or are you worried about having another attack?	○	○

Section Five: Life Experiences

Think about your last bad anxiety attack.

	NO	YES
5.39 Were you short of breath?	○	○
5.40 Did your heart race, pound, or skip?	○	○
5.41 Did you have chest pain or pressure?	○	○
5.42 Did you sweat?	○	○
5.43 Did you feel as if you were choking?	○	○
5.44 Did you have hot flushes or chills?	○	○
5.45 Did you have nausea or an upset stomach, or the feeling that you were going to have diarrhoea?	○	○
5.46 Did you feel dizzy, unsteady, or faint?	○	○
5.47 Did you have tingling or numbness in parts of your body?	○	○
5.48 Did you tremble or shake?	○	○
5.49 Were you afraid you were dying?	○	○

Over the last 4 weeks, how often have you been bothered by any of the following problems?

	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS
5.50 Feeling nervous, anxious, on edge, or worrying a lot about different things	○	○	○
If NOT AT ALL: please skip to question 5.57			
5.51 Feeling restless so that it is hard to sit still	○	○	○
5.52 Getting tired very easily	○	○	○
5.53 Muscle tension, aches, or soreness	○	○	○
5.54 Trouble falling asleep or staying asleep	○	○	○
5.55 Trouble concentrating on things, such as reading a book or watching TV	○	○	○
5.56 Becoming easily annoyed or irritable	○	○	○

Section Five: Life Experiences

Please shade the circles that best describe your experience.		
5.57 In the last 12 months, have you ever felt that life was not worth living?	○ No	○ Yes
5.58 In the last 12 months, have you ever felt so low that you thought about committing suicide?	○ No	○ Yes
5.59 In the last 12 months, have you made a suicide plan?	○ No	○ Yes
5.60 In the last 12 months, have you attempted suicide?	○ No	○ Yes

If you require support in relation to any issues you have identified in this survey, we encourage you to refer to the support contacts provided in the Information Sheet, enclosed with this questionnaire.

Section Six: Your Respiratory Health

The following questions ask you about any respiratory symptoms you may have experienced in the <u>past 12 months</u>.		
	NO	**YES**
6.1 Have you had wheezing or whistling in your chest at any time in the last 12 months?	○	○
If YES:		
a. Have you been at all breathless when the wheezing noise was present?	○	○
b. Have you had this wheezing or whistling when you did not have a cold?	○	○
6.2 Have you woken up with a feeling of tightness in your chest at any time in the last 12 months?	○	○
6.3 Have you been woken by an attack of shortness of breath at any time in the last 12 months?	○	○
6.4 Have you been woken by an attack of coughing at any time in the last 12 months?	○	○
6.5 Have you had an attack of asthma in the last 12 months?	○	○
6.6 Are you currently taking any medicine for asthma (including inhalers, aerosols, or tablets)?	○	○
6.7 Do you have any nasal allergies including hay fever?	○	○

Section Seven: Your Reproductive History

7.1 Have you and your partner (current or previous) ever had problems with infertility (tried to get pregnant for more than 12 consecutive months without success)?

- ○ Never tried to get pregnant - **please skip to Section Eight**
- ○ No problem with infertility - **please skip to question 7.3**
- ○ Yes

If YES:

7.2 In what year did you recognise you had infertility problems? ☐☐☐☐

7.3 Have you ever been pregnant or fathered a pregnancy (including miscarriages, ectopics or terminations)?

- ○ Yes
- ○ No - **please skip to Section Eight**

If YES:

7.4 Please answer the following questions for each of your pregnancies (if you have had more than 4 pregnancies, please phone the study team on 1800 886 567). For pregnancies involving twins, triplets or more, use a separate column for each baby.

		1st Pregnancy	2nd Pregnancy	3rd Pregnancy	4th Pregnancy
What was the outcome of this pregnancy?	Live birth	○	○	○	○
	Live birth but baby died within 28 days of birth	○	○	○	○
	Still birth	○	○	○	○
	Ectopic pregnancy	○	○	○	○
	Miscarriage	○	○	○	○
	Termination (abortion)	○	○	○	○
	Currently pregnant	○	○	○	○
Approximate date of pregnancy outcome		☐☐☐☐☐☐ d d m m y y	☐☐☐☐☐☐ d d m m y y	☐☐☐☐☐☐ d d m m y y	☐☐☐☐☐☐ d d m m y y
How many weeks was the pregnancy? (Full term = 40 wks)	Less than 20	○	○	○	○
	20 or more but less than 37	○	○	○	○
	37 or more (inc. full term)	○	○	○	○

Section Seven: Your Reproductive History

		1st Pregnancy	2nd Pregnancy	3rd Pregnancy	4th Pregnancy
If this pregnancy resulted in a birth, what was your baby's sex?	Male	○	○	○	○
	Female	○	○	○	○
	Not applicable	○	○	○	○
If this pregnancy resulted in a birth, what was your baby's birth weight?		☐☐ lbs ☐☐ oz *or* ☐☐☐☐ g *or:* ○ Can't remember ○ Not applicable	☐☐ lbs ☐☐ oz *or* ☐☐☐☐ g *or:* ○ Can't remember ○ Not applicable	☐☐ lbs ☐☐ oz *or* ☐☐☐☐ g *or:* ○ Can't remember ○ Not applicable	☐☐ lbs ☐☐ oz *or* ☐☐☐☐ g *or:* ○ Can't remember ○ Not applicable
Did the baby have any birth defects?	Yes	○	○	○	○
	No	○	○	○	○
	Not applicable	○	○	○	○
If this pregnancy resulted in a live birth, has the child ever suffered from cancer?	Yes	○	○	○	○
	No	○	○	○	○
	Not applicable	○	○	○	○

Section Eight: Recreation and Social Activities

Please answer the following questions regarding your recreation and social activities.

How often do you…

	EVERY DAY	SEVERAL TIMES PER WEEK	WEEKLY OR FORT-NIGHTLY	MONTHLY	RARELY OR ON SPECIAL OCCASIONS	NEVER
8.1 Have contact with an ex-service organisation?	○	○	○	○	○	○
8.2 Have social contact with other veterans?	○	○	○	○	○	○
8.3 Have contact with friends or relatives?	○	○	○	○	○	○
8.4 Attend social activities such as watching sport, eating meals or watching movies?	○	○	○	○	○	○
8.5 Play sport (e.g. golf, fishing, exercise)?	○	○	○	○	○	○
8.6 Set aside time to do a hobby (e.g. wood work, craft, music)?	○	○	○	○	○	○
8.7 Set aside time to relax (e.g. watch TV, read, listen to music)?	○	○	○	○	○	○
8.8 Do voluntary work?	○	○	○	○	○	○

8.9 Do you commemorate significant military-related occasions such as attend ANZAC Day services, participate in marches or attend dawn services?	○ Yes	○ No
8.10 Do you know of other service veterans living near you?	○ Yes	○ No
8.11 Are any of your close relatives (parents, siblings) military veterans?	○ Yes	○ No

Section Nine: Evaluation Questions

9.1 Are there other important health concerns we have not asked you about? ○ Yes ○ No

If **YES**: please give details in the space provided

9.2 Do you have any additional comments you would like to add? ○ Yes ○ No

If **YES**: please give details in the space provided

Thank you for completing this questionnaire. Please go to Part 2: MEAO Deployment Questionnaire.

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Study ID

Middle East Area of Operations (MEAO) Health Study

Part 2: MEAO Deployment Questionnaire

Part 2: MEAO Deployment Questionnaire

This questionnaire is in two parts. Part 2 (this booklet) will ask about your experiences during your most recent deployment to the Middle East Area of Operations (MEAO).

This booklet contains separate sections to complete, depending on whether you were:

- Deployed to Iraq or areas supporting operations in Iraq between 2002 and 2009. This includes but may not be limited to Operations BASTILLE, FALCONER, CATALYST, KRUGER and RIVERBANK. Note that personnel attached to foreign militaries or the UN are included. Areas supporting operations in Iraq include the Persian Gulf (ships), and other supporting areas located outside the borders of Iraq.
- Deployed to Afghanistan or areas supporting operations in Afghanistan between 2001 and 2009. This includes but may not be limited to Operations SLIPPER, PALATE II and HERRICK. Note that personnel attached to foreign militaries or the UN are included. Areas supporting operations in Afghanistan include those operating outside the land borders of Afghanistan.

If you were deployed to **Iraq or areas supporting operations in Iraq**, please complete Deployment Questionnaire section (a), which begins on page 2 of this booklet.

If you were deployed to **Afghanistan or areas supporting operations in Afghanistan**, please complete Deployment Questionnaire section (b), which begins on page 20 of this booklet.

Instructions to complete this questionnaire:

This questionnaire asks about your physical and mental health. All information you provide in this questionnaire will be de-identified and will not be linked to other data we have collected about your health without your consent.

Please complete all sections by following the instructions at the beginning of each question. Please **shade circles**, rather than ticking or crossing them, and write clearly and **in capital letters**.

If you make a mistake and wish to change your answer, simply cross out your mistake and choose the answer that is right for you.

Please use **blue or black pen**, not pencil.

Some questions may seem repetitive, but this is necessary due to the questions being grouped into scales.

There may be some questions in the survey which you find distressing. Should you feel distressed you may wish to discuss this with someone. A list of organisations to contact is provided in the information sheet.

If you have any questions, please call us on **1800 886 567**.

Deployment Questionnaire

(a) Deployment to Iraq and areas supporting operations in Iraq

(a) Deployment to Iraq since 2002

Section One: Deployment Details

1.1 On your MOST RECENT deployment to Iraq, were you mainly based in: (please shade ALL that apply)

- ○ Baghdad
- ○ Talil
- ○ Balad
- ○ Persian gulf (ships)
- ○ Attachment to foreign militaries or UN
- ○ Other areas in Iraq
- ○ Other supporting areas NOT in Iraq (e.g. .2, .4)

1.2 During deployment to Iraq, what were your MAIN duties? (please shade ALL that apply)

- ○ Combat (e.g. Infantry, Artillery, etc.)
- ○ Medical (e.g. RMO, Environmental or Preventive Health, Nurses, Medics)
- ○ Security
- ○ EOD (Bomb Disposal, IED Technician)
- ○ Training Local Police / Army
- ○ Engineering
- ○ Logistics / Supply
- ○ Force Protection
- ○ Driver
- ○ Welfare (e.g. Chaplain, Psychologist)
- ○ Trades (e.g. Fitter, Mechanic)
- ○ Air Crew - Rotary Wing
- ○ Air Crew - Fixed Wing
- ○ Flight Operations Cell
- ○ Oil Platform Protection
- ○ Maritime Operations - Between Deck
- ○ Maritime Operations - Above Deck
- ○ Clearance Diver
- ○ Boarding Party
- ○ Administrative
- ○ Headquarters
- ○ CIMIC (Civil Military Co-operation)
- ○ Peacekeeping
- ○ Catering
- ○ Intelligence
- ○ Communications
- ○ Military Police
- ○ Other, please specify:

1.3 Were you required to work mixed duty cycles (ie. day - night - day shifts)? ○ Often ○ Sometimes ○ Rarely ○ Never

1.4 About how many hours per day, on average, were you considered 'on duty'? ____ hours

1.5 What was your rank on your MOST RECENT deployment to Iraq?

- ○ Senior Commissioned Officer (CMDR / LTCOL / WGCDR and above)
- ○ Commissioned Officer (LCDR / MAJ / SQNLDR and below)
- ○ Senior Non-Commissioned Officer (PO / SGT and above)
- ○ Junior Non-Commissioned Officer (LS / CPL and below)
- ○ Other ranks (AB / SMN / PTE / LAC / AC or equivalent)

1.6 Please indicate your service status <u>during this deployment</u>.

○ Reservist on full time service ○ Full time member ○ Other, please specify:

(a) Deployment to Iraq

Section Two: Chemical and Environmental Exposures

During your most recent deployment to Iraq, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+ TIMES
2.1 Were you exposed to smoke from fires / smoke from waste incineration / oil fire smoke?	○	○	○	○	○
2.2 Were you exposed to dust storms?	○	○	○	○	○
2.3 Were you exposed to an environment where you inhaled fine dust or fibres (e.g. driving vehicles, near operating aircraft, damaged building)?	○	○	○	○	○
2.4 Were you exposed to others' cigarette smoke in an enclosed recreational or work environment?	○	○	○	○	○
2.5 Were you exposed to diesel exhaust?	○	○	○	○	○
2.6 Were you exposed to aviation, marine or automotive fuels?	○	○	○	○	○
2.7 Were you exposed to aircraft fumes?	○	○	○	○	○
2.8 Were you exposed to toxic industrial chemicals?	○	○	○	○	○
2.9 Were you exposed to solvents (e.g. thinners, sealer, paints)?	○	○	○	○	○
2.10 Did you live in an area recently sprayed or fogged with chemicals?	○	○	○	○	○
2.11 Did you dip your cams to prevent insect bites?	○	○	○	○	○
2.12 Did you take medication to prevent or suppress malaria (e.g. Doxycycline, Primaquine)?	○	○	○	○	○
2.13 Were you close to loud noises and did not have hearing protection (e.g. explosions, weapon fire)?	○	○	○	○	○
2.14 Were you exposed to noise for extended periods of time without hearing protection (e.g. machinery, aircraft operations)?	○	○	○	○	○
2.15 Were you bitten by flies, sand flies, fleas, mosquitoes or other insects that required medical attention?	○	○	○	○	○
2.16 Did you have close contact with local animals (dogs, cats, rats, etc.)?	○	○	○	○	○
2.17 Did you come into contact with body fluids or blood?	○	○	○	○	○
2.18 Did you receive a blood transfusion?	○	○	○	○	○
2.19 Did you drink from local taps or wells?	○	○	○	○	○
2.20 Did you eat local food?	○	○	○	○	○
2.21 Did the food available have a negative effect on your performance?	○	○	○	○	○

(a) Deployment to Iraq

Section Two: Chemical and Environmental Exposures

During your most recent deployment to Iraq, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+
2.22 Did you swim or bath in local lakes, rivers or the sea?	○	○	○	○	○
2.23 Did you have contact with the local population?	○	○	○	○	○
2.24 Did you get sunburnt?	○	○	○	○	○
2.25 Were you close to sources of non-ionising radiation (e.g. radar or microwave, or EOD countermeasures)?	○	○	○	○	○
2.26 Did you have contact with any chemical or biological weapons?	○	○	○	○	○
2.27 Did you have contact with depleted uranium shell casings?	○	○	○	○	○
2.28 Did you enter or come in close proximity to recently destroyed vehicles?	○	○	○	○	○
2.29 Did you enter or come in close proximity to recently destroyed structures (e.g. buildings, bunkers, etc.)?	○	○	○	○	○
2.30 Were you exposed to ionising radiation or radioactive material?	○	○	○	○	○
2.31 Did you use an NBC suit (not for training purposes)?	○	○	○	○	○
2.32 Did you use a respirator (not for training purposes)?	○	○	○	○	○
2.33 Did you clear / search buildings?	○	○	○	○	○
2.34 Did you come under small arms or anti-aircraft fire?	○	○	○	○	○
2.35 Did you come under guided or directed mortar / artillery fire or missile attack?	○	○	○	○	○
2.36 Did you experience in-direct fire (e.g. rocket attack)?	○	○	○	○	○
2.37 Did you seriously fear you would encounter an IED?	○	○	○	○	○
2.38 Did you experience an IED / EOD that detonated?	○	○	○	○	○
2.39 Did you experience a suicide bombing?	○	○	○	○	○
2.40 Did you experience a landmine strike?	○	○	○	○	○
2.41 Did you encounter small arms fire from an unknown enemy combatant (e.g. sniper, civilian with weapon)?	○	○	○	○	○
2.42 Did you discharge your weapon in direct combat?	○	○	○	○	○
2.43 Did you experience a threatening situation where you were unable to respond due to the rules of engagement?	○	○	○	○	○

(a) Deployment to Iraq

Section Two: Chemical and Environmental Exposures

During your most recent deployment to Iraq, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+
2.44 Did you go on combat patrols or missions?	○	○	○	○	○
2.45 Did you participate in support convoys (e.g. re-supply, VIP escort)?	○	○	○	○	○
2.46 Were you concerned about yourself or others (including allies) having an unauthorised discharge of a weapon?	○	○	○	○	○
2.47 Were you in danger of being killed? e.g. combat, motor vehicle accident (MVA), assault, hostage situation	○	○	○	○	○
2.48 Were you in danger of being injured? e.g. combat, MVA, assault, hostage situation	○	○	○	○	○
2.49 Did you handle dead bodies? e.g. combat, civilian casualties	○	○	○	○	○
2.50 Did you see dead bodies? e.g. combat, civilian casualties	○	○	○	○	○
2.51 Did you hear of a close friend or co-worker who had been injured or killed? e.g. combat, MVA, disaster situation	○	○	○	○	○
2.52 Were you present when a close friend or co-worker was injured or killed? e.g. combat, MVA, disaster situation	○	○	○	○	○
2.53 Did you fear that you had been exposed to a contagious disease, toxic agent or injury? e.g. radioactivity, HIV, chemical warfare	○	○	○	○	○
2.54 Were you witness to human degradation and misery on a large scale? e.g. refugee camps, starvation	○	○	○	○	○
2.55 Did you hear of a loved one who had been injured or killed?	○	○	○	○	○
2.56 Were you present when a loved one was injured or killed?	○	○	○	○	○
2.57 Do you believe your action or inaction resulted in someone being seriously injured? e.g. in combat or as a result of rules of engagement or UN restrictions not allowing you to act	○	○	○	○	○
2.58 Do you believe your actions or inaction resulted in someone being killed? e.g. in combat or as a result of rules of engagement or UN restrictions not allowing you to act	○	○	○	○	○

(a) Deployment to Iraq

Section Two: Chemical and Environmental Exposures

2.59 During this deployment, for how long were you outside your base in a hostile area?

- ○ Not at all
- ○ Up to one week
- ○ Up to one month
- ○ More than a month

2.60 Are there any additional experiences you would like to tell us about? Please comment.

(a) Deployment to Iraq

Section Three: Your Work on Deployment

3.1 Did you feel that the work asked of you in theatre generally matched your trade experiences and ability?

- ○ Yes
- ○ No, work was generally above my trade experience and ability
- ○ No, work was generally beneath my trade experience and ability

3.2 Thinking of one very difficult experience on this deployment, do you feel that:

a) Your colleagues did what was expected of them?	○ Yes	○ No
b) You did what was expected of you?	○ Yes	○ No

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEITHER AGREE NOR DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE
3.3 I experienced pain or injury from using the equipment provided to me	○	○	○	○	○
3.4 I felt that I had adequate practical experience using my equipment	○	○	○	○	○
3.5 I had all the supplies and equipment needed to get my job done	○	○	○	○	○

3.6 Please give examples:

(a) Deployment to Iraq

Section Three: Your Work on Deployment

3.7 The following questions ask about your work during deployment. Please answer how often you performed these duties during your deployment, and if you did perform the duty, whether you think this benefited the local community.

	NEVER	OCCAS-IONALLLY	FREQ-UENTLY	IF OCCASIONALLY OR FREQUENTLY, DO YOU THINK THIS BENEFITED THE LOCAL COMMUNITY?	
				YES	NO
a) Work with the National Police / Army (e.g. patrols)?	○	○	○	○	○
b) Assist in the building of infrastructure e.g. wells / roads?	○	○	○	○	○
c) Train local Police / Army?	○	○	○	○	○
d) Take part in Hearts and Minds campaigns, e.g. interacted with the community?	○	○	○	○	○
e) Work with DFAT* / NGO** or Aid organisations*** to assist the locals?	○	○	○	○	○

* DFAT = Department of Foreign Affairs and Trade
** NGO = Non-Government Organisation
*** Aid Organisation = e.g. Red Cross

3.8 How much do you agree or disagree with the following statements?

Please shade ONE circle for each statement under the answer that best describes how you felt during your deployment to Iraq.

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
a) I felt a sense of comradeship (or closeness) between myself and other people in my Unit	○	○	○	○	○
b) There was someone I could go to in my Unit if I had a personal problem	○	○	○	○	○
c) My superiors were interested in what I did or thought	○	○	○	○	○
d) I felt well informed about what was going on in my Unit	○	○	○	○	○
e) I had good communication with other Australian forces / Australian H.Q. from my Unit	○	○	○	○	○

(a) Deployment to Iraq

Section Four: Your Health on Deployment

4.1 How many times did you attend sick parade during your LAST deployment to Iraq?			
If you did attend sick parade: What was the reason? (please shade all that apply)			
	YES	**NO**	**IF YES NUMBER OF DAYS OUT OF ROLE**
a) Injury from a motor vehicle accident	○	○	
b) Injury sustained in combat	○	○	
c) Musculoskeletal injury sustained in your job / role (not combat related)	○	○	
d) Musculoskeletal injury sustained during training	○	○	
e) Musculoskeletal injury sustained during recreation or sport	○	○	
f) Head injury / concussion	○	○	
If YES, how long were you unconscious?			days / hours / minutes
g) Heat stress / exhaustion / dehydration	○	○	
h) Effects of cold or exposure	○	○	
i) Respiratory illness (e.g. cold / flu)	○	○	
If YES, did you have a fever?	○	○	
j) Dental problems	○	○	
k) Skin rashes / irritations	○	○	
l) Diarrhoea and/or vomiting	○	○	
m) Other, please specify:	○	○	

(a) Deployment to Iraq

Section Four: Your Health on Deployment

If you had diarrhoea or vomiting during deployment to Iraq:

4.2 Did the symptoms of diarrhoea and/or vomiting prevent you from carrying out your duties?	○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting
4.3 Did you need intravenous fluids (a drip) as a result of diarrhoea and/or vomiting?	○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting
4.4 Did the symptoms of diarrhoea or vomiting resolve when you exited the MEAO?	○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting

In regard to your sleep and rest while on deployment to Iraq:

4.5 How well did you sleep? ○ Very poorly ○ Poorly ○ Neither good nor poorly ○ Good ○ Very good

4.6 How satisfied were you with your sleep?

○ Very dissatisfied ○ Dissatisfied ○ Neither satisfied nor dissatisfied ○ Satisfied ○ Very satisfied

4.7 Did you have difficulties with sleeping?

○ Not at all ○ A little ○ A moderate amount ○ Very much ○ An extreme amount

4.8 How much did any sleep problems worry you?

○ Not at all ○ A little ○ A moderate amount ○ Very much ○ An extreme amount

4.9 Did you take any medication to help you sleep? ○ No ○ Yes, once or twice ○ Yes, regularly

4.10 During your deployment to Iraq, on an average day, how many 250 - 375ml beverages containing caffeine did you drink (such as caffeine containing energy drinks, coffee, tea, coca-cola)?

○ None ○ 1-2 per day ○ 3-5 per day ○ 6-10 per day ○ 11 or more per day

(a) Deployment to Iraq

Section Four: Your Health on Deployment

4.11 During your most recent deployment to Iraq, did you take any of the following supplements?

a) Body building supplements (such as amino acids, weight gain products, creatine, etc.)

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

b) Energy supplements (such as energy drinks, pills, or energy enhancing herbs)

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

c) Weight loss supplements

○ Never ○ Less than once a month ○ Monthly ○ Weekly ○ Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

4.12 Have you had a previous or current military injury compensation pension arising from deployment to Iraq or other supporting areas? ○ Yes ○ No

If YES: Was this for?

○ Musculoskeletal injury, please specify:

○ Hearing loss, please specify:

○ Injury sustained in combat, please specify:

○ Mental health, please specify:

○ Other reason, please specify:

(a) Deployment to Iraq

Section Four: Your Health on Deployment

4.13 Do you plan on claiming a military injury compensation pension arising from your deployment to Iraq or other supporting areas in the future? ○ Yes ○ No ○ Don't know / Undecided

If YES: What is this for?

○ Musculoskeletal injury, please specify:

○ Hearing loss, please specify:

○ Injury sustained in combat, please specify:

○ Mental health, please specify:

○ Other reason, please specify:

4.14 Compared to your health BEFORE you deployed to Iraq, how would you rate your health in general NOW?

○ Much better now ○ Somewhat better now ○ About the same ○ Somewhat worse now ○ Much worse now

4.15 To what extent do you agree with the following statement?

The change in my health is because of my deployment to Iraq.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Not applicable ○ Disagree ○ Strongly Disagree

(a) Deployment to Iraq

Section Five: Other Deployment Experiences

5.1 During your deployment to Iraq, did you have any major personal problems at home? (e.g. financial problems, family problems, etc). Please shade ONE circle for each statement.

	AGREE	DISAGREE	NOT APPLICABLE
a) I received enough personal support from my family	○	○	○
b) I had serious financial problems	○	○	○
c) My partner / spouse left me	○	○	○
d) There were problems with my children	○	○	○
e) I was concerned I might lose my civilian job	○	○	○
f) I faced other major problems at home whilst deployed	○	○	○

5.2 Did the military provide any reassurance / support to your spouse / partner whilst you were deployed? (e.g. phone calls or visits, arranging 'get togethers' with other service families, newsletters, etc.)

- ○ Yes, it was sufficient
- ○ Yes, but it was not sufficient
- ○ No
- ○ Not applicable

(a) Deployment to Iraq

Section Six: Post Deployment Experiences

6.1 Why did you exit from theatre? (Please shade ONE circle only)

- O End of Deployment
- O CASEVACed through combat related injury
- O CASEVACed through non-combat related injury
- O Compassionate leave
- O Problems at home
- O Routine change of role / appointment / posting
- O To attend professional courses
- O Other, please specify:

6.2 Did you receive a Return to Australia Psychological Screen brief? O Yes O No

If YES:

6.3 Do you believe this process was useful? (please shade ONE circle only)

O Not at all useful O Not particularly useful O Neither useful nor un-useful O Somewhat useful O Extremely useful

6.4 After leaving the theatre of operation, did you have a short period of time somewhere away from the operation area for you to relax before returning to your home base?

O Yes O No - **please skip to question 6.6**

6.5 **If YES:**

a) For how many days?

b) Was the majority of this time…?

- O Structured (a daily programme of activities, e.g. fitness)
- O Unstructured (no planned activities)

c) Did you find this period of time useful? O Yes O No

d) What were the good points?

e) What were the bad points?

(a) Deployment to Iraq

Section Six: Post Deployment Experiences

6.6 After returning to your usual home base, were you required to spend some time in or around your home Unit before being allowed to go on Post Operational Leave?

- O Yes
- O No - **please skip to question 6.7**
- O Not applicable, did not go on Post Operational Leave - **please skip to question 6.7**

If YES:

a) For how many days were you required at your home Unit? | | | |

b) Was the majority of this time…?
- O Structured (a daily programme of activities e.g. fitness / administration)
- O Unstructured (no planned activities)

c) Did you find this period of time useful? O Yes O No

d) What were the good points?

e) What were the bad points?

6.7 How long was it before you could relax properly on return to Australia?

O Immediately O 1 Week O 2 Weeks O 3-4 Weeks O 4-8 Weeks O 9 or more weeks O Have not

6.8 How long before you stopped scanning the environment for risk?

O Immediately O 1 Week O 2 Weeks O 3-4 Weeks O 4-8 Weeks O 9 or more weeks O Have not

6.9 Overall, do you think the Australian public were supportive of the mission to Iraq during your MOST RECENT deployment? O Yes O No

6.10 Since coming home, has anyone had a go at you, or given you a hard time because you went to Iraq? O Yes O No

(a) Deployment to Iraq

Section Six: Post Deployment Experiences

6.11 To what extent do you agree or disagree with the following statements?

In the weeks after I came home...

	AGREE	DISAGREE	NOT APPLICABLE
a) I was well supported by the military	○	○	
b) I found it difficult to adjust to being back home	○	○	
c) People didn't understand what I had been through	○	○	
d) I did not want to talk about my experiences with my family / friends	○	○	
e) I found it difficult to resume my normal social activities	○	○	
f) I had serious financial problems	○	○	
g) I argued more with my spouse / partner	○	○	○
h) I have been let down by people who I thought would stand by me	○	○	
i) I had other major problems on return from deployment	○	○	

6.12 Were any of the following a problem?

a) Loss of seniority, promotion opportunity, or responsibility	○ Yes	○ No
b) Medical classification (MEC) downgraded	○ Yes	○ No

6.13 Overall, have your experiences on THIS DEPLOYMENT made you more or less likely to continue your military career?

○ Very Likely ○ No difference ○ Less likely ○ Already Discharged

(a) Deployment to Iraq

Section Six: Post Deployment Experiences

6.14 Were you married or in a significant relationship when you deployed to Iraq? ○ Yes ○ No

If YES: 6.15 In the weeks after you returned from your deployment:

a) How well did your partner meet your needs?	Poorly	○ 1	○ 2	○ 3	○ 4	○ 5	Extremely well
b) How good was your relationship compared to most?	Poor	○ 1	○ 2	○ 3	○ 4	○ 5	Excellent
c) How often did you wish you hadn't married or lived together?	Never	○ 1	○ 2	○ 3	○ 4	○ 5	Very Often
d) To what extent did your marriage or relationship meet your original expectations?	Hardly at all	○ 1	○ 2	○ 3	○ 4	○ 5	Completely

e) Which best described the degree of happiness, all things considered, in your relationship at the time?

○ Extremely unhappy	○ Fairly unhappy	○ A little unhappy	○ Happy	○ Very happy	○ Extremely happy	○ Perfectly happy

Please answer the following questions if you DEPLOYED AS A RESERVIST.

Otherwise, please go to Section Seven.

6.16 Were you in civilian employment at the time of your call-up for deployment?

○ Yes ○ No ○ Already in full time regular service or equivalent

6.17 Post-deployment, did you return to the same job you held before your deployment?

- ○ Yes
- ○ No, resigned at time of call-up / mobilisation
- ○ No, contract of employment ended just before / during deployment
- ○ No, employer kept job open for me but I chose not to return
- ○ No, employer did not keep job open for me, but I wanted to return
- ○ No, employer did not keep job open for me, and I didn't want to return
- ○ No, other reason, please specify:

6.18 Were any of the following a problem?

	YES	NO	NOT APPLICABLE
a) Loss of seniority, promotion opportunity, or responsibility in civilian job	○	○	○
b) Loss of income during call-up	○	○	○
c) Resentment from co-workers	○	○	○

(a) Deployment to Iraq

Section Seven: Final Questions

As a check of our coverage in this questionnaire, please answer these final questions.

7.1 Are there other important military experiences or exposures we have not asked you about? ○ Yes ○ No

If YES: please give details in the space provided

If you have deployed to Afghanistan, please continue to section (b).

Otherwise, thank you for your time and effort in completing this questionnaire.

(b) Deployment to Afghanistan and areas supporting operations in Afghanistan

(b) Deployment to Afghanistan since 2001

Section Eight: Deployment Details

8.1 On your MOST RECENT deployment to Afghanistan, were you mainly based in: (please shade all that apply)

- O Tarin Kowt
- O Kandahar
- O Kabul
- O Other areas in Afghanistan
- O Other supporting areas NOT in Afghanistan
- O Attachment to foreign militaries or UN

8.2 During deployment to Afghanistan, what were your MAIN duties? (please shade all that apply)

- O Combat (e.g. Infantry, Artillery, etc.)
- O Medical (e.g. RMO, Environmental or Preventive Health, Nurses, Medics)
- O Security
- O EOD (Bomb Disposal, IED Technician)
- O Training Local Police / Army
- O Engineering
- O Logistics / Supply
- O Force Protection
- O Driver
- O Welfare (e.g. Chaplain, Psychologist)
- O Trades (e.g. Fitter, Mechanic)
- O Air Crew - Rotary Wing
- O Air Crew - Fixed Wing
- O Flight Operations Cell
- O Oil Platform Protection
- O Maritime Operations - Between Deck
- O Maritime Operations - Above Deck
- O Clearance Diver
- O Boarding Party
- O Administrative
- O Headquarters
- O CIMIC (Civil Military Co-operation)
- O Peacekeeping
- O Catering
- O Intelligence
- O Communications
- O Military Police
- O Other, please specify:

8.3 Were you required to work mixed duty cycles (ie. day - night - day shifts)? O Often O Sometimes O Rarely O Never

8.4 About how many hours per day, on average, were you considered 'on duty'? ☐☐ hours

8.5 What was your rank on your MOST RECENT deployment to Afghanistan?

- O Senior Commissioned Officer (CMDR / LTCOL / WGCDR and above)
- O Commissioned Officer (LCDR / MAJ / SQNLDR and below)
- O Senior Non-Commissioned Officer (PO / SGT and above)
- O Junior Non-Commissioned Officer (LS / CPL and below)
- O Other ranks (AB / SMN / PTE / LAC / AC or equivalent)

8.6 Please indicate your service status <u>during this deployment</u>.

O Reservist on full time service O Full time member O Other, please specify:

(b) Deployment to Afghanistan

Section Nine: Chemical and Environmental Exposures

During your most recent deployment to Afghanistan, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+ TIMES
9.1 Were you exposed to smoke from fires / smoke from waste incineration / oil fire smoke?	○	○	○	○	○
9.2 Were you exposed to dust storms?	○	○	○	○	○
9.3 Were you exposed to an environment where you inhaled fine dust or fibres (e.g. driving vehicles, near operating aircraft, damaged building)?	○	○	○	○	○
9.4 Were you exposed to others' cigarette smoke in an enclosed recreational or work environment?	○	○	○	○	○
9.5 Were you exposed to diesel exhaust?	○	○	○	○	○
9.6 Were you exposed to aviation, marine or automotive fuels?	○	○	○	○	○
9.7 Were you exposed to aircraft fumes?	○	○	○	○	○
9.8 Were you exposed to toxic industrial chemicals?	○	○	○	○	○
9.9 Were you exposed to solvents (e.g. thinners, sealer, paints)?	○	○	○	○	○
9.10 Did you live in an area recently sprayed or fogged with chemicals?	○	○	○	○	○
9.11 Did you dip your cams to prevent insect bites?	○	○	○	○	○
9.12 Did you take medication to prevent or suppress malaria (e.g. Doxycycline, Primaquine)?	○	○	○	○	○
9.13 Were you close to loud noises and did not have hearing protection (e.g. explosions, weapon fire)?	○	○	○	○	○
9.14 Were you exposed to noise for extended periods of time without hearing protection (e.g. machinery, aircraft operations)?	○	○	○	○	○
9.15 Were you bitten by flies, sand flies, fleas, mosquitoes or other insects that required medical attention?	○	○	○	○	○
9.16 Did you have close contact with local animals (dogs, cats, rats, etc.)?	○	○	○	○	○
9.17 Did you come into contact with body fluids or blood?	○	○	○	○	○
9.18 Did you receive a blood transfusion?	○	○	○	○	○
9.19 Did you drink from local taps or wells?	○	○	○	○	○
9.20 Did you eat local food?	○	○	○	○	○
9.21 Did the food available have a negative effect on your performance?	○	○	○	○	○

(b) Deployment to Afghanistan

Section Nine: Chemical and Environmental Exposures

During your most recent deployment to Afghanistan, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+
9.22 Did you swim or bath in local lakes, rivers or the sea?	○	○	○	○	○
9.23 Did you have contact with the local population?	○	○	○	○	○
9.24 Did you get sunburnt?	○	○	○	○	○
9.25 Were you close to sources of non-ionising radiation (e.g. radar or microwave, or EOD countermeasures)?	○	○	○	○	○
9.26 Did you have contact with any chemical or biological weapons?	○	○	○	○	○
9.27 Did you have contact with depleted uranium shell casings?	○	○	○	○	○
9.28 Did you enter or come in close proximity to recently destroyed vehicles?	○	○	○	○	○
9.29 Did you enter or come in close proximity to recently destroyed structures (e.g. buildings, bunkers, etc.)?	○	○	○	○	○
9.30 Were you exposed to ionising radiation or radioactive material?	○	○	○	○	○
9.31 Did you use an NBC suit (not for training purposes)?	○	○	○	○	○
9.32 Did you use a respirator (not for training purposes)?	○	○	○	○	○
9.33 Did you clear / search buildings?	○	○	○	○	○
9.34 Did you clear / search caves?	○	○	○	○	○
9.35 Did you come under small arms or anti-aircraft fire?	○	○	○	○	○
9.36 Did you come under guided or directed mortar / artillery fire or missile attack?	○	○	○	○	○
9.37 Did you experience in-direct fire (e.g. rocket attack)?	○	○	○	○	○
9.38 Did you seriously fear you would encounter an IED?	○	○	○	○	○
9.39 Did you experience an IED / EOD that detonated?	○	○	○	○	○
9.40 Did you experience a suicide bombing?	○	○	○	○	○
9.41 Did you experience a landmine strike?	○	○	○	○	○
9.42 Did you encounter small arms fire from an unknown enemy combatant (e.g. sniper, civilian with weapon)?	○	○	○	○	○
9.43 Did you discharge your weapon in direct combat?	○	○	○	○	○

(b) Deployment to Afghanistan

Section Nine: Chemical and Environmental Exposures

During your most recent deployment to Afghanistan, how often…?

	NEVER	ONCE	2-4 TIMES	5-9 TIMES	10+
9.44 Did you experience a threatening situation where you were unable to respond due to the rules of engagement?	○	○	○	○	○
9.45 Did you go on combat patrols or missions?	○	○	○	○	○
9.46 Did you participate in support convoys (eg. re-supply, VIP escort)?	○	○	○	○	○
9.47 Were you concerned about yourself or others (including allies) having an unauthorised discharge of a weapon?	○	○	○	○	○
9.48 Were you in danger of being killed? e.g. combat, motor vehicle accident (MVA), assault, hostage situation	○	○	○	○	○
9.49 Were you in danger of being injured? e.g. combat, MVA, assault, hostage situation	○	○	○	○	○
9.50 Did you handle dead bodies? e.g. combat, civilian casualties	○	○	○	○	○
9.51 Did you see dead bodies? e.g. combat, civilian casualties	○	○	○	○	○
9.52 Did you hear of a close friend or co-worker who had been injured or killed? e.g. combat, MVA, disaster situation	○	○	○	○	○
9.53 Were you present when a close friend or co-worker was injured or killed? e.g. combat, MVA, disaster situation	○	○	○	○	○
9.54 Did you fear that you had been exposed to a contagious disease, toxic agent or injury? e.g. radioactivity, HIV, chemical warfare	○	○	○	○	○
9.55 Were you witness to human degradation and misery on a large scale? e.g. refugee camps, starvation	○	○	○	○	○
9.56 Did you hear of a loved one who had been injured or killed?	○	○	○	○	○
9.57 Were you present when a loved one was injured or killed?	○	○	○	○	○
9.58 Do you believe your action or inaction resulted in someone being seriously injured? e.g. in combat or as a result of rules of engagement or UN restrictions not allowing you to act	○	○	○	○	○
9.59 Do you believe your actions or inaction resulted in someone being killed? e.g. in combat or as a result of rules of engagement or UN restrictions not allowing you to act	○	○	○	○	○

(b) Deployment to Afghanistan

Section Nine: Chemical and Environmental Exposures

9.60 During this deployment, for how long were you outside your base in a hostile area?

- ○ Not at all
- ○ Up to one week
- ○ Up to one month
- ○ More than a month

9.61 Are there any additional experiences you would like to tell us about? Please comment.

(b) Deployment to Afghanistan

Section Ten: Your Work on Deployment

10.1 Did you feel that the work asked of you in theatre generally matched your trade experiences and ability?

- ○ Yes
- ○ No, work was generally above my trade experience and ability
- ○ No, work was generally beneath my trade experience and ability

10.2 Thinking of one very difficult experience on this deployment, do you feel that:

a) Your colleagues did what was expected of them?	○ Yes	○ No
b) You did what was expected of you?	○ Yes	○ No

	STRONGLY DISAGREE	SOMEWHAT DISAGREE	NEITHER AGREE NOR DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE
10.3 I experienced pain or injury from using the equipment provided to me	○	○	○	○	○
10.4 I felt that I had adequate practical experience using my equipment	○	○	○	○	○
10.5 I had all the supplies and equipment needed to get my job done	○	○	○	○	○

10.6 Please give examples:

(b) Deployment to Afghanistan

Section Ten: Your Work on Deployment

10.7 The following questions ask about your work during deployment. Please answer how often you performed these duties during your deployment, and if you did perform the duty, whether you think this benefited the local community.

	NEVER	OCCAS-IONALLLY	FREQ-UENTLY	IF OCCASIONALLY OR FREQUENTLY, DO YOU THINK THIS BENEFITED THE LOCAL COMMUNITY?	
				YES	NO
a) Work with the National Police / Army (e.g. patrols)?	○	○	○	○	○
b) Assist in the building of infrastructure e.g. wells / roads?	○	○	○	○	○
c) Train local Police / Army?	○	○	○	○	○
d) Take part in Hearts and Minds campaigns, e.g. interacted with the community?	○	○	○	○	○
e) Work with DFAT* / NGO** or Aid organisations*** to assist the locals?	○	○	○	○	○

* DFAT = Department of Foreign Affairs and Trade
** NGO = Non-Government Organisation
*** Aid Organisation = e.g. Red Cross

10.8 How much do you agree or disagree with the following statements?

Please shade ONE circle for each statement under the answer that best describes how you felt during your deployment to Afghanistan.

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE
a) I felt a sense of comradeship (or closeness) between myself and other people in my Unit	○	○	○	○	○
b) There was someone I could go to in my Unit if I had a personal problem	○	○	○	○	○
c) My superiors were interested in what I did or thought	○	○	○	○	○
d) I felt well informed about what was going on in my Unit	○	○	○	○	○
e) I had good communication with other Australian forces / Australian H.Q. from my Unit	○	○	○	○	○

1312

(b) Deployment to Afghanistan

Section Eleven: Your Health on Deployment

11.1 How many times did you attend sick parade during your LAST deployment to Afghanistan? [| |]

If you did attend sick parade: What was the reason? (please shade all that apply)

	YES	NO	IF YES NUMBER OF DAYS OUT OF ROLE
a) Injury from a motor vehicle accident	○	○	[| |]
b) Injury sustained in combat	○	○	[| |]
c) Musculoskeletal injury sustained in your job / role (not combat related)	○	○	[| |]
d) Musculoskeletal injury sustained during training	○	○	[| |]
e) Musculoskeletal injury sustained during recreation or sport	○	○	[| |]
f) Head injury / concussion	○	○	[| |]
If YES, how long were you unconscious? [|] days [|] hours [|] minutes			
g) Heat stress / exhaustion / dehydration	○	○	[| |]
h) Effects of cold or exposure	○	○	[| |]
i) Respiratory illness (e.g. cold / flu)	○	○	[| |]
If YES, did you have a fever?	○	○	
j) Dental problems	○	○	[| |]
k) Skin rashes / irritations	○	○	[| |]
l) Diarrhoea and/or vomiting	○	○	[| |]
m) Other, please specify:	○	○	[| |]

(b) Deployment to Afghanistan

Section Eleven: Your Health on Deployment

If you had diarrhoea or vomiting during deployment to Afghanistan:

11.2 Did the symptoms of diarrhoea and/or vomiting prevent you from carrying out your duties? ○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting

11.3 Did you need intravenous fluids (a drip) as a result of diarrhoea and/or vomiting? ○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting

11.4 Did the symptoms of diarrhoea or vomiting resolve when you exited the MEAO? ○ Yes ○ No ○ Not Applicable, I did not have diarrhoea or vomiting

In regard to your sleep and rest while on deployment to Afghanistan:

11.5 How well did you sleep? ○ Very poorly ○ Poorly ○ Neither good nor poorly ○ Good ○ Very good

11.6 How satisfied were you with your sleep?

○ Very dissatisfied ○ Dissatisfied ○ Neither satisfied nor dissatisfied ○ Satisfied ○ Very satisfied

11.7 Did you have difficulties with sleeping?

○ Not at all ○ A little ○ A moderate amount ○ Very much ○ An extreme amount

11.8 How much did any sleep problems worry you?

○ Not at all ○ A little ○ A moderate amount ○ Very much ○ An extreme amount

11.9 Did you take any medication to help you sleep? ○ No ○ Yes, once or twice ○ Yes, regularly

11.10 During your deployment to Afghanistan, on an average day, how many 250 - 375ml beverages containing caffeine did you drink (such as caffeine containing energy drinks, coffee, tea, coca-cola)?

○ None ○ 1-2 per day ○ 3-5 per day ○ 6-10 per day ○ 11 or more per day

(b) Deployment to Afghanistan

Section Eleven: Your Health on Deployment

11.11 During your most recent deployment to Afghanistan, did you take any of the following supplements?

a) Body building supplements (such as amino acids, weight gain products, creatine, etc.)

O Never O Less than once a month O Monthly O Weekly O Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

b) Energy supplements (such as energy drinks, pills, or energy enhancing herbs)

O Never O Less than once a month O Monthly O Weekly O Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

c) Weight loss supplements

O Never O Less than once a month O Monthly O Weekly O Daily or almost daily

If YES, what was the name (generic or brand name) of the supplement that you used?

11.12 Have you had a previous or current military injury compensation pension arising from deployment to Afghanistan or other supporting areas? O Yes O No

If YES: Was this for?

O Musculoskeletal injury, please specify:

O Hearing loss, please specify:

O Injury sustained in combat, please specify:

O Mental health, please specify:

O Other reason, please specify:

(b) Deployment to Afghanistan

Section Eleven: Your Health on Deployment

11.13 Do you plan on claiming a military injury compensation pension arising from your deployment to Afghanistan or other supporting areas in the future? ○ Yes ○ No ○ Don't know / Undecided

If YES: What is this for?

○ Musculoskeletal injury, please specify:

○ Hearing loss, please specify:

○ Injury sustained in combat, please specify:

○ Mental health, please specify:

○ Other reason, please specify:

11.14 Compared to your health BEFORE you deployed to Afghanistan, how would you rate your health in general NOW?

○ Much better now ○ Somewhat better now ○ About the same ○ Somewhat worse now ○ Much worse now

11.15 To what extent do you agree with the following statement?

The change in my health is because of my deployment to Afghanistan.

○ Strongly Agree ○ Agree ○ Neither Agree nor Disagree ○ Not applicable ○ Disagree ○ Strongly Disagree

(b) Deployment to Afghanistan

Section Twelve: Other Deployment Experiences

12.1 During your deployment to Afghanistan, did you have any major personal problems at home? (e.g. financial problems, family problems, etc). Please shade ONE circle for each statement.

	AGREE	DISAGREE	NOT APPLICABLE
a) I received enough personal support from my family	○	○	○
b) I had serious financial problems	○	○	○
c) My partner / spouse left me	○	○	○
d) There were problems with my children	○	○	○
e) I was concerned I might lose my civilian job	○	○	○
f) I faced other major problems at home whilst deployed	○	○	○

12.2 Did the military provide any reassurance / support to your spouse / partner whilst you were deployed? (e.g. phone calls or visits, arranging 'get togethers' with other service families, newsletters, etc.)

- ○ Yes, it was sufficient
- ○ Yes, but it was not sufficient
- ○ No
- ○ Not applicable

(b) Deployment to Afghanistan

Section Thirteen: Post Deployment Experiences

13.1 Why did you exit from theatre? (Please shade ONE circle only)

- O End of Deployment
- O CASEVACed through combat related injury
- O CASEVACed through non-combat related injury
- O Compassionate leave
- O Problems at home
- O Routine change of role / appointment / posting
- O To attend professional courses
- O Other, please specify:

13.2 Did you receive a Return to Australia Psychological Screen brief? O Yes O No

If YES:

13.3 Do you believe this process was useful? (please shade ONE circle only)

O Not at all useful O Not particularly useful O Neither useful nor un-useful O Somewhat useful O Extremely useful

13.4 After leaving the theatre of operation, did you have a short period of time somewhere away from the operation area for you to relax before returning to your home base?

O Yes O No - **please skip to question 13.6**

13.5 **If YES:**

a) For how many days?

b) Was the majority of this time…?

- O Structured (a daily programme of activities, e.g. fitness)
- O Unstructured (no planned activities)

c) Did you find this period of time useful? O Yes O No

d) What were the good points?

e) What were the bad points?

(b) Deployment to Afghanistan

Section Thirteen: Post Deployment Experiences

13.6 After returning to your usual home base, were you required to spend some time in or around your home Unit before being allowed to go on Post Operational Leave?

- O Yes
- O No - **please skip to question 13.7**
- O Not applicable, did not go on Post Operational Leave - **please skip to question 13.7**

If YES:

a) For how many days were you required at your home Unit? | | | |

b) Was the majority of this time…?
- O Structured (a daily programme of activities e.g. fitness / administration)
- O Unstructured (no planned activities)

c) Did you find this period of time useful? O Yes O No

d) What were the good points?

e) What were the bad points?

13.7 How long was it before you could relax properly on return to Australia?

O Immediately O 1 Week O 2 Weeks O 3-4 Weeks O 4-8 Weeks O 9 or more weeks O Have not

13.8 How long before you stopped scanning the environment for risk?

O Immediately O 1 Week O 2 Weeks O 3-4 Weeks O 4-8 Weeks O 9 or more weeks O Have not

13.9 Overall, do you think the Australian public were supportive of the mission to Afghanistan during your MOST RECENT deployment? O Yes O No

13.10 Since coming home, has anyone had a go at you, or given you a hard time because you went to Afghanistan? O Yes O No

(b) Deployment to Afghanistan

Section Thirteen: Post Deployment Experiences

13.11 To what extent do you agree or disagree with the following statements?

In the weeks after I came home...

	AGREE	DISAGREE	NOT APPLICABLE
a) I was well supported by the military	O	O	
b) I found it difficult to adjust to being back home	O	O	
c) People didn't understand what I had been through	O	O	
d) I did not want to talk about my experiences with my family / friends	O	O	
e) I found it difficult to resume my normal social activities	O	O	
f) I had serious financial problems	O	O	
g) I argued more with my spouse / partner	O	O	O
h) I have been let down by people who I thought would stand by me	O	O	
i) I had other major problems on return from deployment	O	O	

13.12 Were any of the following a problem?

a) Loss of seniority, promotion opportunity, or responsibility	O Yes	O No
b) Medical classification (MEC) downgraded	O Yes	O No

13.13 Overall, have your experiences on THIS DEPLOYMENT made you more or less likely to continue your military career?

O Very Likely O No difference O Less likely O Already Discharged

(b) Deployment to Afghanistan

Section Thirteen: Post Deployment Experiences

13.14 Were you married or in a significant relationship when you deployed to Afghanistan? ○ Yes ○ No

If YES: 13.15 In the weeks after you returned from your deployment:

a) How well did your partner meet your needs?	Poorly	○ 1	○ 2	○ 3	○ 4	○ 5	Extremely well
b) How good was your relationship compared to most?	Poor	○ 1	○ 2	○ 3	○ 4	○ 5	Excellent
c) How often did you wish you hadn't married or lived together?	Never	○ 1	○ 2	○ 3	○ 4	○ 5	Very Often
d) To what extent did your marriage or relationship meet your original expectations?	Hardly at all	○ 1	○ 2	○ 3	○ 4	○ 5	Completely

e) Which best described the degree of happiness, all things considered, in your relationship at the time?

○	○	○	○	○	○	○
Extremely unhappy	Fairly unhappy	A little unhappy	Happy	Very happy	Extremely happy	Perfectly happy

Please answer the following questions if you DEPLOYED AS A RESERVIST.

Otherwise, please go to Section Fourteen.

13.16 Were you in civilian employment at the time of your call-up for deployment?

○ Yes ○ No ○ Already in full time regular service or equivalent

13.17 Post-deployment, did you return to the same job you held before your deployment?

- ○ Yes
- ○ No, resigned at time of call-up / mobilisation
- ○ No, contract of employment ended just before / during deployment
- ○ No, employer kept job open for me but I chose not to return
- ○ No, employer did not keep job open for me, but I wanted to return
- ○ No, employer did not keep job open for me, and I didn't want to return
- ○ No, other reason, please specify:

13.18 Were any of the following a problem?

	YES	NO	NOT APPLICABLE
a) Loss of seniority, promotion opportunity, or responsibility in civilian job	○	○	○
b) Loss of income during call-up	○	○	○
c) Resentment from co-workers	○	○	○

(b) Deployment to Afghanistan

Section Fourteen: Final Questions

As a check of our coverage in this questionnaire, please answer these final questions.

14.1 Are there other important military experiences or exposures we have not asked you about? ○ Yes ○ No

If YES: please give details in the space provided

THANK YOU
Your time and effort in completing this questionnaire is greatly appreciated.

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Consent Booklet

MilHOP
Military Health Outcomes Program

MEAO Health Study Consent Form

I …….. **give my consent to the following parts of the study:** *(please circle below)*

- Completing the Middle East Area of Operations (MEAO) Health Study Questionnaire **Yes / No**
- *Allowing linkage of information contained in electronic ADF health records (e.g. Health-Keys) with the study data **Yes / No**
- *Allowing linkage of information contained in my electronic ADF psychological screening records with the study data **Yes / No**
- *Allowing linkage to information held in health registries including cancer registries and other health registry systems as outlined in the Information Sheet **Yes / No**
- *Being contacted for follow-up studies as outlined in the Information Sheet, without any obligation to accept the invitation to participate **Yes / No**
- *Allowing CMVH to obtain ADF contact details of any listed partner/spouse so that (s)he may be invited to participate in a family study, if randomly selected, and without any obligation to accept the invitation to participate **Yes / No**

* *This action is always subject to CMVH obtaining separate ethics approval from the appropriate university/institutional ethics committee(s).*

<u>My consent is provided on the following basis:</u>

- I have read the information sheet provided to me about the aims of this research, how it will be conducted and my role in it.
- I understand the risks involved as described in the Information Sheet.
- I am cooperating in this project on the condition that:
  - My personal information and details will be kept confidential.
  - The information that is collected for this study will only be used for the Military Health Outcomes Program or MilHOP research.
  - My participation will be from the commencement date to the end date specified on this form, or to the end of this project (June 2012). I can elect to withdraw from the project at any time.
- I can discuss my participation at any time with the Principal Investigator, a Research Team Member or a representative of one of the relevant Ethics Committees.

Continued over page

I understand that:

- There is no obligation to take part in this study.
- If I choose not to participate there will be no detriment to my career, future health care, service pension, DVA pension or compensation claims.
- I am free to withdraw from the study at any time. If I do, there is no detriment to my career, future health care, service pension, DVA pension or compensation claims.
- My answers will be completely confidential and any personal details, which may identify me in any way, will not be passed to the Department of Veterans' Affairs (DVA) or the Department of Defence. My answers will not in any way affect my pension, benefits or any health services I am entitled to from DVA.
- I can, at any time, withdraw my consent to participate in the project. Should I withdraw my consent, I can do so by contacting the study team at the Centre for Military and Veterans' Health on 1800 886 567 (free call) or milhop@cmvh.org.au

- ✓ I have kept a copy of the information and consent sheet, signed by me for my records.
- ✓ I have also been given a copy of Australian Defence Human Research Ethics Committee's (ADHREC) Guidelines for Volunteers.
- ✓ The study report will be made available to me at my request and any published reports of this study will preserve my anonymity.

Please forward results and findings to:

- ❒ My email address
- ❒ My home address

Participant Signature: _____

Name in Full: _____

Date: _____

Please sign and return to the Centre for Military and Veterans' Health

Participant Copy

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

MilHOP
Military Health Outcomes Program

MEAO Health Study Consent Form

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Continued over page

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- If I choose not to participate there will be no detriment to my career, future health care, service pension, DVA pension or compensation claims.
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- My answers will be completely confidential and any personal details, which may identify me in any way, will not be passed to the Department of Veterans' Affairs (DVA) or the Department of Defence. My answers will not in any way affect my pension, benefits or any health services I am entitled to from DVA.
- I can, at any time, withdraw my consent to participate in the project. Should I withdraw my consent, I can do so by contacting the study team at the Centre for Military and Veterans' Health on 1800 886 567 (free call) or milhop@cmvh.org.au

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- ✓ The study report will be made available to me at my request and any published reports of this study will preserve my anonymity.

Please forward results and findings to:

- ❒ My email address
- ❒ My home address

Participant Signature: _____

Name in Full: _____

Date: _____

Detach and retain this copy for your records

YOUR CONTACT DETAILS

To ensure that we have your correct contact details, please provide your current residential address. Note: to ensure confidentiality of your information, these pages will be removed by the Study Team and stored separately from your survey responses. Your survey will be identified by a unique study number only, which will be linked by a code stored securely and separately from the information.

If you have changed your name, please provide details here

New surname

Given names if different

Please give your current address, contact numbers and email address

Number and Street _____

Suburb / Town _____

State _____ Postcode _____

Mobile phone _____

Home phone _____ Work phone _____

Email _____

Please complete and return to the Centre for Military and Veterans' Health

ALTERNATIVE CONTACT DETAILS (OPTIONAL)

In case you move and we lose contact with you, please give us the names of up to two relatives or friends who may be able to tell us where you are. These should be people who are at long term addresses but who are not living with you. We would only use these alternative contacts in the event that we could not contact you at the address you have provided on the previous page.

Contact 1

Surname

All given names

Number and Street _____

Suburb / Town _____

State _____ Postcode _____

Mobile phone _____

Home phone _____ Work phone _____

Email _____

Contact 2

Surname

All given names

Number and Street _____

Suburb / Town _____

State _____ Postcode _____

Mobile phone _____

Home phone _____ Work phone _____

Email _____

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

MilHOP
Military Health Outcomes Program

You are invited to participate in the
Middle East Area of Operations (MEAO) Health Study

(part of the Military Health Outcomes Program – MilHOP)

Dear Participant,

Australia's commitment to the Middle East Area of Operations (MEAO) is undeniable with over 25,000 personnel having been deployed to this theatre of operations since the conflict commenced in 2001. In order to support this considerable commitment, the ADF has commissioned a MEAO research program which aims to better understand the impact of deployment on the performance and capability of serving and ex-serving personnel.

As Chief Investigator of the MEAO research program I would like to invite you to participate in this study. While I am aware that Defence conducts many such surveys, this particular health study is unique in that it will highlight the factors that put individuals at risk in order to develop ways in which they can be protected from harm in the future.

Confidentiality of your personal information is of utmost concern. As CMVH is independent from Defence we can assure you that any individually identifiable information you choose to provide to us will not be accessible by Defence, nor by any party outside of the immediate research team.

While we appreciate your time is valuable, the participation of as many people as possible is critical to making sure our findings are representative of the ADF community. Even if you do not believe that your deployment will have any adverse consequences on your health, your contribution is still critical.

I urge you to read the enclosed information sheet and consent form, and to consider participation. Further information can also be found on our website www.cmvh.org.au/milhop

Yours sincerely,

Annette Dobson

Professor Annette Dobson
Principal Investigator, MEAO Health Study

Australian Government
Department of Defence

Australian Government
Department of Veterans' Affairs

Dear Participant,

We are writing to strongly encourage you to participate in a Health Study of Australian Defence Force (ADF) personnel who have deployed, or are about to deploy, to the Middle East Area of Operations.

The health of serving and ex-serving members of the ADF is of great importance to both the ADF and the Department of Veterans' Affairs (DVA). It is vital that the ADF possesses the best deployment-related health information available so that it can effectively monitor, prepare for, and lessen any adverse effects that operational deployments might have on its people.

The Department of Defence has previously commissioned studies into the long-term health and future well-being of ADF personnel who have taken part in recent deployments to Timor, Bougainville, and the Solomon islands. You and more than 25,000 other serving and ex-serving personnel are now being invited to participate in the Middle East Area of Operations Health Study. This study will include personnel who have deployed to Iraq or Afghanistan since 2001, and those who will deploy in 2010 and 2011. This includes Operations SLIPPER, BASTILLE, CATALYST, FALCONER and KRUGER.

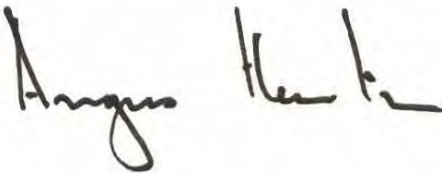
Your support will assist the ADF in understanding the various health effects of operational deployments, now and into the future. With that knowledge, the ADF will be able to better protect the health of ADF members preparing for and undertaking future deployments. Clearly, the greater the response rates to the study survey, the more useful the results for us all.

The study will be conducted by the Centre for Military and Veterans' Health (CMVH), a consortium of Universities including the University of Queensland and the University of Adelaide, jointly supported by Defence and DVA.

Study participants' information will be used only for the purposes of the deployment studies unless otherwise indicated, and will be protected under the provisions of the Privacy Act 1988. Your response will not in any way affect your current status or future prospects within the ADF, or any pension, benefits or health services you are entitled to receive from the Department of Veterans' Affairs. Time will be made available during normal work hours for serving ADF members to complete the survey.

We encourage you to participate for your own benefit and that of your colleagues, as well as for the benefit of the broader ADF in carrying out our important work for the nation. A high participation rate is critical to the quality of the findings from this study.

Yours sincerely,



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AUSTRALIAN DEFENCE HUMAN RESEARCH ETHICS COMMITTEE— GUIDELINES FOR VOLUNTEERS

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CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

[Study ID]

MilHOP
Military Health Outcomes Program

You are invited to participate in the
Middle East Area of Operations (MEAO) Health Study

(part of the Military Health Outcomes Program – MilHOP)

Dear [name],

Australia's commitment to the Middle East Area of Operations (MEAO) is undeniable with over 25,000 personnel having been deployed to this theatre of operations since the conflict commenced in 2001. In order to support this considerable commitment, the ADF has commissioned a MEAO research program which aims to better understand the impact of deployment on the performance and capability of serving and ex-serving personnel.

As Chief Investigator of the MEAO research program I would like to invite you to participate in this study. While I am aware that Defence conducts many such surveys, this particular health study is unique in that it will highlight the factors that put individuals at risk in order to develop ways in which they can be protected from harm in the future.

Confidentiality of your personal information is of utmost concern. As CMVH is independent from Defence we can assure you that any individually identifiable information you choose to provide to us will not be accessible by Defence, nor by any party outside of the immediate research team.

While we appreciate your time is valuable, the participation of as many people as possible is critical to making sure our findings are representative of the ADF community. Even if you do not believe that your deployment will have any adverse consequences on your health, your contribution is still critical.

I urge you to read the enclosed information sheet and consent form, and to consider participation. Further information can also be found on our website www.cmvh.org.au/milhop

Yours sincerely,

Annette Dobson

Professor Annette Dobson
Principal Investigator, MEAO Health Study

Australian Government
Department of Defence

Australian Government
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Dear Participant,

We are writing to strongly encourage you to participate in a Health Study of Australian Defence Force (ADF) personnel who have deployed, or are about to deploy, to the Middle East Area of Operations.

The health of serving and ex-serving members of the ADF is of great importance to both the ADF and the Department of Veterans' Affairs (DVA). It is vital that the ADF possesses the best deployment-related health information available so that it can effectively monitor, prepare for, and lessen any adverse effects that operational deployments might have on its people.

The Department of Defence has previously commissioned studies into the long-term health and future well-being of ADF personnel who have taken part in recent deployments to Timor, Bougainville, and the Solomon islands. You and more than 25,000 other serving and ex-serving personnel are now being invited to participate in the Middle East Area of Operations Health Study. This study will include personnel who have deployed to Iraq or Afghanistan since 2001, and those who will deploy in 2010 and 2011. This includes Operations SLIPPER, BASTILLE, CATALYST, FALCONER and KRUGER.

Your support will assist the ADF in understanding the various health effects of operational deployments, now and into the future. With that knowledge, the ADF will be able to better protect the health of ADF members preparing for and undertaking future deployments. Clearly, the greater the response rates to the study survey, the more useful the results for us all.

The study will be conducted by the Centre for Military and Veterans' Health (CMVH), a consortium of Universities including the University of Queensland and the University of Adelaide, jointly supported by Defence and DVA.

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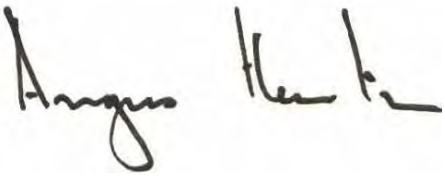

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Letter of Invitation

[Study ID]

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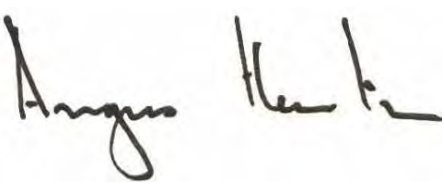

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Middle East Area of Operations (MEAO) Health Study

➢ If you wish **to participate**, you can complete the study in one of the following two ways:

(1) Complete the questionnaire on the *internet*, by accessing the following link and logging in using your details provided. You do not need to return any forms, as all information can be submitted online.

URL: http://www.cmvh.org.au/meao-survey

Study ID: **[12345678]**

Password: **[password]**

OR

(2) Complete the questionnaire in *paper* format, by completing and returning the enclosed **consent** and **contact details** forms in the reply paid envelope provided. We will then post you a hard copy of the questionnaire to your nominated mailing address.

➢ If you **do not** wish to participate, you can decline this invitation in any of these ways to suppress further reminders:

- Send an email with your **Study ID** and "**Declined**" in the subject line.
- Complete and return the form below in the reply paid envelope provided.
- Call our freecall number (below) to decline via telephone.

The Centre for Military and Veterans' Health
(University of Queensland node) Contact details:

Website: http://www.cmvh.org.au/milhop

Email: milhop@cmvh.org.au

Tel: **1800 886 567 (freecall)**

✂- -

Middle East Area of Operations (MEAO) Health Study

☐ I DO NOT wish to participate in the MEAO Health Study.

[Study ID]

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Middle East Area of Operations (MEAO) Health Study

(part of the Military Health Outcomes Program)

MILHOP
Military Health Outcomes Program

We recently invited you to participate in the MEAO Health Study. The Study is investigating the post-deployment health outcomes of ADF personnel who have deployed to the MEAO since 2001.

If you have already returned your consent forms and/or questionnaire in the mail, logged on to the internet, or contacted the Centre for Military and Veterans' Health, **thank you!** If you have not yet participated in this study but would like to, we would be grateful if you would do so in the next 14 days.

[FORENAME], to participate online, use the following link with your Study ID: **[12345678]** and Password: **[PWORD]**

http://www.cmvh.org.au/meao-survey

If you have any queries about the study, please contact the **Centre for Military and Veterans' Health** on the free call number **1800 886 567** or email **milhop@cmvh.org.au**.

We would appreciate your participation. Thank you.

If you wish to speak to an independent person about the conduct of this Study, contact details for the relevant Human Research Ethics Committees appear below:

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Detailed Research Plan - Revised

Middle East Area of Operations (MEAO) Health Study

Deliverable Item 5 (Phase 2b)
Financial Year 2009/10

June 2010

Centre for Military and Veterans' Health

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Document Version	**Version 10.1**
Status	**Final**

Australian Government
Department of Defence
Department of Veterans' Affairs

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Charles Darwin UNIVERSITY
Innovation in Education

THE UNIVERSITY OF ADELAIDE
AUSTRALIA

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Approvals

This document requires the following approvals:

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Executive Summary

1. The Detailed Research Plan presented here updates the previous Detailed Research Plan submitted December 2009. The various updates to the plan build on the initial Design Options paper that was submitted during Phase 1a and incorporate methodological developments achieved through experience gained during the Near North Area of Influence (NNAI) Studies, outcomes of the Middle East Area of Operations (MEAO) Preliminary Study conducted by CMVH in 2009, and ongoing consultation with the Department of Defence and Department of Veterans' Affairs (DVA) and other partners and collaborators.

2. The MEAO Health Study is part of the Deployment Health Surveillance Program (DHSP). The CMVH UA has also been contracted by the Defence Directorate of Mental Health to conduct a study of the Health and Wellbeing of Australian Defence Force (ADF) members who have not deployed to the MEAO. Collectively, the MEAO Health Study and the Health and Wellbeing Study are promoted under a common banner known as the Military Health Outcomes Program (MilHOP).

3. The specific objectives of the MEAO Health Study include identifying:

a. links between specific chemical, physical, biological and psychological exposures potentially encountered during the MEAO deployment and physical and psychological health outcomes;

b. short-term and long-term physical and psychological health effects associated with MEAO deployment;

c. means of increasing the utility of ADF health records for monitoring of the physical and psychological health of serving members;

d. protective (resilience) factors for psychological health outcomes; trajectory and pattern of psychological morbidity and its somatic manifestations and antecedents;

e. potential emergence of any post-deployment syndrome(s); patterns of health care utilisation by personnel deployed to the MEAO;

f. health indicators that are predictive of disability and where early intervention or program change may minimise disability in ADF members and veterans

4. The Detailed Research Plan is divided into two elements: Part 1 describes the research methods and Part 2 outlines the project management plan.

5. The MEAO Health Study will comprise three studies:

- **Prospective Study** (Study 1) - All Defence personnel who are scheduled to deploy to the MEAO after June 2010 and return to Australia by December 2011 will be invited to participate in the MEAO Prospective Study. Data (self-report questionnaire, physical assessments, blood and saliva samples, and neurocognitive assessments) will be collected approximately three months prior to and four months post-deployment. Electronic health records may also be collected in the future.
- **Census Study** (Study 2) - All Defence personnel who have deployed to the MEAO (between October 2001 and December 2009) will be invited to participate in the MEAO Census Study. Self-report questionnaire data, psychological screening data and future electronic health records will be collected. No blood samples will be collected and no other testing (e.g. physical tests or neurocognitive assessments) will be conducted as part of the Census study.
- **Mortality and Cancer Incidence Study** (Study 3) - This study will include all personnel who have deployed to the MEAO.

6. For each study we describe the study design, the recruitment plan and data collection approach, and provide an overview of the data analysis plan. The recently completed Preliminary Study has identified exposure and health concerns amongst serving and ex-serving personnel deployed to the MEAO as well as strategies to maximise recruitment of participants for Studies 1 and 2.

7. Part 2 of the Detailed Research Plan addresses project management issues. It is divided into five elements – a data management plan, a communication plan, a risk management plan, a quality assurance plan and the governance plan.

Introduction

1. This document updates the Detailed Research Plan submitted December 2009 for a health study of Australian Defence Force (ADF) personnel deploying to the Middle East Area of Operations (MEAO) during or after June 2010 and returning from deployment by December 2011 and MEAO veterans who deployed between 2001 and 2009. The plan builds on a Literature Review, Review of Health Hazards and Evaluation of Design Options that were prepared in Phase 1a.

2. The MEAO Health Study flows on from earlier CMVH Deployment Health Studies. These projects include the InterFET (International Force in East Timor) Pilot Project, the Solomon Islands Health Study, the Bougainville Health Study, and the East Timor Health Study (collectively referred to as the Near North Area of Influence (NNAI) Health Studies).

3. These projects involved one group of personnel who deployed on specific Operations and a comparison group of frequency-matched non-deployed ADF personnel. Because of the large numbers who have deployed to the MEAO, this design required review for the MEAO Health Study.

4. DHSP projects to date have collected both cross-sectional and retrospective data. The MEAO Health Study aims for the first time to incorporate a prospective component, collecting baseline data where possible both before and after deployment.

5. The MEAO Health Study will consist of three major components: a prospective study (Study 1), a census study (Study 2) and a mortality and cancer incidence study (Study 3).

6. As for previous DHSP studies, data sources for the MEAO Health Study will include hazard assessments, the National Death Index and the National Cancer Statistics Clearing House, self-report questionnaires, and routinely collected Defence psychological screening information. Unlike previous DHSP studies, hard copies of defence medical records will not be extracted, although potentially, future electronic health records may be accessed. Also Study 1 will collect blood and saliva samples and conduct specific physical and neurocognitive assessments with consenting personnel in identified sub-groups.

7. Provision has been made in the study design for follow-up cancer and mortality linkage for members of the NNAI study cohorts. Further longitudinal follow-up of members of the DHSP health study cohorts will be required in order to identify longer term health trends.

8. The Detailed Research Plan is divided into two substantive parts: Part 1 describes the research method and Part 2 outlines the project management plan.

PART 1 – PROJECT METHODOLOGY

Aims and Objectives

Aims

9. The MEAO Health Study is part of the Deployment Health Surveillance Program (DHSP). The DHSP aims to establish and maintain an integrated data system for monitoring the physical and mental health of deployed ADF personnel and to conduct specific studies to:

a. Increase understanding of:
   i. Chemical and physical environmental factors
   ii. Biological factors (including health countermeasures) such as vaccines and infections
   iii. Psychological stressors that lead to physical and mental health problems associated with deployment;

b. Investigate and increase understanding of the short, medium and longer-term physical and mental health effects of exposure to the factors described above (in a.) with specific deployments;

c. Provide advice to Defence on measures to improve health programs.

10. The MEAO Health Study will contribute to the overall aim of the DHSP by:

a. Ascertaining the health status of ADF personnel who have deployed to the MEAO;

b. Investigating changes in health outcomes between pre- and post-deployment in a subgroup of ADF personnel scheduled to deploy to the MEAO from June 2010 and returning from deployment by December 2011;

c. Investigating exposures and other risk factors where changes in health outcomes are found;

d. Establishing a framework for ongoing monitoring of the health of MEAO veterans, throughout their military career and after they separate from the ADF;

e. Being an important building block in the development of a comprehensive health surveillance system for ADF personnel.

11. The MEAO Health Study has been designed to address the following **broad research objectives**, by investigating whether there are:

a. Specific physical or psychological disorders or symptom clusters that are associated with particular features of deployment to the MEAO in different locations or roles;

b. Gender differences in any health impact of MEAO deployment;

c. Exposures associated with increased risk of morbidity and mortality for the group as a whole, and for specific MEAO subgroups with identified health disorders;

d. Changes in health outcomes between the pre- and post-deployment phases that may be associated with specific exposures;

e. Screening tools and tests which may enable the early detection of disorders so as to instigate treatment earlier and minimise disability in veterans;

f. Changes in ADF health and exposure records and recording practice that will facilitate future health surveillance at group level as well as providing ADF clinicians with quality data for clinical purposes.

12. The MEAO Health Study will provide data to describe the health of ADF personnel who have deployed to the MEAO and this information has the potential to enhance the future force capability of ADF personnel.

Specific objectives

13. Within the broad aims outlined above, the MEAO Health Study has the following specific objectives:

a. To investigate links between specific chemical, physical, biological and psychological exposures potentially encountered during the MEAO deployment and physical and psychological health outcomes;

b. To understand the interrelationships between short-term and long-term physical and psychological health effects associated with deployment;

c. To increase the utility of ADF health records for monitoring of the physical and psychological health of serving members;

d. To identify protective (resilience) factors for psychological health outcomes;

e. To determine the trajectory and pattern of psychological morbidity and its somatic manifestations and antecedents;

f. To investigate the potential emergence of any post-deployment syndrome(s);

g. To identify patterns of health care utilisation by personnel deployed to the MEAO;

h. To investigate relationships between deployment, exposures and non-specific symptoms and specific health problems;

i. To identify health indicators that are predictive of disability and where early intervention or program change may minimise disability in ADF members and veterans.

Preliminary Study and Pilot Work

Study Design

14. This planning stage during 2009 included meetings with stakeholders, focus groups and piloting instruments with the target population.

Stakeholder meetings

15. Stakeholder meetings targeting key Defence and veteran stakeholders were conducted to gain feedback on the proposed study design and assessments, in addition to the ongoing input and support from Defence and DVA directly. These included:

- National Younger Veterans' Consultative Forum (CMVH has a standing agenda item)
- Defence Force Units such as 1 Psychology Unit
- Ex-service organisations such as RSL, Australian Defence Association
- Other veterans groups (e.g. Young Diggers, Australian Peacekeepers and Peacemakers Veterans' Association).

Focus Groups

16. Focus groups were conducted to add to and complement the process already undertaken to select instruments for the study questionnaire and assign priority to the measures proposed. This process incorporated a review of the literature and a review of health hazards (MEAO Phase 1a), experience of the investigators, input from the Scientific Research Team (SRT) and the input of the Scientific Advisory Committee (SAC) and the Program Management Board (PMB).

17. Specifically, focus groups were used to: 1) capture qualitative data on the experiences and health concerns of MEAO veterans that will be mapped to the health and exposure questionnaire to check the validity and relevance of items to be assessed and 2) engage serving ADF and ex-serving members in the project.

18. Up to 10 individuals participated in any one focus group. Stratified purposive sampling and quota sampling were used to select participants for the focus groups. Quotas were applied to gender (with one focus group restricted to female participants only), rank and Service.

19. The procedure for identification of participants within each Service was advised by the Chain of Command and coordinated by a delegated Officer assigned by each Service in liaison with CMVH ADF liaison personnel.

20. The focus groups were conducted according to the protocol and approach recommended by Kreuger and Casey[1], and Morgan and Kreuger[2].

[1] Kreuger R and Casey M. Focus Groups: a practical guide for applied research. Sage: Thousand Oaks, Ca. 2000.
[2] Morgan D and Kreuger R. The focus group kit. Sage: Thousand Oaks, Ca. 1998.

21. In total, 27 focus groups were held with currently serving Defence Force members as outlined in Table 1. Holding focus groups in each of these Units provided an opportunity for different Service groups and members with different roles to take part.

22. Two focus groups (one in Adelaide and one in Brisbane) were held with MEAO veterans who had separated from the ADF. CMVH liaised with ex-serving organisations to promote the focus groups to ex-serving members. Additional advertisements in the general media and veterans' publications were used to widely publicise the focus groups.

23. Venues on ADF bases were used when focus groups included serving members, and CMVH offices in Brisbane or Adelaide were used for focus groups with ex-serving participants.

24. Each focus group session lasted between 1 and 1.5 hours and was facilitated in a consistent way by a group moderator who used a semi-structured interview guide. The interview guide covered topics including:

- Health concerns
- Positive and negative aspects of the deployment
- Experiences after returning from deployment
- Strategies for recruitment to the study and the use of incentives.

25. The focus groups were tape recorded using a digital recorder with the consent of participants. Initially, in order to meet the deadline for reporting to the PMO (29 May 2009) and finalisation of the study questionnaire for pilot testing (in July 2009), key themes and key issues were identified from the notes of the observer/scribe and from a review of the audio record. The latter involved creating an abridged transcript by listening to the audio file and making notes to supplement the written record.

26. The key themes and key issues identified in this manner were mapped to the battery of assessments planned for the MEAO Health Study to ensure that key health and exposure concerns of personnel were incorporated into the study protocols for pilot testing.

27. Later, the audio files obtained from focus groups were transcribed verbatim by CMVH staff with appropriate security clearances and an external transcription company. The transcripts were prepared such that future analysis may be facilitated by the use of the qualitative data management program NVivo 8 (QSR International).

Table 1: Defence Force personnel invited to participate in a focus group

Army		Navy		Air Force	
1st Bde - Darwin		**Fleet Base East**		**RAAF Edinburgh**	
Officer Rank	**Other Rank**	**Officer Rank**	**Other Rank**	**Officer Rank**	**Other Rank**
FG1	FG2 Combat	FG1	FG2 (sailors)	FG 1 Aircrew	
	FG3 Combat Support	FG3 Medical		FG2 Non-Aircrew	
FG4 Medical		FG4 Women		FG3 Medical	
3rd Bde - Townsville				**RAAF Richmond**	
FG1	FG3 Combat				
FG2 Aviation Air Crew	FG4 Combat Support			FG1 Aircrew	
	FG5 Aviation Non Air Crew			FG2 Non-aircrew	
FG6 Medical				FG3 Medical	
7th Bde - Enoggera					
FG1					
FG2 Medical					
FG3 Women					
SASR - Perth					
FG1	FG2				
4RAR - Holsworthy					
FG1	FG2				

FG = Focus Group

Pilot study

28. Information derived from the focus groups was mapped to the draft questionnaire, which was then amended to address any weakness or omission identified from the focus groups.

29. Focus group participants who consented to being contacted for future follow-up were asked to pilot test the questionnaire.

30. These participants were mailed a hard copy of the questionnaire to complete and return to the CMVH.

31. Any problems with questions, structure, flow or organisation of items identified by participants were noted by a CMVH research officer, and then all feedback was collated and reviewed by the SRT prior to development of the final version of the questionnaire.

Process Pilots

32. Process piloting of the recruitment process and the web-based questionnaire is described in the Study 1 and Study 2 Recruitment Plan sections.

Study 1: Prospective Study

Study Design

33. Currently serving ADF personnel will be invited to participate in the study approximately four months prior to deployment to the MEAO **(Time 1)** and followed up three months after returning from deployment **(Time 2).**

34. At each time point, participants will be asked to complete a self-administered questionnaire**.** A subset of eligible ADF members (~n=750) will also be asked to take part in a brief physical assessment and provide a saliva and blood sample. A smaller group of these participants (~n=400) will also be asked to undertake a neurocognitive assessment

35. CMVH researchers will seek consent to access and link post-deployment psychological screening records (RtAPS and POPS).

Recruitment Plan

Participants

36. In order to be eligible to participate in the MEAO Prospective Study individuals must :

a) Be members of the ADF and deploying to the Middle East Area of Operations after the 1st June 2010, and return to Australia from deployment by December 2011; and

b) Individuals who are eligible to participate in this study, but were not given the opportunity, or who did not respond to the pre deployment invitation, will still be eligible and therefore invited to participate at the post-deployment follow up.

These inclusion criteria apply regardless of:

- service type (navy, army or air force),
- rank,
- gender
- the length of deployment,
- the country where most time is spent (i.e. may be in Iraq/Afghanistan or in an area/country (outside Australia) supporting these operations),
- the role (combat, support, technical etc); and/or
- whether the ADF member has previously deployed to the MEAO.

Exclusion criteria

37. The following criteria will exclude individuals from being invited to participate in the MEAO Prospective Study questionnaire:

- Individuals who are NOT members of the Australian Defence Force including:
  - Members of foreign militaries seconded to the ADF;
  - Civilian contractors (whether bound to Defence Force Discipline Act or not);
  - Government officials (e.g. Department of Foreign Affairs and Trade (DFAT));
  - Aid workers (including Australian Government officials);
  - Civilians contracted to Defence Science Technology Organisation (DSTO);
  - Public Servants; and
  - Australian Federal Police;
- ADF personnel accompanying government officials or representatives not technically required for conduct of operations

38. Recruitment will be staggered to coincide with deployment schedules for different deploying groups.

39. All ADF personnel meeting the inclusion criteria will be invited to participate. Based on current deployment commitments, it is estimated there will be approximately 2,100 ADF personnel eligible to participate in the MEAO Prospective Study. Of this number we expect that approximately 1000 would consent and provide data pre- and post-deployment.

40. Individuals who complete Study 2 measures but are then subsequently selected for deployment will also be invited to participate in Study 1. These individuals will have multiple data points, which is consistent with the vision for the DHSP as a longitudinal health surveillance program.

Sample Size and Power

41. From ADFPAY data it is estimated that approximately 3,000 personnel deployed on Operation SLIPPER in 2008 (up to 12 November 2008). Defence have estimated that during the study data collection period approximately 2,100 eligible ADF personnel will be deploying to the MEAO. Of the these personnel, we estimate that 1,000 will be recruited to the MEAO Prospective Study, and that with this number the study will have good power to detect within-person differences between measurements taken pre- and post-deployment.

42. To detect small effects in categorical health outcomes (for example, 2.5% reporting improved health and 5% reporting a deterioration in health) a minimum sample of over 1000 participants responding at both time points would be required to achieve

80% power. However, for outcomes with clearer trends of an increase in prevalence, the number of participants required to achieve an 80% power is less.

43. For continuous outcomes the standardised mean difference (mean difference / standard deviation) was used to determine the sample size required to achieve good statistical power. These calculations assumed a correlation of 0.3 between the measures taken before and after deployment. Based on these assumptions the MEAO Prospective Study should have high power to detect standardised differences as small as 0.15 if the sample size participating is greater than 600. The retention rate from pre to post deployment is anticipated to be greater than 80%. Therefore, small effects in continuous outcomes will be possible to detect.

44. For biological measures the sample size required varies depending on the anticipated difference between the pre- and post-deployment measures. Given the anticipated higher response rate in the MEAO Prospective Study there is some potential for sub-studies using smaller samples to test specific research questions.

MEAO Prospective Pilot Study

45. A small pilot test of the MEAO Prospective Study protocol was conducted by the beginning of June 2010.

46. Approximately 50 Aircrew from RAAF Base Edinburgh who routinely deployed to the MEAO were invited to participate in the pilot test. Thirty-three individuals responded to the invitation.

47. The first 13 respondents agreed to participate in a pilot test of the MEAO Prospective Study physical testing protocol.

48. Pilot testing of the following instruments was undertaken:

a. Self administered questionnaire.

b. Physical testing sub protocol:

- Blood and Saliva collection
- Physical tests
- Transportation of biological samples to laboratories for testing

c. Data transfer and data analysis.

General Promotion of MEAO Prospective Study

49. For the MEAO Prospective Study to be effective and achieve desired outcomes, participation by ADF personnel is paramount. To encourage maximum participation and to best utilise personnel and resources, robust engagement plans to inform, recruit and involve participants have been developed. A series of advertisements will be followed by a Ministerial Launch. In addition to further media releases, promotional posters, web

pages and editorials, a 1800 number and study email address will be available to answer any Study questions.

50. Prior to the initial direct contact with potentially eligible ADF members the following strategies will be used to promote the MEAO Prospective Study:

a. Once deploying groups have been identified, and DIRLAUTH has been approved, CMVH posted ADF Liaison Officers will brief Commanding Officers (COs), Officers Commanding (OC), Executive Officers (XOs) and Senior Non-Commissioned Officers (SNCOs) of target units to gain support for the project
b. Permission will be sought to incorporate generic information about the MEAO Prospective Study into the pre deployment briefings with the support of JOC.

Pre-deployment Communication

51. Different strategies will be used to promote the MEAO Prospective Study, contact individuals and then follow up non-responders depending on whether they are members of the Special Forces (SF) or other ADF elements.

Communicating with eligible ADF members who are NOT part of the SF

52. Defence Force members posted to the CMVH will be responsible for identifying all deploying ADF personnel who are eligible for this study and are not members of the SF. This information will be provided to the research team who have been cleared to a restricted status. These research staff will then be responsible for sending warm up letters and invitation packs. The invitation pack will be sent both by email and hardcopy and will contain the study free-call (1800) number and an email address so that recipients can advise CMVH researchers if they would prefer the invitation pack to be sent to a different email or mailing address.

53. Non-SF respondents can nominate to take part in the study by returning the signed consent forms to CMVH researchers, or by logging on to the secure study website to complete the consent form and questionnaires online.

Communicating with eligible ADF members who are a part of the SF

54. A Special Operations Command (SOC) Administration Officer will liaise with the SF personnel eligible to participate in the MEAO Prospective Study. This will include obtaining lists of deploying SF members and sending out warm up letters and invitation packs to these individuals. The SF members' invitation pack will be sent by hardcopy only and will contain an SF-specific study free-call number and email address so that recipients can advise the SOC Administration Officer if they would prefer the invitation pack to be sent to a different mailing address.

55. SF respondents can only nominate to take part in the study by returning the signed consent forms to the SOC Administration Officer.

Recruitment to the MEAO Prospective Study

56. A personalised study invitation pack will be sent to all potential eligible participants approximately three months prior to the scheduled date for overseas deployment.

57. Members of SF will receive a modified invitation package to meet the special privacy and security requirements of this group.

Materials included with the SF Invitation Pack include:

a. A letter from the Principal Investigator
b. A letter of support from the Chief of the Defence Force and the Repatriation Commissioner
c. An instruction sheet describing how to take part in the study or decline the invitation to participate
d. The study consent form and duplicate participant copy
e. A basic information sheet for SF members who are eligible to take part in physical tests and neurocognitive assessments identifying procedures and requirements related to participation in the study
f. A supplementary information sheet for SF members eligible for the physical tests and neurocognitive assessments
g. A contact form to aid tracking for future longitudinal follow-up
h. A copy of the ADHREC guidelines for volunteers
i. The pre-deployment study questionnaires
j. A reply paid envelope

58. Other eligible ADF members (non-SF) will be sent an email containing a link to the study website where individuals can view the following documents:

a. A letter from the Principal Investigator
b. A letter of support from the Chief of the Defence Force and the Repatriation Commissioner
c. An instruction sheet describing how to take part in the study or decline the invitation to participate
d. EITHER
    a. A basic information sheet for those eligible to take part in the questionnaire component of the study only

        OR

    b. A basic information sheet for ADF members who are not SF and are eligible to take part in physical tests and neurocognitive assessments. These individuals will also be provided with a supplementary information sheet describing the physical testing and neurocognitive assessment measures in detail
e. A contact form to aid tracking for future longitudinal follow-up
f. A copy of the ADHREC guidelines for volunteers
g. A reply paid envelope.

59. Non-SF members can choose to complete the study consent form and the pre-deployment study questionnaires over the internet or in hardcopy. SF members will only be able to complete the hardcopy version.

60. A hard copy of the invitation pack will be sent concurrently to the member's Unit address, or to a nominated address advised by the invitee upon receipt of the warm up letter, that will contain each of the documents described above that are relevant to the individual.

61. A free-call study information phone number and dedicated study email address will also be available for refusals or queries from invitees.

62. The strategies detailed above have been revised based upon lessons learnt from the NNAI Health studies and the MEAO Preliminary Study completed in 2009.

Pre Deployment Follow-up of Non-SF Non-Responders

63. Follow-up of individuals who have not responded to the invitation package will be managed by the research team.

64. These non-responders will be followed-up with a reminder email within two weeks of the first invitation package being sent. If a response is still not received within one week of the reminder, a research staff member with appropriate security clearance will follow-up non-responders with a telephone call. If requested, information will be resent by email or mail. A further follow-up call will be placed one week later if no response has been received.

65. Up to ten attempts to contact non-responders prior to the scheduled date for deployment will be made.

66. In Formed Units where there is minimal response, the Officer Commanding will be contacted by CMVH staff and asked to promote the study further amongst personnel under their command.

Pre Deployment Follow-up of SF Non-Responders

67. Follow-up of SF members who have not responded to the invitation package will be managed by a SOC Administration Officer.

68. The SOC Administration Officer will follow up non-responders from the SOTGs by hard copy reminder letter within two weeks of the first invitation package being sent. If a response is still not received within one week of the reminder, the SOC Administration Officer will follow-up non-responders with a telephone call and re-send information by mail if requested. A further follow-up call will be placed one week later if no response has been received.

69. Up to ten attempts to contact non-responders prior to the scheduled date for deployment will be made.

70. In SF Units where there is minimal response, the Officer Commanding will be contacted by CMVH staff and asked to promote the study further amongst personnel under their command.

Recruitment at the post-deployment follow-up

71. Pre deployment questionnaires, physical tests, biological samples and neurocognitive assessments must be completed prior to deployment. However, eligible participants who wish to participate but who deploy at short notice, or who are unable to complete the consent procedure or questionnaire prior to deployment, will remain eligible and still be invited to participate in the post deployment component. These individuals will receive a post-deployment warm up letter one week prior to receiving the remainder of the invitation package as described above.

Selection of a sample of participants for the physical and neurocognitive assessments

72. Individuals from SOTG, the MTF and RAN sailors deploying to the MEAO, may be invited to participate in a physical test, provide a sample of saliva and blood and undertake a neurocognitive assessment pre- and post-deployment.

73. These participants will be provided with a supplementary information sheet describing the physical tests, the biological sampling process and the neurocognitive assessment to be performed.

74. These individuals will be able to consent to completing just the questionnaire component or all questionnaire, physical testing and/or neurocognitive assessment components.

75. Non-SF members from these groups who consent to completing the physical tests and/or neurocognitive assessments will be contacted by a CMVH research officer to schedule an appointment.

76. SF members who consent to completing the physical test and/or neurocognitive assessments will be contacted by the SOC Administration Officer.

77. Different selection criteria apply to the physical tests and neurocognitive assessment components. These are:

Physical Test Inclusion Criteria

78. In order to be eligible to participate in the MEAO Prospective Study physical testing, individuals must:

a. be eligible to participate in the MEAO Prospective Study questionnaire (see inclusion and exclusion criteria above),
b. have completed a pre deployment questionnaire,
c. be assigned to either:
    i. Special Operations Task Group (SOTG);
    ii. Mentoring Task Force (MTF); or
    iii. A RAN ship selected by Defence.

Physical Test Exclusion Criteria

79. There are no specific exclusion criteria applicable to the MEAO Prospective Study physical testing.

Neurocognitive Assessment Inclusion Criteria

80. In order to be eligible to participate in the MEAO Prospective Study neurocognitive assessment, individuals must

a. be eligible to participate in the MEAO Prospective Study questionnaire
b. have completed a pre deployment questionnaire,
c. be assigned to:
    i. Special Operations Task Group (SOTG);
    ii. Mentoring Task Force (MTF); or
    iii. a RAN ship selected by Defence.

Neurocognitive Assessment Exclusion Criteria

81. There are no specific exclusion criteria applicable to the MEAO Prospective Study neurocognitive assessments.

Data Collection Plan

Overview

82. Data will be collected at two time points. At Time 1 data collection will occur just after recruitment to the study, approximately three months prior to deployment.

83. Time 2 measures will be administered approximately four months after completion of Return to Australia processing.

84. The data collection is divided into four components:

a. A self-administered questionnaire (all)
b. Extracting data from health records including ADF psychological screening records
c. A physical test, saliva and blood samples (sample only n~750).
d. A neurocognitive assessment (sample only n~400)

Self administered questionnaire

85. The self-administered questionnaire will be administered at the pre-deployment assessment and at the post-deployment assessment.

86. The pre-deployment questionnaire (Annex 1.1) consists of:

- A brief deployment history questionnaire;
- A health questionnaire; and
- Personality and resilience insert

The post-deployment questionnaire (Annex 1.2) consists of:

- A health questionnaire; and
- A deployment experiences questionnaire completed at the post-deployment assessment. Specific deployment experiences questions are asked for Afghanistan and Iraq separately.

87. Details of the questions and scales within each component of the survey are provided later in the section entitled Data Collection Tools.

88. Pilot testing of the questionnaire has indicated that it will take participants between 30 and 60 minutes to complete at each assessment and options for completing will include:

a. Internet, using a web-based questionnaire (access by ID number and password provided with invitation package) (available for non-SF only); and

b. A mailed (hard copy) questionnaire on a scannable tele-form (available for non-SF and SF).

89. Experience from the NNAI Health Studies suggests that the majority of participants preferred the web-based version. The data from questionnaires completed on the web automatically populates the DHSP database (see Data Management Plan), removing the need to enter data by hand.

90. Non-SF participants who opt to complete the paper questionnaire will be able to return the questionnaires in a supplied reply paid envelope to CMVH. Following processing and checking of the completed forms, returned hard copy questionnaires will be uploaded to the Defence Health Research System database as described in the Data Management Plan.

91. SF participants will be provided with a reply paid envelope to return the completed questionnaire to the SOC Administration Officer. Once the SOC Administration Officer has checked to ensure that there is no identifying information on the questionnaire, they will send it to the CMVH, who will scan the forms using a tele-form scanner. This de identified data will also be used to populate the DHSP database.

92. 'Drop-in centres' conducted by CMVH staff at selected bases will also provide an additional opportunity for ADF members eligible for the MEAO Prospective Study to complete the questionnaire.

Health Records Data

Psychological Screens (RtAPS and POPS)

93. On returning to Australia, ADF personnel complete a paper-based screening tool, the Return to Australia Psychological Screen (RtAPS). Personnel complete a further screen—the Post Operational Psychological Screen (POPS)—three to six months later. These instruments are administered by Defence Force psychologists. The information collected during these screens is stored electronically and will be provided to the research team.

Physical Tests, saliva and blood samples

94. A rigorous and thorough examination of serving personnel has clear scientific benefits and the potential to define future risks that can be modified for individuals. Further, it communicates a concern and conviction about the wish to protect individuals by the ADF. Defining these health characteristics and their impact on performance also has a major capacity to sustain and develop the capability of the ADF.

95. Consequently, participants from SOTG, MTF and the Navy will be invited to take part in a series of physical tests, provide saliva samples and have blood samples taken.

96. CMVH will subcontract physical tests and biological collection and analysis to Healthscope.

97. ADF Liaison Officers will negotiate with a Point of Contact at each location for physical testing and neurocognitive assessment and facilitate access to suitable facilities at the home barracks of the groups who will participate in these assessments.

98. CMVH will provide training to Healthscope staff in the procedures and use of equipment for physical tests. CMVH will provide staff to oversee data collection at each location and monitor quality, providing continuous quality improvement feedback directly to Healthscope staff.

99. The CMVH staff (in the case of non-SF participants), or the SOC Administration Officer (for SF participants) will provide participants with salivette tubes for collection of saliva samples the day before the physical testing appointment. Three samples will be collected by participants in their home. One sample approximately 30 minutes after awakening in the morning, and two further samples collected at 8pm in the evening. Participants will then be asked to store the samples in their refrigerator at home and bring it with them the following day when they are required to present for the physical testing. An automated SMS reminder will be sent to participants 30 minutes before each sample is due to be collected, to remind them to collect the saliva sample.

100. During the physical tests, specifically trained research staff from Healthscope will measure height, weight and waist and hip circumference, conduct a step (fitness) test and measure blood pressure. Lung function will be assessed by spirometry.

101. Photographs will be taken of participants' backs, palms of their hands, soles of their feet and side views of the cheek, lower nose and lips. This is done in order to assess dermatological conditions that develop on deployment.

102. The collection of blood samples, coordination of pathology tests, reporting of results to CMVH and storage of samples will be sub-contracted to Healthscope.

103. Approximately 40ml of blood will be collected in vacuette tubes.

104. Following collection, the bloods will be prepared for transport and storage on site by Healthscope staff. This will involve centrifugation, where appropriate, using a portable centrifuge, of the whole blood to separate serum. Healthscope will coordinate delivery of the saliva and blood samples to laboratories for testing.

105. Two aliquots of serum will initially be stored for up to 10 years.

106. The complete list of pathology tests to be undertaken is provided with the description of data collection tools.

107. De-identified, linkable, results of laboratory tests will be provided electronically to populate the Defence Health Data Management System.

108. The results of each of the pathology tests will be reviewed by a medical doctor. A plain language summary of the outcomes of pathology tests will be prepared and provided as part of feedback directly to the participants that complete this aspect of the study, if requested by the participant. In addition, participants will be advised when any of the test results indicate the need for a medical consultation. In this case, participants will also be provided with a copy of the original pathology results for review by their doctor.

Neurocognitive Testing

109. Personnel from SOTG, MTF and the Navy may also be invited for neurocognitive testing utilising the computerised Brain Resource Company (BRC) QuickCap. Neurocognitive testing will occur on a subgroup of approximately 400 individuals who meet the eligibility criteria for neurocognitive testing. This testing will provide pre- and post-deployment assessment of the effects of stress and mild traumatic brain injury on neurocognitive function.

110. Neurocognitive assessments will involve direct measurement of brain function in response to particular tasks using event related potentials, quantitative electroencephalogram (qEEG) and startle response. Consenting participants will be fitted with a QuickCap and EDA electrodes and receive pre-recorded task instructions. The testing environment is standardised and the measurement of performance is computerised, which limits confounding due to the impact of the environment and human interaction on participant performance. An extensive database of normative data exists for this test against which results can be matched.

111. The battery of tests assess the following domains of cognitive function:

- Resting Electric Brain Function (qEEG)
- Working memory
- Startle Response
- Emotion processing
- A Go/No Go Task to measure the capacity of the individual to suppress a natural tendency to respond.

Data Analysis Plan

Overview

112. The MEAO Prospective Study is an important building block in the establishment of a long-term health of ADF personnel. The data collected as part of this study will contribute to establishing a framework for ongoing monitoring of the health of MEAO veterans, throughout their military career and after they leave the ADF, and provides information to answer the following specific research questions:

a. Are there changes in health outcomes between pre- and post-deployment in ADF personnel deploying to the MEAO?
b. What exposures and other risk factors are associated with changes in health outcomes?
c. What are the protective (resilience) factors for psychological health outcomes?
d. What are the specific physical or psychological disorders or symptom clusters that are associated with particular features of deployment to the MEAO in different locations or roles?
e. Are there relationships between deployment exposures and non-specific symptoms and specific health problems?
f. What is the trajectory and pattern of psychological morbidity and its somatic manifestations and antecedents?

g. What role do biological measures play as mediating variables between exposure and symptom formation?
h. Are there gender differences in any health impact of MEAO deployment?
i. What is the value of measures utilised in the study as screening tools and tests which may enable the early detection of disorders so as to instigate treatment earlier and minimise disability in veterans?
j. What role do these biological measures play as screens?
k. How can the utility of ADF health records for monitoring of the physical and psychological health of serving members be increased?

Exploratory Data Analysis

113. An analysis of questionnaire response rates will be performed to assess response bias by comparing the demographic characteristics of people who took part in the prospective study and people who refused to take part. Response quality will also be assessed by examining proportion of survey questions completed and the biological outcomes recorded. The baseline demographics of the personnel in the prospective study will also be described.

Primary Analyses

114. For the prospective component of the study, the data from the self-administered questionnaire as well as any assessments will give information on the baseline level of health of Defence personnel before deployment to the MEAO.

115. The self-administered questionnaire will be repeated approximately four months after return from the deployment.

116. Health outcomes measured before and after deployment will be compared to assess whether deployment to the MEAO has had an effect on the health of Defence personnel. Paired t-tests will be used to compare normally distributed continuous variables, and the Wilcoxon signed rank test for non-normally distributed continuous variables. For categorical variables, McNemar's Test (for 2 by 2 category comparisons) and the test for symmetry (where the number of categories is greater than 2) will be utilised.

117. Multiple Regression models can also be used to compare the before and after deployment health measures. In these models the baseline measurement (pre-deployment) is treated as an independent variable (with other exposures and confounders) and the post-deployment measurement is treated as the dependent variable in the model.

118. As further follow-up data is collected from the same participants, the repeated measures data will be analysed using Multi-Level Modelling.

Study 2: Census Study

Study Design

119. Study 2 will involve a **cross-sectional census** of **all** serving and ex-serving ADF members who deployed to the MEAO between 1 October 2001 and 31 December 2009.

120. These individuals will be invited to complete a self-administered questionnaire about their deployment experiences and health outcomes.

121. ADF-held electronic psychology records and future electronic health record data will be obtained for analysis. Linkage between these and questionnaire data will only be possible where specific individual consent is provided.

Recruitment Plan

Participants

122. All current and former members of the ADF from the Royal Australian Navy, Australian Army or Royal Australian Air Force who deployed

- to Afghanistan or areas supporting operations in Afghanistan between 2001 and 2009; and/or
- to Iraq or areas supporting operations in Iraq between 2002 and 2009

will be invited to participate in the study. This definition encompasses only force assigned personnel and excludes visitors/secondments to the ADF from other military and civilian organisations. It includes personnel attached to foreign militaries or the United Nations.

Generation of Sampling Frame

123. A nominal roll will be constructed of personnel deployed to the Middle East Area of Operations. The initial sources used to generate the nominal roll are PMKeyS, ADFPAY and Deployment Orders (DEPORDS).

124. CMVH is working in consultation with the PMKeyS Remediation Project currently undertaken by Defence to verify and clean the datasets from each source and to best ascertain the most accurate deployment records for each person.

125. All individuals identified as having deployed to the MEAO between 1 October 2001 and 31 December 2009 will be invited to participate in the study. No comparison group is planned for the census study. Due to the large number deployed to the MEAO, identifying an appropriate comparison group who did not deploy to the MEAO, but who were fit to deploy over the same time period in similar roles, was not feasible. Rather, comparisons will be made between subgroups of interest within the full nominal roll.

Sample size and Power

126. Sample size and power calculations have been conducted for outcomes assessed in the questionnaire.

127. The nominal roll compiled includes a total of 26,915 persons, so around 27,000 are eligible to participate in the census study. A comparison of different subgroups (for example, gender, Service, time of deployment and Operation) and a response rate of 45% (based on responses to the Near North Area of Influence studies) would yield good statistical power to detect relative differences greater than 50% in conditions with a prevalence of over 5% in a comparison group. However, there is little power to detect relative differences of less than 20% in rarer conditions (less than 10% prevalence).

128. The statistical power to detect differences between continuous measures between the main subgroups is good, except for instances when the standardised absolute difference is less than 0.01.

Process Piloting

129. Procedures for contacting individuals and access to the web-based questionnaire for Study 2 will be developed and refined as part of process piloting.

130. A small number of known individuals (approximately 20) will be selected for preliminary testing of the web-based questionnaire. These individuals will be CMVH staff.

131. A sample of approximately 20 individuals will then be invited to test the web-based questionnaire. These individuals will include current ADF personnel.

132. Information for logging on to the web-based form and providing electronic consent will be provided by email. Participants will be asked to complete the web-based protocol to ensure smooth technical operation of consent procedures and the online forms. Testing will occur both within and external to the DRN environment. Extraction of data from web-based systems will also be tested for both participant tracking and data quality.

Promotion of the study and contacting veterans

133. Study 2 will initially be promoted through various media outlets and Defence organisations as described in the Communications Plan. The study will then be launched for serving personnel. This will involve intense promotion of the study throughout internal Defence channels. A launch of the study focusing on ex-Serving personnel will follow, utilising ex-Service organisations and media to promote the study and encourage participation, as described in the communication plan.

134. Prior to distributing any study information, vital status will be checked with the National Death Index (NDI). Approval from the Australian Institute of Health and Welfare (AIHW) Ethics Committee will be required to match names on the nominal roll to those on the NDI.

135. The Directorate of Strategic Personnel Policy Research (DSPPR) will assist with the recruitment of participants, based on an assessment of DSPPR's capacity and

capability to achieve scientific objectives. It is proposed that a project officer be employed within DSPPR to facilitate the process. However, all telephone follow-up will be conducted in-house at CMVH.

136. The Defence Health and Wellbeing Survey funded by the Directorate of Mental Health will also be run concurrently with Study 2.

Contacting Currently Serving Members

137. Initial contact will be made with participants via mail distribution of a 'warm-up letter', advising members that they will be invited to participate in the study and the importance of participation. The letter will contain the study freecall number and email address so that recipients can advise CMVH if they would prefer the invitation pack to be sent to a particular email or mailing address.

138. Seven days from the warm-up mailed letter being sent, a personalised study invitation pack will be sent by email to all individuals on the nominal roll, except those known to be deceased. The email will include an overview of the project and its significance, and links to a web-based package that will include more detailed information about the study, the information sheet, consent forms and questionnaires.

139. Where requested, or in the absence of an email address, a hard copy of the invitation pack will be sent by internal Defence Force mail to the member's Unit address, or to a nominated address advised by the invitee upon receipt of the warm-up letter.

140. The invitation package will include:

a. A comprehensive information sheet identifying procedures and requirements related to participation in the study;
b. A letter of support from the Chief of the Defence Force and the Repatriation Commissioner;
c. A contact letter from the Principal Investigator;
d. A copy of Australian Defence Force Human Research Ethics Committee Guidelines for Volunteers;
e. An instruction sheet for participation (including the URL and loin information for the online questionnaire, if relevant) and a form to register refusal, if desired;
f. A consent form with duplicate participant copy, covering individual components of the study (enabling consent to some or all components);
g. A contact form to aid tracking for future longitudinal follow up;
h. Health and Deployment Questionnaire booklets (hard copy invitation packs only); and
i. A reply paid envelope.

141. 'Drop-in centres' conducted by CMVH staff at selected bases will provide an additional opportunity for currently serving members wishing to participate in the study to obtain an invitation pack and complete the questionnaire. These centres will operate for four to five days in each location.

Contacting ex-serving members

142. For ex-serving members, a warm-up letter will be mailed to the individuals' last known home address obtained from their PMKeyS record.

143. As many ex-serving personnel can be expected to have changed address since leaving the Defence Force, 30 days will be allowed for 'return to sender' mail.

144. When the warm-up letter is not 'returned to sender', a mailed invitation package will be sent to this address.

Follow-up of non-responders

Invitations

145. It is assumed that an initial response rate of 30% will be achieved with currently serving personnel and 5% with ex-serving personnel (based on DSPPR advice and NNAI results).

146. Where a warm-up letter or invitation is returned undeliverable, telephone follow-up and tracing, as described below, will commence immediately.

147. In other cases, if there is no response to the invitation package within two weeks (emailed invitations) or three weeks (mailed invitations) a reminder will be sent to the same email or mailing address.

148. If there is still no response within a further two weeks (emailed reminder) or three weeks (mailed reminder), appropriately trained staff will follow up non-responders by telephone. A maximum of 10 attempts will be made, on various days of the week and various times of day to contact non-responders at the ADF or private telephone numbers obtained from their PMKeyS record.

149. Where telephone contact is made, the invitation package may be resent to the email or mailing address supplied by the invitee at their request, or alternatively refusal can be registered, if desired by the invitee. If no contact is made, but a telephone message service is available, a reminder message will be left, along with the study freecall number and email address.

150. Where telephone contact attempts have been unsuccessful, the individual's name, date of birth and last known private address will be provided to ComSuper who will assist researchers by checking their databases for current addresses. In cases where new addresses are found, ComSuper will forward the invitation package with a covering letter. In the event that this process is unsuccessful, a similar procedure will be undertaken in conjunction with the Department of Veterans' Affairs (DVA). Protocols have been developed by CMVH in collaboration with both ComSuper and DVA as part of the NNAI studies to facilitate this process.

Questionnaires

151. Where an individual registers his or her intention to complete the online questionnaire, but does not do so within two weeks of registering this intention, an email will be sent to the email address nominated on the individual's contact form, reminding him or her to complete the questionnaire within the next 14 days.

152. Where a mailed questionnaire is still outstanding three weeks after being sent, a reminder card will mailed.

153. Telephone follow-up of outstanding questionnaires will follow the same protocol as the follow-up of invitations described above. Questionnaires may be re-mailed or re-emailed, if requested by the respondent.

Data Collection Plan

Overview

154. Data collection for Study 2 will involve a survey of all personnel who have deployed to the MEAO and accessing health records including ADF electronic psychological screening records and the electronic (medical) health record as this becomes available.

Self administered questionnaire

155. The self-administered questionnaire is comprised of a:

- Brief Deployment History questionnaire
- Health Questionnaire
- Deployment Experiences Questionnaire.

156. The questionnaire is designed to take between 30 and 60 minutes for participants to complete and options for completing will include:

a. Internet, using a web-based questionnaire (access by study ID number and password provided with invitation package) or;
b. Paper questionnaire on a scannable tele-form completed privately or;
c. Telephone interview, if requested by the participant.

157. Experience from the NNAI Health Studies suggests that the majority of participants preferred the web-based version. The data from questionnaires completed on the web automatically populates the DHSP database (see Data Management Plan).

158. Participants who request to complete the paper questionnaire will be provided with a reply paid envelope to return the completed questionnaire to CMVH. Following tracking and checking the completed forms will be uploaded to the DHSP database as described in the Data Management Plan.

159. Serving members will be encouraged to complete the questionnaire in work time.

Health Records Data

Psychological Screening Records

160. On returning to Australia from overseas deployment, ADF personnel complete a paper-based screening tool, the Return to Australia Psychological Screen (RtAPS). Personnel complete a further screen—the Post Operational Psychological Screen (POPS)—three to six months later. These instruments are administered by Defence Force psychologists. The information collected during these screens is stored electronically and will be accessed by the research team in collaboration with Defence staff and according to protocols established for previous DHSP studies.

Electronic Health Records

161. Access to health records forms part of the vision for the DHSP, as described in the DHSP Road Map and Mandate. However, experience from the NNAI studies demonstrated that it is impractical to obtain hard copies of Unit Medical Records for large numbers of personnel. Consequently, the MEAO Health Study will seek to obtain electronic health records of MEAO veterans as they become available through 2010 as the electronic record replaces the paper record but it is recognised that in the life of this project representative analysis of health outcomes using this data source is unlikely to be possible.

Data Analysis Plan

Overview

162. The data collected as part of this study aims to answer the following specific research questions:

a. Are there links between specific chemical, physical, biological and psychological exposures encountered during the MEAO deployment and physical and psychological health outcomes?
b. What exposures are associated with increased risk of morbidity for the group as a whole and for specific MEAO subgroups with identified health disorders?
c. Are there gender differences in any health impact of MEAO deployment?
d. What are the protective (resilience) factors for psychological health outcomes?
e. Are there relationships between deployment, exposures and non-specific symptoms and specific health problems?
f. What is the pattern of psychological morbidity and its somatic manifestations?
g. Is there a post-deployment syndrome(s) common to the MEAO deployments?
h. What are the patterns of health care utilisation in personnel deployed to the MEAO and do these differ between groups?
i. What is the value of measures utilised in the study as screening tools and tests which may enable the early detection of disorders so as to instigate treatment earlier and minimise disability in veterans?

j. How can the utility of ADF health records for monitoring of the physical and psychological health of serving members be increased?

Exploratory Data Analysis

163. An analysis of questionnaire response rates will be performed to assess response bias. The response rate by age, sex, Service, service type, rank and current status (serving or ex-serving) will be assessed to identify sources of response bias and whether the study participants are representative of the full nominal roll. The level of response will be compared between the different subgroups of the nominal roll (for example gender, Service, time of deployment and Operation). Response quality will also be assessed by examining proportion of survey questions completed.

164. There are likely to be veterans of deployments to the Near North Area of Influence (and other deployments not considered to date in the DHSP) on the nominal roll. The previous deployment history of MEAO veterans will be compared between the subgroups of the MEAO nominal roll to assess whether specific subgroups were more likely to have deployed on other Operations. Likewise the number of MEAO deployments for each person will be calculated and compared between the exposure groups of interest.

Primary Analyses

165. The health outcomes in the self-administered questionnaire will be cross-tabulated by deployment and exposure subgroups. Differences in the distribution of responses between the different Operations, periods of deployment, deployment locations, services and other defined exposure subgroups will be examined using the chi-squared test for categorical variables, the t-test for normally distributed continuous variables, and the Mann-Whitney test for non-normally distributed continuous variables. Continuous measure may also be analysed using ordinary linear regression with demographics or confounder variables built into the model to account for differences between the exposure groups.

166. Odds ratios associated with different exposures with 95% confidence intervals will be calculated for binary outcomes using logistic regression to control for potential confounders.

167. Appropriate models for count data (for example Poisson or Negative Binomial Models) will be used to assess whether there are differences in the number of events (for example, the total number of symptoms recorded for each person). These models will also control for potential confounders.

168. Within-person comparisons will be performed between measures taken at different time points. In particular, measures of the K10 and PCL-C scales measured on Defence psychological screening records can be compared between the Return to Australia Psychological Screen (RtAPS) and the Post Operation Psychological Screen (POPS). McNemar's Test (for 2 by 2 category comparisons) and the test for symmetry (where the number of categories is greater than 2) will be used to compare categorical variables, and the paired t-test or the Wilcoxon signed rank test will be used as

appropriate to compare the scale original scores between these screens. Similar methods can be used to compare measures of psychological distress taken at the RtAPS or POPS with those recorded on the self report questionnaire.

Secondary / Subgroup Analyses

169. The responses from the general symptoms checklist can be used to investigate patterns of symptoms. There is also potential to investigate the existence of any post-deployment syndrome by looking at clusters of symptoms using factor analysis techniques if required.

170. More specific definitions of exposure will be investigated. For example, particular forms of combat, locations or other specific operational/occupational exposures such as sub-element task groups may be explored to define additional subgroups for comparison and analysis. Stratifications used in previous DHSP studies include Service, service type, gender, rank and period of deployment. Given the significant heterogeneity of the deployments (and therefore exposures) and the design based on internal comparisons within the cohort, the large sampling frame will allow these stratifications to be made while retaining acceptable cell size.

Study 3: Mortality and Cancer Incidence Study

Study Design

171. Study 3 will involve acquisition of data from the National Death Index and the State/Territory Cancer Registries (via the National Cancer Statistics Clearing House).

172. Defence personnel records (from PMKeyS) will be accessed to obtain information on personnel who were serving Australian Defence Force (ADF) members or separated from the ADF at three separate time points (1 January 2001, 1 January 2006 and 1 January 2011).

173. These personnel will be separated into four key groups:

- ADF personnel never deployed to the Middle East Area of Operations (MEAO);
- ADF personnel deployed to the MEAO between 2001 and 2005 inclusive, but not between 2006 and 2010 inclusive;
- ADF personnel deployed to the MEAO between 2006 and 2010 inclusive, but not between 2001 and 2005 inclusive;
- ADF personnel deployed to the MEAO between 2001 and 2005 inclusive, and also between 2006 and 2010 inclusive.

These groups have been defined to allow for the cohort deployed between 2001 and 2005 inclusive to be analysed at specific time points (such as 10-year follow-up) earlier. Five-year groups have been selected based on retention figures for the Australian Defence Force during the timeframe being considered [3].

In addition, this design allows for changes in prevalence of specific conditions among personnel deployed at different times to be detected [4,5]. Further subgroups will be defined based on individuals' dates of joining and separating from the ADF, to ensure that comparisons are made between contemporaneously serving groups of individuals.

Mortality Registry Data

174. Increased deaths from external causes have been found in studies of deployments to the 1990/91 Gulf War. Therefore, investigating patterns of mortality in veterans is an important focus of this study.

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[3] J Reich, J Hearps, A Cohn, J Temple, P McDonald. 2006. Defence Personnel Environment Scan 2025, p42. Department of Defence, Canberra. http://www.defence.gov.au/dpe/dpe_site/publications/DPES2025, accessed 5 May, 2010.

[4] JF Kelly, AE Ritenour, DF McLaughlin, KA Bagg, AN Apodaca, CT Mallak, L Pearse, MM Lawnick, HR Champion, CE Wade, JB Holcomb. 2008. Injury severity and causes of death from Operation Iraqi Freedom and Operation Enduring Freedom: 2003-2004 versus 2006. J Trauma, 64(2 Suppl): S21-26.

[5] O Horn, A Sloggett, GB Ploubidis, L Hull, M Hotopf, S Wessely, RJ Rona. 2010. Upwards trends in symptom reporting in the UK Armed Forces. Eur J Epidemiol, 25(2), 87-94.

175. The MEAO Health Study will utilise similar protocol and procedures as developed by CMVH for the NNAI studies. The mortality study will be conducted by linkage with the National Death Index which is managed by the Australian Institute of Health and Welfare (AIHW), and is a compilation of the data held by the various registries of death in the Australian States and Territories.

176. The timing of this study will have to take into account that the National Registry takes approximately two years to compile mortality information from the State and Territory Registries. For example, an analysis of mortality data conducted in 2011 would include only data compiled at that time, which would be as of 2009.

Cancer Registry Data

177. All forms of cancer (with the exception of non-melanocytic skin cancer) are the subject of compulsory registration in all States and Territories of Australia. While studies of cancer in veterans of the first Gulf War have not shown elevated rates, studies of Korean War veterans have shown excess rates of cancer decades after the end of the war. Cancer remains a significant concern of many veterans.

178. CMVH has established protocols for the extraction of data from the cancer registries and these protocols will be applied to the MEAO Health Study. Briefly, this will involve extraction and cleaning of data from the National Cancer Statistics Clearing House, which contains data derived from the eight State and Territory Cancer Registries.

179. Linkage to health registries formed one of the consent options in Study 2 (Census) of the Middle East Area of Operations Health Study. Cancer incidence data for the subset participants who give their consent to this linkage will be able to be linked to their responses to MEAO Study 2, in order to explore possible associations with specific roles or exposures during deployment.

180. The timing of this study will have to take into account that the National Cancer Statistics Clearing House takes approximately three to four years to compile cancer incidence information from the State and Territory Registries. For example, an analysis of cancer incidence data conducted in 2011 would only include State data compiled at that time, which would be as at 2007.

Analysis of cancer and mortality incidence

181. A subject's person-years of follow-up will be estimated from the end of the deployment to their death or follow-up date. The person-years will be used to calculate rates of mortality and cancer incidence in each arm of the study. Survival analysis techniques such as Life Tables, Survival curves as well as Poisson and Cox models can be used to analyse this time-to-event data. Long-term follow-up (10, 20 or 30 years post-deployment) is expected to provide the most informative results on mortality and cancer incidence.

Design options and power

182. Tables A-J present the estimated statistical power after 10 and 15 years follow-up for different effect sizes associated with cancer and mortality outcomes. Projections of mortality and cancer incidence rates are based on the most current Australian national estimates available (2005 for cancer and 2006 for mortality) and derived by applying these rates to a lexis expansion of the data assuming 10 and 15 years follow-up.

183. It is estimated that the mortality study will have a good statistical power (0.86) to detect relative differences of 30% in all-cause mortality after 10 years follow-up using a comparison group two thirds the size of the nominal roll and accounting for a healthy soldier effect (Table A). Using the same comparison group, after 15 years follow-up there is good statistical power (0.81) to detect a 20% difference in mortality (Table B) and a relative difference of 30% could be detected in the cancer incidence rates between the veterans and comparisons with 96% power after 10 years follow-up (Table C).

Longer follow-up would be required to be able to detect differences in cancer mortality and external cause mortality and detect relative differences of less than 20% in some of the comparisons of those deployed in the early period of the deployment and those deployed later (Tables E-J).

Hypothesis 1 – Is there an association between MEAO deployment and cancer/mortality?

Table A: All cause mortality power based on 10 years follow-up (estimated number in veterans arm 379 deaths (N = 26915))

All cause mortality	Comparison group size			Comparison group size with correction#		
Relative Risk	N = 26915	N=17943	N= 13458	N = 26915	N=17943	N= 13458
1.2	0.74	0.64	0.55	0.64	0.54	0.46
1.3	0.97	0.93	0.87	0.93	0.86	0.79
1.4	>0.99	>0.99	0.98	0.99	0.98	0.95

Rates in the cohort assumed to be 20% less than the general population

Table B: All cause mortality power based on 15 years follow-up (estimated number in veterans arm 693 deaths (N = 26915))

All cause mortality	Comparison group size			Comparison group size with correction#		
Relative Risk	N = 26915	N=17943	N= 13458	N = 26915	N=17943	N= 13458
1.1	0.44	0.36	0.31	0.36	0.30	0.25
1.2	0.95	0.89	0.82	0.89	0.81	0.73
1.3	>0.99	>0.99	>0.99	>0.99	0.99	0.97

Rates in the cohort assumed to be 20% less than the general population

Table C: All types cancer incidence power based on 10 years follow-up (estimated number in veterans arm 447 cancers (N = 26915))

All cause mortality	Comparison group size		
Relative Risk	N = 26915	N=17943	N= 13458
1.1	0.30	0.24	0.21
1.2	0.81	0.71	0.63
1.3	0.99	0.96	0.93

Table D: All types cancer incidence power based on 15 years follow-up (estimated number in veterans arm 889 cancers (N = 26915))

All cause mortality	Comparison group size		
Relative Risk	N = 26915	N=17943	N= 13458
1.1	0.54	0.45	0.38
1.2	0.98	0.95	0.91
1.3	>0.99	>0.99	>0.99

Hypothesis 2 – Is there an association between early MEAO deployment and cancer/mortality?

Table E: All cause mortality power based on 10 years follow-up (estimated number in veterans arm 111 deaths (N = 8581))

All cause mortality	Comparison group size			Comparison group size with correction#		
Relative Risk	N = 4291	N=8581	N= 17162	N = 4291	N=8581	N= 17162
1.2	0.18	0.28	0.37	0.15	0.23	0.31
1.3	0.35	0.53	0.67	0.28	0.44	0.57
1.4	0.56	0.76	0.88	0.46	0.66	0.80
1.5	0.75	0.91	0.97	0.64	0.83	0.93

Rates in the cohort assumed to be 20% less than the general population

Table F: All types cancer incidence power based on 15 years follow-up (estimated number in veterans arm 255 cancer (N = 8581))

All cause mortality	Comparison group size		
Relative Risk	N = 4291	N=8581	N= 17162
1.2	0.40	0.57	0.71
1.3	0.72	0.89	0.96
1.4	0.92	0.99	>0.99
1.5	0.99	>0.99	>0.99

Hypothesis 3 – Is there an association between late MEAO deployment and cancer/mortality?

Table G: All cause mortality power based on 10 years follow-up (estimated number in veterans arm 201 deaths (N = 13978))

All cause mortality	Comparison group size			Comparison group size with correction#		
Relative Risk	N = 7000	N=13978	N= 21000	N = 7000	N=13978	N= 21000
1.2	0.32	0.47	0.55	0.26	0.38	0.46
1.3	0.60	0.79	0.87	0.50	0.70	0.78
1.4	0.84	0.95	0.98	0.74	0.90	0.95
1.5	0.95	0.99	>0.99	0.90	0.98	0.99

Rates in the cohort assumed to be 20% less than the general population

Table H: All types cancer incidence power based on 15 years follow-up (estimated number in veterans arm 474 cancer (N = 13978))

All cause mortality	Comparison group size		
Relative Risk	N = 7000	N=13978	N= 21000
1.2	0.66	0.84	0.90
1.3	0.94	0.99	>0.99
1.4	>0.99	>0.99	>0.99

Hypothesis 4– Is there an additional effect of 'early' MEAO deployment on cancer/mortality among ADF personnel deployed 'late' MEAO?

Hypothesis 5- Is there an additional effect of late MEAO deployment on cancer/mortality among ADF personnel deployed 'early' MEAO?

Table I: All cause mortality power based on 15 years follow-up (estimated number in veterans arm 129 deaths (N = 4056))

All cause mortality	Comparison group size			Comparison group size with correction#		
Relative Risk	N = 4056	N=8112	N= 12168*	N = 4056	N=8112	N= 12168*
1.2	0.32	0.43	0.47	0.27	0.36	0.41
1.3	0.60	0.74	0.79	0.50	0.64	0.69
1.4	0.83	0.93	0.95	0.73	0.85	0.89
1.5	0.95	0.99	0.99	0.89	0.96	0.97

Rates in the cohort assumed to be 20% less than the general population
*Not possible for Hypothesis 5

Table J: All types cancer incidence power based on 15 years follow-up (estimated number in veterans arm 171 cancers (N = 4056))

All cause mortality	Comparison group size		
Relative Risk	N = 4056	N=8112	N= 12168*
1.2	0.42	0.54	0.60
1.3	0.74	0.86	0.90
1.4	0.93	0.98	0.99
1.5	0.99	>0.99	>0.99

*Not possible for Hypothesis 5

Data Collection Tools

184. The MEAO Health Study will utilise data collected from a number of different sources including self-report questionnaires, physical tests, biological tests, neurocognitive assessments and routinely collected electronic health data.

185. In order for data to be linked between the different sources, specific consent must be obtained from participants for that data linkage to occur.

186. Individual studies will utilise data sources as described below:

187. Study 1: the Prospective Study will utilise data collected from:

- Self-administered questionnaires;
- Physical tests including saliva and blood samples;
- Neurocognitive assessment;
- Electronic health records held by the ADF; and
- RtAPS and POPS.

188. Study 2: the Census Study will utilise data collected from:

- Self-administered questionnaires;
- Electronic health records held by the ADF; and
- RtAPS and POPS.

189. Study 3: the Mortality and Cancer Incidence Study will involve:

- Linkage with State and Territory cancer registries; and
- Linkage with the National Death Index.

190. The data to be collected from each of these sources are described in detail below.

Self-Administered Questionnaire

191. All participants will be asked to complete a self-administered questionnaire. This questionnaire will be the primary method used to determine where individuals deployed and for how long, deployment experiences, and health and wellbeing outcomes.

192. The questionnaire (Annex 1) is divided into three major components: 1) Brief Deployment History; 2) Health Questionnaire; 3) Deployment Experiences Questionnaire. These sections are described in more detail below.

193. Participants in Study 1 (Prospective Study) will complete an additional Personality and Resilience Insert (Annex 1.6) at the pre-deployment assessment.

Brief Deployment History

194. This questionnaire will be used in the following studies:

- Study 1 – MEAO Prospective Study (Pre-Deployment only)
- Study 2 – MEAO Census Study

195. All participants will be asked to indicate participation in active deployments. The questions and format were designed in-house after experience with the NNAI Health Studies.

196. Participants recruited to the MEAO Prospective Study will be asked to complete this history prior to deployment only. The census study participants will complete this questionnaire at the same time as they complete the Health Questionnaire and the Deployment Experiences Questionnaires.

197. The list of operations includes warlike, non-warlike, UN peacekeeping and peacemaking operations, and humanitarian aid and assistance operations.

198. Participants are asked to indicate the country they deployed to, the Operation name, the year the deployment started, the number of times deployed in that year and the total time (in months) deployed. Major recent operations are provided in boxes and space is provided for participants to nominate additional deployments at the end of the questionnaire. Following the question about history of deployments to the MEAO, three questions are asked about feelings of pressure to deploy and if they deployed with their home Unit. Questions about deploying with one's home Unit were identified during the Preliminary Study focus group as an important source of (di)stress. The items themselves were sourced from the Kings College Gulf War study questionnaire.

199. In addition to formal ADF deployments, a question is asked about work in the Middle East in a role outside of the ADF, such as working as a security contractor. The inclusion of this item was based on anecdotal reports of ADF members working in these roles, and which may contribute to the cumulative stress associated with working in the MEAO environment.

Personality and Resilience Insert

200. The Personality and Resilience Insert will be completed by participants in the following study:

- Study 1: MEAO Prospective Study (Pre-Deployment only)

201. This section consists of questions that will be completed at the pre-deployment assessment in place of the Deployment Experiences Questionnaire, which is only required at the post-deployment assessment.

202. The questions are drawn from a number of sources including the Ten Item Personality Inventory, Schuster Social Support Scale, a single item each for negative life events and prior psychiatric history, Symptom Interpretation Questionnaire, pre-existing traumatic exposures, and the Toronto Alexithymia Scale.

Ten Item Personality Inventory (TIPI)

203. The TIPI is a very brief personality inventory that provides a measure of the 'big' five personality domains[6].

[6] Gosling SD, Rentfrow PJ, Swann WB. A very brief measure of the big five personality domains. J Res Person. 2003; 37:504-528

204. The ten items ask directly about descriptors of each of the big five dimensions, thus optimising content validity, and focuses on breadth of coverage, removal of redundant and negation items. Each item represents each pole (extreme) of the big five personality dimensions (e.g. extraversion vs. introversion).

205. While having somewhat inferior psychometric properties to standard multi-item personality inventories, the TIPI is suitable for situations where personality is not the primary topic of interest and/or where time and resources to conduct a more extensive assessment for personality is not feasible.

Schuster Social Support Scale

206. The Schuster Social Support Scale is a ten item measure of social support that was developed to enable investigation of the effects of social relationships on emotional functioning[7]

207. This scale has been used extensively in community samples and is also used in the LASERR Study (Longitudinal ADF Study Evaluating Retention and Resilience).

Negative Life Events

208. Negative life events and problems in childhood are an important predictor of mental health and social problems.

209. The single item used here is intended to provide an indicator of 'good enough' childhood. It is also used in the Longitudinal ADF Study Evaluating Retention and Resilience (LASERR) study.

Prior Psychiatric History

210. Prior psychiatric history is an indicator of future mental health problems. Professor Alexander McFarlane developed the single item used.

Symptom Interpretation Questionnaire

211. The Symptom Interpretation Questionnaire (SIQ) is a 13-item scale used to determine attributional style, which is important for understanding self-report of symptoms and distress[8]. It comprises three scales providing an indication of 3 different attributional styles: psychologiser, somatiser, and normaliser.

Preexisting Traumatic Exposures

212. This set of 18 questions are adapted from the Composite International Diagnostic Interview (CIDI) and modified by McFarlane et al.

213. The questions ask about exposure to a number of traumatic experiences, the number of times exposed and the age of first and last exposure to the event. Experiences considered are taken from both potential traumatic exposures encountered in the ADF (e.g. direct combat) and events that may have occurred outside the ADF in adulthood (e.g. serious assault, terrorism) or in childhood (e.g. child physical abuse).

[7] Schuster T, Kessler R, Aseltine R. Supportive interactions, negative interactions and depressed mood. Am J Community Psychol. 1990; 18:423-38

[8] Robbins JM, Kirmayer LJ. Attributions of common somatic symptoms. Psychological Medicine. 1991; 21:1029.

214. The questions are used in the ADF LASERR study and also form part of the CIDI which is a widely used structured interview for mental health disorder.

Toronto Alexithymia Scale

215. Alexithymia is a cognitive-affective disturbance related to a reduced ability to recognise and verbalise internal emotions, and thoughts that tend to be fixated on external events. The Toronto Alexithymia Scale is a validated and reliable 20-item scale that has been used in studies of general community and clinical populations to provide a measure of the degree of alexithymia[9].

Health Questionnaire

216. The health questionnaire will be used in the following studies:

- Study 1: MEAO Prospective Study
- Study 2: MEAO Census Study

217. The cohort recruited to Study 1 will be asked to complete this questionnaire both prior to deployment and then on return from deployment. The cohort recruited to Study 2 will complete this questionnaire at the same time that they complete the Deployment Experiences Questionnaire.

218. The questions are derived from a number of different sources and will provide information about the major physical health, mental health, social function, and health risk factors identified by the review of literature, consultation with stakeholders and focus groups with serving and ex-serving personnel.

219. The questions are grouped into sections each with a common theme. The sections and the questions that make up each section are described in detail below.

Section 1: Background Details

1. This section is divided into two parts. All participants complete the first part that asks 13 questions providing important demographic and social information. The second part is only completed by Reservists and individuals who have left the ADF, who are asked a further five questions about their income and employment outside of the ADF.

2. The first part asks participants their gender, date of birth and marital/relationship status, which are used as confirmatory items to ensure information from PMKeyS is correct as these are essential covariates for assessment of health risk. Further questions are then asked about education, satisfaction with significant relationships, change in relationship status and the impact of military commitments on relationships and children.

3. A series of questions are also asked about workload and rank to provide confirmatory information against the PMKeyS data.

[9] Taylor GJ, Bagby RM, Parker JD. The 20-item Toronto Alexithymia Scale. Reliability and factorial validity in different languages and cultures. J of Psychosom Res. 2003;55(3): 277-83.

Section 2: Recent Health Symptoms

4. This section comprises 2 measures: a health symptom checklist and questions screening for mild traumatic brain injury.

Health Symptom Checklist

5. The 67-item self-report symptom questionnaire asks about recent (in the past month) respiratory, cardiovascular, musculoskeletal, dermatological, gastrointestinal, genitourinary, neurological, neuropsychological or cognitive, and psychological symptoms.

6. The questions build on the 63 item symptom questionnaire used in the Australian Gulf War Veterans' Health Study, which in turn was adapted from the symptom questionnaire developed and used by the King's College Gulf War Illness Research Unit[10] and which was based on the Hopkins Symptom Checklist[11].

7. The items can be analysed individually or using factor analysis to identify clusters of symptoms that might be indicative of 'syndromes'.

8. The questionnaire enables internal comparisons of self-reported symptoms within the study cohort, but importantly, use of the questionnaire allows comparisons with the results of international studies as well as the earlier 1990/91 Australian Gulf War Veterans' Health Study and the NNAI studies.

Mild Traumatic Brain Injury Questions

9. The mild traumatic brain injury (TBI) screener is used to provide an indication of mild traumatic brain injury. This screening tool comprises four questions and was adapted from Pietrzak et al.[12]. It was originally developed for use in Veteran's Administration medical facilities, and was based on a tool developed by the United States Defense and Veterans Brain Injury Center. It has been implemented at selected U.S. military bases to screen for TBI among returning OEF/OIF service members.

Section 3: Your Health Now

10. This section comprises 51 questions that have been drawn from instruments including the Short Form 12 (SF-12)[13], the 45 and Up Study[14] , the Kessler 10 Plus

[10] Unwin C, Blatchley N, Coker W, *et al.* Health of UK servicemen who served in Persian Gulf War. *Lancet* 1999;353:169–78

[11] Derogatis LR, Lipman RS, Rickels K, et al. The Hopkins Symptom Checklist (HSL): A self-report symptom inventory. *Behav. Sci.* 1974;19:1-15.

[12] Pietrzak RH, Johnson DC, Goldstein MB, Malley JC, Southwick SM: Posttraumatic stress disorder mediates the relationship between mild traumatic brain injury and health and psychosocial functioning in veterans of Operations Enduring Freedom and Iraqi Freedom. *J Nerv Ment Dis* 2009; 197(10): 748-53.

[13] Ware JE, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36). Conceptual framework and item selection. *Med. Care* 1992;30:473-483.

[14](www.45andup.org.au)

(K10+)[15], a question from the LASERR study, and medically diagnosed conditions from the Solomon Island Health Study and the Australian Gulf War Veterans' Health Study.

The Short Form 12 (SF-12)

11. The SF-12 is a multipurpose short form with only 12 questions, all selected from the SF-36 Health Survey[16]. Like the SF-36, it is a generic measure of health status and quality of life. Only a subset of questions from the SF-36 are utilised that enable scores to be calculated for general health, physical health, and mental function. The SF-12v2 to be utilised in the MEAO Health Study can also be scored as an eight scale health profile.

Questions from the 45 and Up Study

12. A series of questions relating to general health and wellbeing have been incorporated from those used in the 45 and Up Study (www.45andup.org.au). These questions ask participants to rate, in general, their overall health, quality of life, eyesight (with glasses or contact lenses), hearing, memory, and teeth and gums on a 5-point Likert scale.

Kessler 10 Plus (K10+)

13. The Kessler 10 Plus (K10+) is a widely used and validated 14-item questionnaire that is used as a general measure of psychological distress. Scores are calculated to provide a measure of risk of mental health problems. The scales were designed to be sensitive around the threshold for the clinically significant range of the distribution of non-specific distress in an effort to maximise the ability to discriminate cases of serious mental illness from non-cases. The K10 is used in the Australian Mental Health and Wellbeing Survey enabling comparison with general community norms. Additionally, it is currently used by the Australian Defence Force as part of the Return to Australia Psychological Screen (RtAPS) and Post Operational Psychological Screen (POPS). It was also used as a measure of psychological distress in the NNAI Health Studies.

Questions from the LASERR Study

14. This question provides a short measure of coping ability using one question with two subparts taken from the LASERR study. This item asks to what extent participants agree with statements relating to adopting to change and 'bouncing back' from illness or hardship.

Doctor Diagnosed Medical Conditions

15. A 23-item medical conditions questionnaire is incorporated here as an indicator of medical problems or conditions that have been diagnosed or treated by a doctor. This list is shortened from that used in the Australian Gulf War Veterans' Health Study and Solomon Islands Health Study such that it only incorporates the most common medical conditions identified in those studies.

[15] Kessler R, Mroczek D. Final Versions of our Non-Specific Psychological Distress Scale [memo dated 10/3/94]. Ann Arbor (Michigan): Survey Research Centre of the Institute for Social Research, University of Michigan; 1994

[16] Ware JE, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36). Conceptual framework and item selection. *Med. Care* 1992;30:473-483.

16. The questions are based on the medical conditions questionnaire originally developed and used by the King's College Gulf War Illness Research Unit and adapted for use in the Australian Gulf War Veterans' Health Study to include several conditions considered relevant to Australian veterans.

17. The term 'medical doctor' is used to qualify the person who diagnosed or treated the problem or condition and the time frame is 'last 12 months' when the questionnaire is completed pre-deployment, or since returning from the last deployment to the MEAO when the questionnaire is completed post-deployment in order to standardise the reference point and context for that diagnosis or treatment.

Section 4: Lifestyle behaviours

18. This section comprises 22 items to determine history of cigarette smoking, frequency of alcohol use and current alcohol use disorders, and use of dietary and energy supplements.

Cigarette smoking and tobacco use

19. History of cigarette smoking is assessed using a brief set of questions developed for use in the Millennium Cohort Study. Participants are asked about smoking in the past year (current smoking), ever smoking at least 100 cigarettes (ever smoking), age when started smoking, how much is smoked and if they have tried quitting. Two additional questions taken from the Kings College Study ask about smoking pattern on deployment.

Alcohol Use Disorders Identification Test (AUDIT)

20. The Alcohol Use Disorders Identification Test (AUDIT) questionnaire will be used to quantify current alcohol use and detect alcohol disorders. The scale was developed for the identification of currently active, hazardous and harmful alcohol consumption[17] . The AUDIT is used extensively in military research including the NNAI studies and the Australian Gulf War Veterans' Health Study. It is used by ADF psychologists in the POPS.

Questions about dietary supplements

21. Three questions developed for use in the Millennium Cohort study will be used here to assess whether participants currently use any body building supplements, energy supplements, or weight loss supplements. These questions are all asked in the deployment experiences questionnaire in relation to the use of supplements while on deployment.

Section 5: Life Experiences

22. This section comprises 60 items drawn from five separate questionnaires to assess anxiety and affective disorders including post traumatic stress disorder (PTSD), panic attacks, generalised anxiety disorder, major depression as well as anger and suicidality.

[17] Babor T, Fuente J, Saunders J, et al. The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care. Geneva: Division of Mental Health, World Health Organisation, 1989

PTSD Check List (PCL)

23. Post traumatic stress symptoms will be assessed using the post traumatic stress disorder checklist (PCL). The PCL is a widely used, 17 item self-administered questionnaire for assessing symptoms of PTSD. The PCL-C to be used here is a civilian version of the instrument that can be referenced to any specific traumatic event (hence the C in the acronym). It has excellent test-retest reliability and internal consistency is very high. It has been used extensively for population-based research and is also used by Defence Force psychologists as part of the RtAPS and POPS, and was used in the NNAI studies.

Anger

24. Items from the Dimensions of Anger Scale[18] and two additional items from the AG21 questionnaire addressing anger and use of force are used. Items from the Dimensions of Anger Scale were also used in the LASERR study providing comparison to this study. Questions from the AG21 have not been published but are used by the US Military and were used in the East Timor and Bougainville Health Studies.

Questions from the Patient Health Questionnaire (PHQ)

25. The PHQ is the self report version of the PRIME-MD (Primary Care Evaluation of Mental Disorders) which was the first instrument designed for use in primary care that specifically diagnoses mental health disorders using diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition (DSM-III-R) and Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). The full PHQ screens for five of the most common groups of disorders in primary care: depressive, anxiety, alcohol, somatoform, and eating disorders. Just the items from the anxiety and depression modules are used here.

Anxiety Module

26. Panic attacks and other anxiety disorders will be assessed by 22 items from the Brief PHQ. The first 15 items are questions for panic attack and the final seven items screen for other anxiety disorders.

27. The PHQ anxiety module has high sensitivity and specificity for detection of anxiety disorders in primary care and medical settings[19] and superior psychometric properties to other screening instruments such as the Hospital Anxiety and Depression Scale (HADS) for detection of panic attack.

Depression module

28. Depression is assessed from nine items from the Brief PHQ. Each item in the PHQ9 evaluates the presence and severity (frequency) of one of the nine DSM-IV criteria of major depression.

[18] Novaco, R. (1975). *Dimensions of anger reactions*. Irvine, CA: University of California.
[19] Spitzer RL, Kroenke K, Williams J. Validation and utility of a self-report version of PRIME-MD. JAMA 1999; 282: 1737-1744.

29. The nine item depression module has been validated against clinical diagnosis from a medical professional[20] and found to have superior operating characteristics to the Hospital Anxiety and Depression Scale and WHO5 instruments. In addition, a depressive symptom severity score can be obtained.

Suicidality

30. Suicidality is assessed using four items relating to ideation, planning and attempts in the previous 12 months.

Section 6: Respiratory Health

31. Respiratory symptoms are assessed using the European Community Respiratory Health Survey screening questionnaire. This questionnaire comprises seven main dichotomous items and two further items conditional on a positive answer to item

32. These nine items are drawn from the longer European Community Respiratory Health Survey (ECRHS), which in turn is derived from the International Union against Tuberculosis and Lung Disease (IUATLD) questionnaire.

33. Items within the screening questionnaire are weighted to produce a total score indicating the seriousness of asthma like symptoms[21] such as wheeze, shortness of breath and cough. A single question is included on allergy and hay fever which does not contribute to the calculation of the total score, but may be used as an indicator of allergy.

Section 7: Reproductive History

34. Reproductive health items were developed in-house by CAPT (RAN) Sonya Bennett. Participants are asked if they have ever had problems with fertility and if they have ever been pregnant or fathered a pregnancy. If they have fathered a pregnancy/become pregnant, detail is asked for each pregnancy including what the outcome of the pregnancy was, whether the pregnancy resulted in a live birth, gestation, gender of baby, weight of baby, and the presence of any birth defects or cancer.

Section 8: Recreation and Social Activities

35. Eleven questions are asked about current recreational and social activities. These were adapted from a DVA instrument but have not been published in the scientific literature. The questions were used in the NNAI Health Studies.

[20] Kroenke K, Spitzer RL, Williams JBW. The PHQ-9: Validity of a brief depression severity measure. J Gen Intern Med 2001; 16:606-613.
[21] Grassi M, Rezzani C, Biino G, Marinoni A. Asthma-like symptoms assessment through ECRHS screening questionnaire scoring. J Clin Epidemiol.2003; 56:238-247.

Section 9: Evaluation Questions

36. These two items ask the participant if there are any other important health concerns that were not addressed in the questionnaire or if they would like to add any other comments.

Deployment Experiences Questionnaire

37. This questionnaire is used to identify health hazards and threats both real and perceived, health on deployment, and experience returning to Australia. Questions are answered in relation to the *last deployment* to the MEAO.

38. The questionnaire is presented with forms specific for Iraq-based operations (Part A), and Afghanistan-based operations (Part B). Having two separate forms is designed to make participants feel that they are being asked questions specific to their experience in the MEAO and enables tailoring of the questionnaire to exclude questions not relevant to the experiences of personnel at some locations.

39. Participants are asked about a range of experiences they may have encountered on deployment to the MEAO including their exposure and frequency of exposure to hazards including airborne (e.g. dust, smoke), exhaust emissions/fumes/toxic industrial chemicals, noise, vector borne and communicable disease, animals, ionising and non-ionising radiation, combat, and perceived threats.

40. The items selected cover each of the major hazards personnel face in the MEAO as identified by the review of literature and review of Hazard Assessment Team reports conducted during Phase 1a. In addition, hazards reported by serving and ex-serving personnel during the Preliminary Study focus groups have also been incorporated.

41. The items addressing these hazards are derived from multiple sources including the Australian Gulf War Veterans' Health Study, ADF post-deployment health screen, Traumatic Stress Exposure Scale Revised (TSES-R), the Deployment Risk and Resilience Inventory (DRRI), and the Kings College Phase 2 questionnaire. Additional questions developed by the investigators to address health hazards identified during the preliminary study process that are not covered by pre-existing items include "Were you exposed to an environment where you inhaled fine dust or fibres?", "Were you exposed to others' cigarette smoke on base in a recreational or work context?", "Did you come into contact with body fluids or blood?", "Did you receive a blood transfusion?", "Did you use an NBC suit (not for training purposes)?" and "Did you use a respirator (not for training purposes)?"

Assessment of Physical Measures in a sub-group of participants enrolled in Study 1

Standardised measurement of height, weight, hip and waist circumference

42. Height will be measured in centimeters to one decimal place using a stadiometer, as the maximum distance from the floor to the vertex of the head with shoes removed.

43. Weight will be measured in kilograms, to one decimal place, in light clothing and without shoes using electronic scales.

44. Waist and hip circumference will be measured using a tape measure, in centimeters to one decimal place at the smallest circumference below the rib cage and above the umbilicus taken at the end of normal expiration. Hip circumference will be measured, in centimetres to one decimal place, at the largest circumference at the posterior section of the buttocks.

Blood Pressure

45. Blood pressure (BP) will be taken by a trained research nurse using a calibrated and validated digital sphygmomanometer with appropriate sized cuffs.

46. BP will be measured with the participant in a seated position and the arm supported at heart level, after five minutes' rest, and abstinence from food (including nutritional supplements) and caffeinated beverages for a minimum of 30 minutes prior to BP measurement. BP will be measured from the left arm of all participants unless there is some contraindication (e.g. lymphoedema).

47. BP will be recorded as three serial measurements at intervals of at least one minute. An additional three serial measures will be taken, if the difference between the SBP and DBP readings is more than 8 mm Hg for SBP and more than 5 mm Hg for DBP. The mean of three acceptable BP measurements will be used in the analysis.

Spirometry

48. Lung function testing will be conducted by a nurse using spirometry. The nurses will be provided with training on how to perform spirometry following the TSANZ/ANZSRS position paper on spirometry training.

49. Participants are asked to avoid using bronchodilators on the day of screening. Height and age will be recorded in order to calculate predicted lung function, and patients will then undergo spirometry using an Easy One^{TM} spirometer and following American Thoracic Society (ATS) guidelines for conducting spirometry.

50. Briefly this involves:

- Participants are seated for the testing
- The forced expiratory manoeuvre is performed with maximum effort immediately following a maximum inspiration
- Participants are required to perform a minimum of three technically acceptable blows with acceptability defined as:
  - Satisfactory start of test
  - Minimum exhalation Forced Vital Capacity (FVC) time of 6 seconds
  - End of test criteria met
- Participant manoeuvres are required to meet ATS criteria for reproducibility.

51. Quality of spirometry will be monitored routinely by a respiratory physiologist associated with CMVH, who will review spirometry results and provide feedback directly to the nurses.

52. The EasyOne™ spirometer will be used due to its ease of use, portability, and superior reliability. The EasyOne™ spirometer utilises digital ultrasonic flow measurement technology. Ultrasonic flow measurement eliminates problems associated with traditional methods of flow measurement and has no moving parts thus does not require repeated calibration or maintenance.

The Step Test

53. The step test is a standardised assessment of an individual's fitness and capacity to sustain effort. Measurement of heart rate in recovery from a standardised step test is an objective and efficient way to classify participants in terms of their aerobic fitness and is a measure of fatigability.

54. The method of McArdle[22] as applied in the Australian Gulf War Veterans' Health Study will be used. The test involves stepping at a designated cadence using a digital metronome, up and back from a 41.3 centimetre platform for three minutes. Women are required to complete 22 step ups per minute whilst men complete 24 step ups per minute. Participants are timed using a stop watch. Pulse rate is measured at five seconds and 20 seconds after completion of stepping using a heart rate monitor. The two measures are then averaged to give a single recovery heart rate in beats per minute for each participant, with lower rates indicating greater aerobic capacity.

Assessment of dermatological conditions

55. Photographs will be taken of participants' backs, palms of their hands, soles of their feet and side views of the cheek, lower nose and lips. This is done in order to assess dermatological conditions that develop on deployment.

[22] McArdle WD, Katch FI, Katch VL, Exercise physiology: energy, nutrition, and human performance. 2nd ed. 1986, Philadelphia: Lea & Febiger. 696.

Laboratory Investigations

56. Saliva and blood samples will be collected for the purpose of determining:

- Exposure to toxins;
- Exposure to infections known to be ubiquitous in the environment of the deployment;
- Direct physiological and immunological changes as a consequence of the stress to which the individual has been exposed in the course of the deployment;
- Direct effects of being exposed to a militant environment where there may be limitations on an individual's diet, combined with physical demands and potentially high altitude environments.

57. The measures proposed to be collected are based on the experience of the investigators in the Australian Gulf War Veterans' Health Study which provided probably the most detailed examination to date of a veterans' cohort in terms of their physical health and the current scientific literature.

58. The investigations to be undertaken are listed in Table 2 below.

Table 2 Summary of proposed assessments of biological samples collected pre and post deployment during the MEAO prospective Health Study

Assessment Purpose	What is assessed
Exposure to Toxins	*Blood chemistry and liver function* specifically: Sodium, Potassium, Chloride, Bicarbonate, Anion Gap, Glucose, Urea, Creatinine, total Cholesterol, Osmolarity, Urate, Phosphate, calcium, Ionised calcium, Albumin, Globulins, Total Protein, Bilirubin, GGT, ALP, ALT, AST, LD, CK, Magnesium, Amylase, Lipase, and C-Reactive Protein. *Heavy metal exposure* specifically: Lead *Organophosphate exposure* specifically: red blood cell cholinesterase
Exposure to Infections	*Total Cell Count (CBE)* specifically: haemoglobin, red cell count, packed cell volume, mean corpuscular volume, mean corpuscular haemoglobin, mean corpuscular haemoglobin concentration, red cell distribution width, total white cell count and white cell differentiation counts and percentages (neutrophils, lymphocytes, monocytes, eosinophils, basophils and platelets). *Erythrocyte Sedimentation Rate (ESR)* as part of CBE

	Viral infections specifically: o Epstein-Barr, o Cytomegalovirus, o Herpes Simplex, o Hepatitis C *Bacterial infections* specifically: o Mycoplasma, o Chlamydia (serology) o Helicobacter pylori (serology) *Parasitic infections* specifically: Leishmaniasis
Physiological and Immunological changes arising from stress	*Inflammatory mediators* specifically: Interleukin 1, Interleukin 4, Interleukin 6, C-Reactive Protein, and TNF Alpha, *Stress hormones* specifically: cortisol, nor-adrenaline, adrenaline
Effects of the deployed environment	*Cardiovascular Risk Factors* specifically: Total cholesterol and High Density Lipoproteins, Glycated Haemoglobin (HbA1C) *Dietary Components* specifically: B12 and Folate

Storage of biological samples

59. Two aliquots of serum will be stored at -70° Centigrade for a period of up to 10 years in order to conduct investigations in the future as new diagnostic technologies become available and/or as unexpected health concerns emerge among veterans.

Neurocognitive function

60. In addition to the measures listed above, neurocognitive assessments will occur on a subgroup of 400 individuals who meet the eligibility criteria for neurocognitive assessment. This testing will provide pre- and post-deployment assessment of the effects of stress and mild traumatic brain injury on neurocognitive function.

61. Consenting participants will be fitted with a QuickCap and EDA electrodes and receive pre-recorded task instructions. The testing environment is standardised and the measurement of performance is computerised, which limits confounding due to the impact of the environment and human interaction on participant performance. An extensive database of normative data exists for this test against which results can be matched.

62. The battery of tests assess the following domains of cognitive function:

- Resting Electric Brain Function assessment allows for the measurement of cortical arousal in the resting state, which reflects the priming of the individual to deal with environmental challenge.
- The verbal working memory task taps into a domain of function that is known to be abnormal in mild traumatic brain injury and psychiatric disorders and allows the measurement of reaction times.
- Startle response assessment involves a measure of arousal modulation and orientation to the environment that is known to change in PTSD. It is also a symptomatic marker, the objective measurement of which may have the capacity to be used as a screen of psychological symptoms independent of self-report.
- The emotion processing task measures the processing of unconscious facial expression providing information about the fear networks in the brain. Important significant differences have been found in the processing of facial emotion in individuals with post-traumatic stress disorder.
- The Go/No Go Task is a measure of the capacity of the individual to suppress a natural tendency to respond to visual stimuli. This particularly captures frontal inhibition of response by using both speed and accuracy of responses as well as the ability to inhibit inappropriate automotive responses.

Health Records

63. Data from a number of existing health record databases will be collected including psychological screening records, and future ADF electronic health records.

Psychology screening records

64. The Australian Defence Force conducts routine psychological screening for all personnel returning from overseas deployment. These screens are known as the Return to Australia Psychological Screen (RtAPS) and the Post Operational Psychological Screen (POPS).

65. RtAPS is usually conducted in theatre immediately prior to returning to Australia, while POPS is completed between three and six months post-deployment.

66. RtAPS and POPS are completed on paper and entered into a statistical package (SPSS) by the Psychology Research and Technology Group (PRTG). This SPSS file can then be accessed by the MEAO Health Study research team.

67. De-identified data will be requested for every individual deployed to the MEAO from October 2001 and returning from the MEAO by December 2011. Some individuals will have deployed more than once and will have multiple RtAPS and POPS files. Individual consent is required to link this information with data from other sources.

68. The following information will be requested for RtAPS and POPS:

RtAPS

- Major Stressors questionnaire

POPS

- Kessler 10 (K10)

- Traumatic Stress Experiences Scale (TSES-R)
- Kessler 10 (K10)
- Posttraumatic Stress Disorder Checklist (PCL)
- Posttraumatic Stress Disorder Checklist (PCL)
- Alcohol Use Disorders Identification Test (AUDIT)

ADF Electronic Health Records

69. The ADF is currently pursuing a standard electronic health record. It is unclear at this point what information this record will contain. When the electronic record becomes available CMVH will review the available data and access relevant information for all personnel deployed to the MEAO from October 2001 to December 2009.

70. As with psychological screening records, participants are required to consent to allowing the research team to link this information with other data sources.

Consent for data linkage

71. Privacy guidelines dictate that information provided by individuals can only be used for the purposes for which it was collected.

72. De-identified data can be obtained from each of the data sources nominated in this research plan; however, in order to link data, that is to match individual outcomes from one data source to another, written consent is required from the individual concerned.

73. Written consent will be sought from each individual in order to conduct data linkage for:

- ADF psychological screening records
- ADF-held medical records.

PART 2 - PROJECT MANAGEMENT

Data Management Plan

1. Data management for the MEAO Health Study is being handled by three data systems and data are transferred between systems on a needs basis. A Memorandum of Understanding between UA and UQ for data transfer is being developed for the sharing of MEAO Health Study data.

2. UA has established the Defence Health Research System at the Data Management and Analysis Centre (DMAC) University of Adelaide. This facility is a member of the Defence Industry Security Program (DISP) and is accredited as a restricted facility by the Department of Defence Information Communications Technology Development Division. Certificates of accreditation are included in Annex 2.

3. CMVH UQ has established a Research Data Management System (RDMS). CMVH UQ has DISP accreditation for the Defence Restricted Network (DRN) and RDMS server facility and Department of Defence Information Communications Technology Development Division accreditation at restricted level for its DRN system. Certificates of accreditation are included in Annex 2.

4. Health data for the MEAO Health Study will be obtained from four sources:

- Self-reported questionnaire data (Studies 1 and 2)

  The health and deployment questionnaire data may be completed online, in hard copy or, if required by the respondent, telephone interview. Online questionnaire data for Study 1 will be collected and managed by the Defence Health Research System. Online questionnaire data for Study 2 will be collected by a contractor to the Defence Directorate of Strategic Personnel Policy and Research (DSPPR) and then transferred to the Defence Health Research System. At the same time, participant tracking data will also be transferred to the UQ Research Data Management System. Data provided on hard copy questionnaires will be scanned and transferred electronically to the Defence Health Research System.

- Clinical and biological data (Study 1)

  Capture of this data will be performed by CMVH staff and Healthscope Clinical personnel. Data will be collected on hard copy case report forms, downloaded from testing equipment and direct electronic downloads from Healthscope laboratories for download into the Defence Health Research System at DMAC.

- Defence-owned psychological data (Study 1 and 2)

  Data from ADF psychological screening records will be requested when consent is obtained and transmitted electronically via the DRN or secure network to the Defence Health Research System.

- National routinely collected data (Study 3)

  Data for the Cancer and Mortality studies (Study 3) will be sourced from National Death Index and State Cancer Registry data provided by the Australian Institute of Health and Welfare (AIHW). These data will be provided electronically, either on disk or by the establishment of a secure web portal and transferred into the Defence Health Research System.

5. Databases will operate at CMVH UQ and the Data Management and Analysis Centre (DMAC) at the University of Adelaide, and DSPPR contractor. Routine data handling regarding participation will occur at each site.

6. Data from Study 1 will be held at the Defence Health Research System which in accordance with the directions of SAC and PMB will be the primary database.

7. Study 2 data will be collected by DSPPR and will be transmitted to the Defence Health Research System in a format compatible with the Defence Health Research System. Downloads of the Study 2 data will be made available to CMVH UQ by DMAC for analysis. The Defence Health Research System has been accredited to a restricted status. At a minimum, all activities associated with and any data transferred to and from the Defence Health Research System will be maintained in accordance with the System Security Design Document approved by Department of Defence Information Communications Technology Development Division.

8. Any other data maintained by the Research Data Management System (based at UQ) will be maintained in accordance with the following specifications:

- Nominal rolls - maintained on DRN or DSN;
- The key linking allocated Study ID numbers to individuals' identifying information - maintained on DRN;
- Participant contact information and service data sourced from PMKeyS - maintained on DRN or DSN;
- Participant management data to track the participation status of eligible individuals, including all contacts or attempted contacts made by CMVH or by other agencies assisting in data collection.

9. Datasets will be exported for statistical analysis in an appropriate format. All related datasets created for the study will be linked by Study ID numbers.

10. A protocol has been developed and implemented by CMVH for management of requests for data for DHSP sub-studies or follow-up studies. All such requests will need approval of the Investigator Committee in addition to ethical approval from the relevant ethics committees.

11. A protocol for providing access to de-identified data obtained in the DHSP studies has been established. Eligibility to apply for data access is restricted to CMVH Research Staff, investigators and associate investigators. Approval to access data must be sought from the Investigator Committee. All data requests and data sets provided are documented.

12. A Data Manager at each node will have responsibility for:

- Checking and maintaining data quality
- Developing and maintaining the consistency of data dictionaries
- Importing data from relevant sources
- Exporting datasets for analysis
- Ensuring compatibility and comparability of data collected at different sites
- Transfer of data between sites.

13. The Defence Health Research System operates at a minimum in accordance with the security requirements as described System Security Design Document approved by Department of Defence Information Communications Technology Development Division.

14. In addition to the above, CMVH UQ has approved Standard Operating Procedures for data management and data security.

Communication Plan

15. The MEAO Health Study communication plan is congruent with the CMVH Communications Strategy.

16. The CMVH Research Manager, WGCDR Merilyn White, chairs the Communications Working Group and coordinates Defence Liaison for the studies.

17. A detailed communication implementation plan outlines the form and timing of communication to engage all parties and stakeholders associated with the project.

18. The Research Manager provides regular reporting against key Communications Performance Indicators.

19. The MEAO Health Study Communications Plan is stored on the CMVH Project in a Box (PIAB) project management system.

Organisational Structure

20. The Chief Investigators of the MEAO Health Study are Professor Alexander McFarlane (First Chief Investigator), Associate Professor Susan Treloar, Professor Annette Dobson, Professor Malcolm Sim, Dr Keith Horsley, and COL Stephanie Hodson.

21. Described below are the roles and responsibilities of the key entities and positions within CMVH.

Director CMVH

22. Professor Peter Warfe is the senior supplier to Defence, has overall responsibility for the contract and he or the acting Director represents CMVH on the DHSP Program Management Board. Professor Warfe is the primary point of contact with the Commander, Joint Health Command in matters other than the MEAO study.

23. Professor Alexander McFarlane the first Chief Investigator, will be the primary point of contact with Defence for major scientific, contractual, management and budget issues pertaining to meeting the deliverables of the MEAO contract.

Investigator Committee

The Investigator Committee comprises:

- **Professor Alexander McFarlane** (Psychiatrist), **CMVH**. first Chief Investigator of the MEAO Health Study and Head University of Adelaide Node CMVH. Responsible for overall scientific leadership of the MEAO Health Study, and leading the University of Adelaide components of the MEAO Prospective Study. First point of contact for Defence on scientific issues for the MEAO Health Study.
- **Professor Annette Dobson** (Biostatistician and Epidemiologist), **CMVH**. Chair of Research, CMVH & School of Population Health, University of Queensland. Responsible for providing overall scientific leadership to the DHSP and statistical and epidemiological advice.
- **Associate Professor Susan Treloar** (Epidemiologist and Principal Research Fellow), **CMVH**. Head University of Queensland Node and First Chief Investigator of the East Timor and Bougainville Defence Deployed Health Studies. Responsible for leading the University of Queensland components of the MEAO Health Study (MEAO Census Study and Mortality and Cancer Incidence Studies).
- **Professor Malcolm Sim** (Occupational Physician and Epidemiologist), **Monash University**. Professor Sim's key contributions are as lead investigator on the Australian Gulf War Veterans' Health Study and in hazard assessment and occupational risks.

- **Dr Keith Horsley** (Medical Consultant) adjunct Associate Professor University of Queensland and Australian National University, formerly Department of Veterans' Affairs and Australian Institute of Health and Welfare. Dr Horsley's contribution is extensive experience in veterans' health research.
- **COL (Dr) Stephanie Hodson**, Directorate of Mental Health, **Department of Defence**. LTCOL Hodson has extensive mental health screening experience in a Defence context.

Investigator Committee Terms of Reference

Terms of reference are as follows.

1. Title

The name of the working group will be the MilHOP Investigators Committee**.**

2. Purpose

To ensure the scientific design, rigour, quality, and integrity of the MEAO Health Study and to facilitate the distribution of research findings.

3. Members

Members to include but not limited to:

- Professor McFarlane (First Chief Investigator)
- Professor Annette Dobson (Chief Investigator)
- Associate Professor Susan Treloar (Chief Investigator)
- Professor Malcolm Sim (Chief Investigator)
- Dr Keith Horsley (Chief Investigator)
- COL Stephanie Hodson (Chief Investigator)

As observers:

- Program Manager, Program Management Office (Ms Maxine Baban)
- Project Manager for UQ
- Study Manager for UA
- Study Manager Mental Health Prevalence Study

4. Chairperson

The Chief Investigator, Professor McFarlane will act as chair.

The responsibilities of the Chair include:

- scheduling meetings and notifying members,
- inviting specialists to attend meetings when required by the Investigators Committee; and
- reviewing and approving key points and recommendations from each meeting before distribution to members.

5. Frequency of Meetings

Meetings are held fortnightly or as required.

6. Functions

The function of the Investigator Committee is to ensure:

a) the scientific design, rigour, quality, and integrity of the individual components of the MEAO Health Study, including compliance with the NHMRC Guidelines for Ethical Conduct for Human Research, Australian Regulatory Authorities Regulation and Guidelines (eg privacy) and those of other appropriate approving bodies,

b) the primary MEAO Health Study is conducted in accordance with the Detailed Research Plan and the Statement of Works,

c) engagement with Defence and DVA to address emerging research questions that are relevant to the Defence Deployed MEAO Health Study and/or its various component studies,

d) the results from the MEAO Health Study are published in high quality scholarly journal articles, reports, book chapters, monographs, and texts,

e) that the research is presented at relevant conferences and other professional community forums,

f) regular correspondence and reports on scientific aspects of the MEAO Health study are provided to the PMB; and

g) the performance of the study is monitored against key deliverables (including financial aspects and timelines). Where significant changes to budget may be required or a potential impact on the performance of the study is noted, they are to discuss this with the Director CMVH. If the MEAO Investigator Committee and the Director CMVH cannot agree on the required actions to be taken, the Director CMVH will seek the advice of the Executive Deans UQ and UA if necessary to progress a satisfactory outcome.

7. Amendments

24. The Investigator group are listed in the acknowledgements in all research outputs but are only authors on publications where they meet the Vancouver Protocol criteria. The terms of reference are able to be reviewed as required so that the Investigators Committee remains responsive to the MEAO Health Study implementation requirements.

Other key CMVH positions in the organisational structure

25. The following positions within CMVH have specific roles in the MEAO Health Study:

- University of Adelaide MEAO Study Manager and Research Fellow (Dr Carol Davy)
- University of Queensland Project Officer (Finance and Contracts) (Anil Naidu)
- CMVH Business Manager (Geoff Wickham)
- CMVH Chief of Operations (GPCAPT Geoff Robinson)
- CMVH Research Manager (WCDR Merilyn White)
- CMVH e-health Officer (LCDR Steve Pullman)
- CMVH Professional Development Officer (CAPT Mat Carroll)
- CMVH Communications Officer (Alan Pinsker)

Other key entities in the organisational structure

26. The following entities and individuals within CMVH have a specific role in the MEAO Health Study:

Associate Investigators

27. Current Associate Investigators and their particular contribution to the study are:

- Dr Christopher Barton, CMVH, University of Adelaide (Research Fellow)
- Professor Philip Ryan, University of Adelaide (Data management and statistical consultant)
- Professor Catherine D'Este, University of Newcastle (Biostatistician, First Chief Investigator Solomon Islands Health Study, Investigator SHOAMP study)
- Professor John Spencer, University of Adelaide (Oral Health Epidemiology)
- Professor Justin Beilby, University of Adelaide (Health Services Research)
- Dr Carol Davy, CMVH, University of Adelaide (Research Fellow)

University of Queensland MEAO Health Study Research Team

28. Key personnel in the University of Queensland DHSP Research team are:

- Mr Michael Waller, statistician
- Dr Katherine Kirk – Senior Research Fellow
- Mrs Colleen Loos, Senior Research Assistant
- Mr Gore Chen -- Data Manager

- Ms Kara Pasmore, Research Assistant
- Ms Jeeva Kanesarajah, Research Assistant (Statistics)
- Mrs Fiona Grieve, Research Assistant (p/t)
- Ms Sarah McMullen, Project management assistant (p/t)
- Mrs Nadine Mammone, Administrative Assistant

University of Adelaide MEAO Health Study Research Team

29. Key personnel in the University of Adelaide DHSP Research team are:

- Ms Miranda van Hooff, Research Fellow
- Mr Roger Glenny, Adelaide Liaison Officer
- Flight Sergeant Yvette Davies, SOC Administration Officer
- Mr Chris Davies, Statistician
- Ms Michelle Lorimer, Statistician
- Ms Jenelle Baur, Data Manager
- Mr Daniel Barnes, Research Officer
- Ms Maria Abrahams, Research Officer
- Ms Freya Goodhew, Research Officer
- Mr Derek Browne, Research Officer
- Ms Laura Jones, Research Officer
- Matthew Robinson, Research Officer
- Elizabeth Saccone, Research Officer
- Ashleigh Kenny, Senior Administration Officer

30. Curricula Vitae for staff are available on request.

Other Project Support

Data management and Data Management Working Group

31. Data management services will be provided by the Data Management and Analysis Centre (DMAC) at the University of Adelaide and the University of Queensland CMVH Data Management System. The Defence Health Research System and the Defence Directorate of Strategic Personnel Policy Research will facilitate data collection.

32. A Data Management Working Group has been established and working to implement data management protocols in accordance with Program Management Board and Scientific Advisory Committee requirements.

33. A separate Data Analysis Working Group has been established for the MEAO Health Study.

34. Agendas and Minutes of the Data Management Working Group are held on the CMVH Project in a Box (PIAB) project management system.

MEAO Operations and Communications Working Groups

35. A working group to include key contacts in the Department of Defence and DVA has been established to implement and coordinate the logistics of operationalising the studies. Core membership will include the following:

- Mrs Maxine Baban (Program Management Office) (Chair, Operations Working Group);
- WGCDR Merilyn White, CMVH Research Manager (Chair, Communications Working Group);
- MAJOR Peter Collins (Joint Operational Command);
- Single Service representatives; and

- CMVH MEAO Research Team Study 1 and Study 2 representatives.

Other members will include but not be limited to:

- Ms Belinda Mitchell (Directorate of Strategic Personnel Policy Research)
- Ms Helen Benassi or other representative (Directorate of Mental Health)

36. Agendas and Minutes of the OpsComms Working Group are held on the CMVH Project in a Box (PIAB) project management system.

Stakeholders Group

37. A Stakeholders Group will be formed to ensure regular input and communication for relevant parties. Membership of this group will include: Study Investigators, Defence Personnel, Veterans / Ex-Service Organisations and DVA.

Australian Institute of Health and Welfare

38. The Australian Institute of Health and Welfare (AIHW) will conduct the linkage to the National Cancer Statistics Clearing House and the National Death Index for the Cancer Incidence and Mortality Study, and provide linked data directly to the DHSP.

Risk Plan

Identification of risks

39. Risk logs for each Study (1, 2 and 3) and for the MEAO Health Study overall have been developed and will be updated on a monthly basis by the UQ MEAO Project Manager and UA Study Manager. Current risks logs are stored on the CMVH Project in a Box (PIAB) project management system. The Investigator Committee and the PMO will be alerted to changes in risk after each review and update.

Classification of risk

40. The risk strategy for Phase 2b of the MEAO Health Study uses a conventional approach. Each risk is assessed against the Likelihood and Consequence Matrix below. Some of these risks were identified during planning and conduct of the Near North Area of Influence projects. For each risk appropriate responses will be determined in relation to avoidance, mitigation, acceptance or transfer.

Likelihood and Consequence Matrix ***(***L Low, M Moderate, H High and VH Very High)

Likelihood	Consequence				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost Certain	M	H	H	VH	VH
B Likely	M	M	H	H	VH
C Possible	L	M	H	H	H
D Unlikely	L	L	M	M	H
E Rare	L	L	M	M	H

Risk Level is then determined according to the following table.

Unacceptable Risks	VH	Very High Risk	Management and resources required
	H	High Risk	Significant management attention required
Acceptable Risks	M	Moderate Risk	Some management attention required
	L	Low Risk	Manage by routine procedures

41. CMVH are committed to a comprehensive and systematic approach directed towards the effective risk management of opportunities and adverse impacts. Responsibility for risk management of each identified risk will be assigned to a specific risk owner. The University of Queensland carries overall responsibility for coordination of risk management.

42. All risk management decisions and practices will be in accordance with the values, ethics, leadership and behaviours of the University of Queensland and where appropriate the University of Adelaide. The study will be conducted in accordance with The National Statement on Ethical Human Research (NHMRC 2007). The investigators will endeavour to ensure that identified risks are managed through the application of control measures that provide the best outcomes for all stakeholders, ensuring that material risks are monitored through formal documentation and review with mitigation controls being implemented.

Quality Plan

43. This Quality Plan is part of the CMVH Quality Management System and should be considered relative to that framework. CMVH applies a systematic process of checking to ensure products and/or services are being developed to meet specified requirements. The MEAO Health Study will be conducted in compliance with the following corporate and nationally recognised research quality standards:

Corporate Quality Standards

- Centre for Military and Veterans' Health, Quality Manual
- Centre for Military and Veterans' Health, Research Standard Operating Procedures
- Centre for Military and Veterans' Health, Head Agreement
- University of Adelaide Guidelines and Rules for Responsible Practice in Research http://www.adelaide.edu.au/rb/policies/resprac.html
- University of Queensland Handbook of Policies and Procedures, (http://www.uq.edu.au/hupp/ - last accessed, 24 June 2010)
- Australian Defence Human Research Ethics Committee (ADHREC) approval
- Department of Veterans' Affairs Human Research Ethics Committee approval

- Australian Institute of Health and Welfare (AIHW) Ethics Committee approval
- All eight State and Territory Cancer Registry Ethics Committees
- The University of Adelaide Human Research Ethics Committee
- University of Queensland Medical Research Ethics Committee (UQ MREC) approval.

National Research Quality Standards

- National Statement on Ethical Conduct in Research Involving Humans, National Health and Medical Research Council and the Australian Vice-Chancellors' Committee, 2007 (http://www.nhmrc.gov.au/publications/ethics/2007_humans/contents.htm - last accessed 24th June 2010)
- National Privacy Principles, The Privacy Amendment (Private Sector) Act 2000, AGPS, February 2008 (http://www.privacy.gov.au/publications/npps01.pdf - last accessed 6th May 2009).

Customer's Quality Expectations

44. The Study Protocol has been designed to meet contemporary scientific and ethical standards in epidemiological research and governance standards as set by the Program Management Board. The aim is:

a. to facilitate a study design capable of obtaining data useful in answering questions of interest to Defence

b. assist in the validation and development of policy to address the health needs of personnel.

Customer Acceptance Criteria

Performance Reporting

45. Contract performance is to be assessed against the contract deliverables. Exception reports are to be submitted to the PMO for resolution.

Deliverables

46. Where appropriate, the supplier shall provide two (2) hardcopies and one (1) softcopy (in Microsoft products and in PDF format) of deliverable items. Notification of other deliverables will be provided within each interim report.

Quality Management Approaches

47. Quality management of the MEAO Health Study incorporates project management (planning and coordination of the operational aspects of the project) and management of the scientific components of the project (the research aspects of the project). These two aspects are considered below.

Project Management

48. Research projects conducted by CMVH for the Department of Defence comply with the "Projects IN Controlled Environments Version 2" (PRINCE2) project management methodology. Performance, risk and quality are specifically addressed through the use of the PRINCE2 system.

49. The management of the MEAO study will be undertaken in accordance with the PRINCE2 Project Management Methodology which aims to ensure the optimum risk reduction in achieving project objectives, within the prescribed quality, time and cost criteria.

50. Day-to-day management of the project will be the responsibility of the MEAO Health Study Manager at the University of Adelaide and the Project Manager at the University of Queensland.

Document Management - Quality Specifications for CMVH Research Manuscripts,

Reports and other Written Documents

51. Activity Statements being submitted to Defence are to be prepared in consultation with PMO to ensure that relevant information is presented in the format required by Defence. An Activity Statement Template will be used as the basis of these reports.

52. Final versions of documents must be scientifically accurate, organised in a logical fashion, comprehensible to the target reader, formatted consistently throughout and of a high standard of presentation.

53. Manuscripts prepared for submission to a journal must comply with the DHSP Policy & Procedures for Data Access, Analysis, Presentation & Publication and the respective journal 'Guidelines for Authors'.

54. Quality Assurance of written documents:

- Review and approval by supervisor
- Review and approval by the first Chief Investigator
- Review and clearance by Department of Defence.

55. Documents will be stored on the CMVH Project in a Box (PIAB) project management system.

Scientific Quality

56. Quality checks will be undertaken for all products produced by the MEAO Health Study. These checks will include reviews by the Investigator Committee and where appropriate review by individuals with specific expertise, including Defence and DVA personnel. Further quality checks will be provided by peer-reviewed assessment when results are submitted for publishing and presented at scientific meetings.

57. For the MEAO Health Study the following specific data quality checks will be implemented:

- For data collected by the self-report questionnaire, the investigators have checked the reliability and validity of the instruments, and where possible have only used instruments validated in military samples
- The quality and accuracy of the database will be a consequence of Data Management Systems operations and activities. The use of trained and experienced staff, the development of SOPs for activities and data checking as outlined above will ensure data of the highest quality possible given the study design.

Quality control and audit processes

58. Quality controls are developed for each of the primary MEAO Health Study Activities and are documented within the study protocols.

59. Audits and reviews against these Quality Controls will be undertaken by the Project Manager at the University of Queensland and the Study Manager at the University of Adelaide, to ensure variations to acceptable criteria are reported and resolved. Quality assurance activity and audit report outcomes will be reported to the Investigator Committee and PMO.

Problem Reporting and corrective action

60. The PRINCE2 methodology and template tools associated with Project In A Box (PIAB) project management system will be utilised to document quality issues and actions. Issues logs, quality logs, and project exception reporting will be reviewed quarterly reports to Defence.

Change Control Procedures

61. Because of the dynamic nature of the research environment, the inherent uncertainty in conducting research and the importance of being able to react to events and restructure the research protocol accordingly it is necessary to develop principles for project changes.

62. For changes resulting in deviations from the agreed products, project scope, timeframes, quality or budget originally approved by the Program Board, a Contract Change Proposal must be raised by CMVH. Changes to the protocol once approved by the relevant Human Research Ethics Committees will be submitted as amendments to those committees as per the instructions in the Australian Defence Force Protocol ADFP 1.2.5.3. (Health & Human Performance Research in Defence: Manual for Researchers).

Configuration Management Plan

63. Configuration management will be put in place to ensure that the version of products, their status, date of submission and location is clearly recorded.

Governance Plan

64. This Governance Plan provides details of the study deliverables, timelines, budget, and change management strategies for the study.

Timelines - MEAO Health Study Phase 2

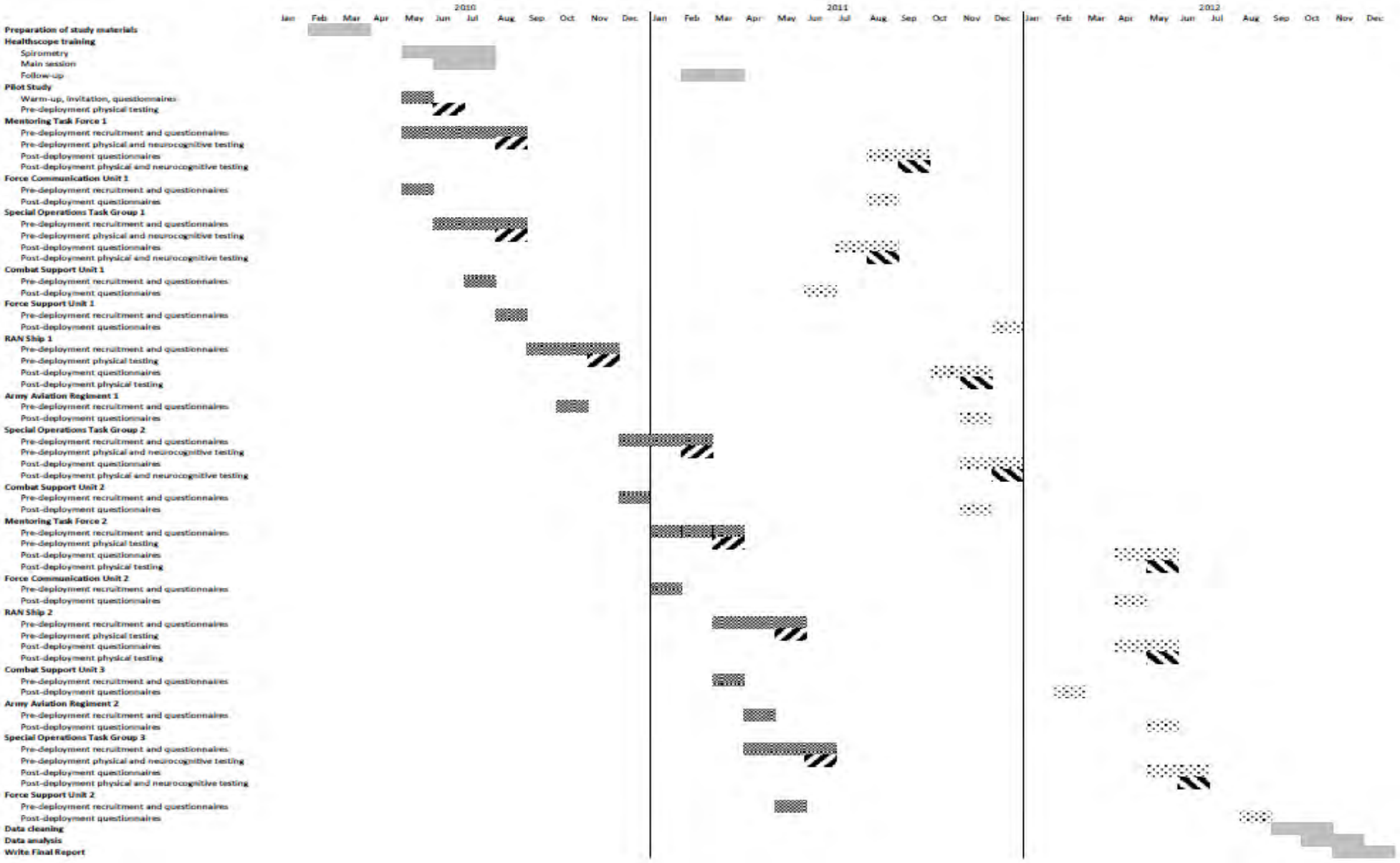
65. The proposed timelines for Phase 2 of the MEAO Health Study are January 2008 to June 2012. These timelines have been set to take into account the timing of:

- establishment of a robust secure data management system for participant contact and data collection tracking
- future deployments (for Study 1)
- time frames for ethics approvals
- time required to gain access to Defence-held data (for development of nominal rolls and health and psychological data)
- time required for adequate recruitment of study participants
- availability of data for appropriate reference years for linkage (mortality and cancer registry data).

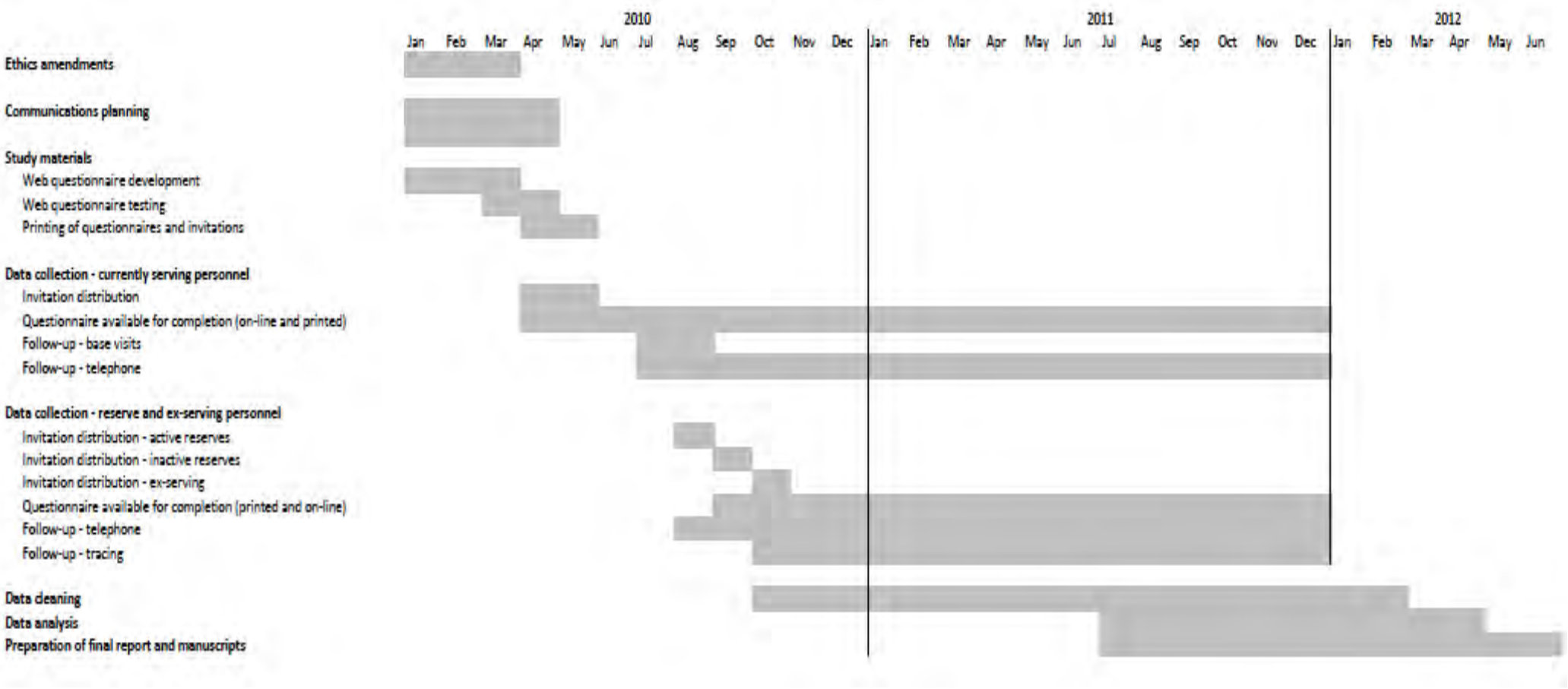
66. Some of these parameters are outside the control of CMVH such as ethical approval, provision of data from Defence, DVA contact tracing and data linkage by AIHW and will require ongoing monitoring. This schedule is also contingent on the timing of funding. These timelines have also been coordinated to achieve efficiencies in the recruitment of staff.

67. Gantt charts showing summaries of the timelines for Studies 1 and 2 are included below.

Gantt chart for Study 1 (Prospective)



Gantt chart for Study 2 (Census)



Deliverables / Milestones

68. The agreed deliverables/milestones for the MEAO Health Study Phase 2b are documented in each Financial Year's Statement of Works.

69. Each Statement of Works is stored on the CMVH Project in a Box (PIAB) project management system.

Key Performance Indicators (KPIs)

70. Key Performance Indicators are reported against Quarterly to Defence, for each Financial Year's Statement of Works.

71. KPIs as well as Milestones and Deliverables have to be met before invoicing can take place by the Universities.

72. Milestones and Deliverables as well as KPIs will vary between Financial Years.

73. Agreed KPIs are stored on the CMVH Project in a Box (PIAB) project management system for the Program Management Office (PMO) and both the University of Queensland and the University of Adelaide nodes to access.

74. CMVH reports against KPIs are stored on PIAB and will be provided to the PMO.

Budget

75. The budget for Phase 2 of the MEAO Health Study has been adjusted following revisions to the research protocols and changes in payment protocols.

76. Defence will pay salaries and travel costs on acquittal, but other operational costs will be paid quarterly on completion of deliverables, milestones and Key Performance Indicators as specified in the Statements of Works for each financial year.

77. The budgets for each of the studies are stored on the CMVH Project in a Box (PIAB) project management system. The budgets are appended to this plan (Annex 3).

Former contributors to MEAO Health Study

University of Adelaide

The late Professor Konrad Jamrozik (Chief Investigator)
SQNLDR Michel Devine (ADF Liaison Officer)
SQNLDR Jenny Dowling
Dr Nancy Briggs (Statistician)
Ms Penny Williamson

University of Queensland

Dr Christine McClintock (Deployment Health Surveillance Program Manager)
Dr Annabel McGuire (Head, Research Coordination Unit)
Jonathan Bleier (Statistician)
Paul Rivas (Research Assistant, Project Management)
Tegan Cosgrove (Research Assistant)
Lisa Nielsen (Research Assistant)

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Detailed Research Plan – Annexes

Middle East Area of Operations (MEAO) Health Study

Deliverable Item 5 (Phase 2b) Financial Year 2009/10

Centre for Military and Veterans' Health

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ACCREDITATION CERTIFICATE FOR DEFENCE HEALTH RESEARCH SYSTEM

Reference:
A. Defence Security Manual – Aug 09

1. Information Assurance (IA) hereby provides the enclosed accreditation certificate 3499 as proof of system accreditation. Any conditions applying to this accreditation are contained on the certificate and may not be varied without IA approval.

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Director
Certification and Compliance

21 Jun 10

Enclosure:
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University of Adelaide

Data Management & Analysis Centre

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Bice Building,
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has been accepted as a member of the Defence Industry Security Program and agrees to ongoing compliance with the minimum protective security requirements of the Australian Government Department of Defence.

On behalf of Head Defence Security Authority

16 October 2009
Date

Secure capability, secure operations, secure Defence: it's everybody's business

Australian Government

Department of Defence
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Application Architecture	Russell Offices
DDISS	CP3-4-99

ACCREDITATION CERTIFICATE FOR CENTRE FOR MILITARY AND VETERANS' HEALTH DRN INFRASTRUCTURE

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3. My point of contact in relation to this matter is Mr Dean Marden, who can be contacted on (02) 6127 4621 or dean.marden@defence.gov.au.

Craig Butler
Director
Certification and Compliance

4 Jun 10

Enclosure:
1. Accreditation certificate number 3472

COPY NO: 001
DATE: 22 April 2010

CENTRE FOR MILITARY & VETERANS' HEALTH
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MAYNE MEDICAL SCHOOL BUILDING
HERSTON ROAD
HERSTON QLD 4006

SECURITY PRACTICES & PROCEDURES (SPP)

FOR AN

ACCREDITED FACILITY

IN THE

DEFENCE INDUSTRY SECURITY PROGRAM (DISP)

Issued by the Authority of

Printed Name: GPCAPT GEOFF ROBINSON

Signature: .....

Position: CHIEF OF OPERATIONS

Date: 31 May 18

COPY NO: 001
DATE: 22 APR 2010

CENTRE FOR MILITARY & VETERANS' HEALTH
UNIVERSITY OF QUEENSLAND
MAYNE MEDICAL SCHOOL BUILDING
HERSTON ROAD
HERSTON QLD 4006

DRN STANDARD OPERATING PROCEDURE
FOR AN
ACCREDITED FACILITY

IN THE

DEFENCE INDUSTRY SECURITY PROGRAM (DISP)

Issued by the Authority of

Printed Name: GPCAPT Geoff Robinson

Signature: .....

Position: CHIEF OF OPERATIONS

Date: 31 MAY 10

Department of Defence
Information Communications Technology Development Division

CERTIFICATE OF ICT ACCREDITATION APPROVAL TO OPERATE

SYSTEM NAME: **CENTRE FOR MILITARY AND VETERANS' HEALTH DRN INFRASTRUCTURE**

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Table 1 MEAO Health Study Budget Summary

		UQ		UA		Total
Salaries						
Academic	$	1,259,802	$	1,741,622	$	3,001,424
General	$	1,775,554	$	1,216,629	$	2,992,183
Defence	$	107,016	$	305,760	$	412,776
Total	$	**3,142,372**	$	**3,264,011**	$	**6,406,383**
Operational						
IT Infrastructure	$	58,820	$	72,268	$	131,088
Database	$	292,600	$	660,000	$	952,600
Communication	$	120,271	$	-	$	120,271
Travel	$	124,964	$	98,956	$	223,920
Office Maintenance	$	34,513	$	30,993	$	65,505
Staff Recruitment	$	10,626	$	12,276	$	22,902
Total	$	**641,794**	$	**874,492**	$	**1,516,286**
Study specific costs						
Preliminary Study	$	20,460	$	13,310	$	33,770
Study 1	$	-	$	1,520,002	$	1,520,002
Study 2	$	407,446	$	-	$	407,446
Study 3	$	45,060	$	-	$	45,060
Study 4	$	-	$	-	$	-
Maintenance of parti	$	-	$	-	$	-
MBS PBS Linkage	$	-	$	-	$	-
Total	$	**472,966**	$	**1,533,312**	$	**2,006,278**
Project Total GST excl	$	4,257,132	$	5,671,815	$	9,928,947
GST	$	425,713	$	567,182	$	992,895
Project Total GST incl	$	4,682,845	$	6,238,997	$	10,921,842

Table 2 MEAO Health Study Budget by Financial Year and Calendar Yea

		UQ		UA		Total
FY 08 09	$	145,057	$	167,384	$	312,441
FY 09 10	$	1,261,675	$	1,352,312	$	2,613,988
FY 10 11	$	2,057,174	$	2,588,333	$	4,645,508
FY 11 12	$	1,218,939	$	2,130,967	$	3,349,906
Total	$	**4,682,845**	$	**6,238,997**	$	**10,921,842**
CY 2008	$	14,737	$	36,623	$	51,360
CY 2009	$	481,239	$	530,265	$	1,011,504
CY 2010	$	2,102,810	$	2,224,547	$	4,327,357
CY 2011	$	1,554,735	$	2,675,828	$	4,230,562
CY 2012	$	529,325	$	771,734	$	1,301,059
Total	$	**4,682,845**	$	**6,238,997**	$	**10,921,842**

Table 3. Study 1 Summary

	Jul 08 - Jun 12	08/09 Jul-Dec	08/09 Jan-Jun	09/10 Jul-Dec	09/10 Jan-Jun	10/11 Jul-Dec	10/11 Jan-Jun	11/12 Jul-Dec	11/12 Jan-Jun	Check
Salaries										
Academic	$ 1,741,622	$ 31,093	$ 113,154	$ 159,794	$ 245,327	$ 263,820	$ 263,820	$ 341,553	$ 323,061	$ 1,741,622
General	$ 1,216,629	$ -	$ -	$ 41,428	$ 103,570	$ 294,816	$ 317,661	$ 317,661	$ 141,493	$ 1,216,629
Defence	$ 305,760	$ -	$ -	$ -	$ 76,440	$ 76,440	$ 76,440	$ 76,440	$ -	$ 305,760
Total	**$ 3,264,011**	**$ 31,093**	**$ 113,154**	**$ 201,222**	**$ 425,338**	**$ 635,076**	**$ 657,920**	**$ 735,654**	**$ 464,554**	$ 3,264,011
Operational										
IT Infrastructure	$ 72,268	$ 880	$ 880	$ 14,746	$ 39,922	$ 5,280	$ 2,640	$ 5,280	$ 2,640	$ 72,268
Database	$ 660,000	$ -	$ -	$ 132,000	$ 198,000	$ 132,000	$ 66,000	$ 66,000	$ 66,000	$ 660,000
Communication	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Travel	$ 98,956	$ -	$ -	$ -	$ 21,114	$ 17,756	$ 21,114	$ 17,756	$ 21,216	$ 98,956
Office Maintenance	$ 30,993	$ 1,320	$ 2,640	$ 2,870	$ 4,879	$ 4,879	$ 4,879	$ 4,879	$ 4,649	$ 30,993
Staff Recruitment	$ 12,276	$ -	$ -	$ 1,238	$ 1,694	$ 4,444	$ 4,444	$ 457	$ -	$ 12,276
Total	**$ 874,492**	**$ 2,200**	**$ 3,520**	**$ 150,853**	**$ 265,609**	**$ 164,358**	**$ 99,077**	**$ 94,371**	**$ 94,505**	$ 874,492
Study specific costs										
Preliminary Study	$ 13,310	$ -	$ 2,200	$ 11,110	$ -	$ -	$ -	$ -	$ -	$ 13,310
Study 1	$ 1,520,002	$ -	$ -	$ -	$ 175,243	$ 356,692	$ 439,908	$ 405,642	$ 142,518	$ 1,520,002
Study 2			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Study 3			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Study 4	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance of participants in cohort	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
MBS PBS Linkage	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	**$ 1,533,312**	**$ -**	**$ 2,200**	**$ 11,110**	**$ 175,243**	**$ 356,692**	**$ 439,908**	**$ 405,642**	**$ 142,518**	$ 1,533,312
										$ -
Project Total GST exclusive	**$ 5,671,815**	**$ 33,293**	**$ 118,874**	**$ 363,185**	**$ 866,190**	**$ 1,156,126**	**$ 1,196,905**	**$ 1,235,666**	**$ 701,577**	$ 5,671,815
GST	$ 567,182	$ 3,329	$ 11,887	$ 36,318	$ 86,619	$ 115,613	$ 119,690	$ 123,567	$ 70,158	$ 567,182
Project Total GST inclusive	$ 6,238,997	$ 36,623	$ 130,761	$ 399,503	$ 952,809	$ 1,271,738	$ 1,316,595	$ 1,359,233	$ 771,734	$ 6,238,997

	Cal 2008	FY0809	Cal 2009	FY0910	Cal 2010	FY10/11	Cal 2011	FY11/12 & Cal 2012	
Financial Years		$ 167,384		$ 1,352,312		$ 2,588,333		$ 2,130,967	$ 6,238,997
Calendar Years	$ 36,623		$ 530,265		$ 2,224,547		$ 2,675,828	$ 771,734	$ 6,238,997

Table 6 Studies 2 & 3 Summary - Total Budget

	Jul 08 - Jun 12	08/09 Jul-Dec	08/09 Jan-Jun	09/10 Jul-Dec	09/10 Jan-Jun	10/11 Jul-Dec	10/11 Jan-Jun	11/12 Jul-Dec	11/12 Jan-Jun	Check
Salaries										
Academic	$ 1,259,802	$ -	$ 53,997	$ 91,711	$ 208,665	$ 208,665	$ 232,255	$ 232,255	$ 232,255	$ 1,259,802
General	$ 1,775,554	$ -	$ 31,709	$ 37,858	$ 254,072	$ 533,077	$ 446,573	$ 257,098	$ 215,167	$ 1,775,554
Defence	$ 107,016	$ -	$ -	$ 30,576	$ 76,440	$ -	$ -	$ -	$ -	$ 107,016
Total	**$ 3,142,372**	**$ -**	**$ 85,706**	**$ 160,145**	**$ 539,177**	**$ 741,741**	**$ 678,828**	**$ 489,353**	**$ 447,422**	$ 3,142,372
										$ -
Operational										$ -
IT Infrastructure	$ 58,820	$ 1,155	$ 1,155	$ 6,105	$ 30,385	$ 6,985	$ 3,465	$ 6,105	$ 3,465	$ 58,820
Database	$ 292,600	$ -	$ -	$ 126,148	$ -	$ 117,084	$ -	$ 49,368	$ -	$ 292,600
Communication	$ 120,271	$ -	$ -	$ -	$ 62,497	$ 40,369	$ 5,802	$ 5,802	$ 5,802	$ 120,271
Travel	$ 124,964	$ 10,516	$ 11,534	$ 14,022	$ 19,339	$ 16,286	$ 17,643	$ 16,286	$ 19,339	$ 124,964
Office Maintenance	$ 34,513	$ 1,726	$ 3,451	$ 3,451	$ 5,177	$ 5,177	$ 5,177	$ 5,177	$ 5,177	$ 34,513
Staff Recruitment	$ 10,626	$ -	$ 1,282	$ 4,032	$ 1,282	$ 4,032	$ -	$ -	$ -	$ 10,626
Total	**$ 641,794**	**$ 13,397**	**$ 17,422**	**$ 153,758**	**$ 118,679**	**$ 189,932**	**$ 32,086**	**$ 82,737**	**$ 33,782**	$ 641,794
										$ -
Study specific costs										$ -
Preliminary Study	$ 20,460	$ -	$ 15,345	$ 5,115	$ -	$ -	$ -	$ -	$ -	$ 20,460
Study 1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Study 2	$ 407,446	$ -	$ -	$ -	$ 170,104	$ 152,011	$ 56,102	$ 29,228	$ -	$ 407,446
Study 3	$ 45,060	$ -	$ -	$ -	$ -	$ -	$ 19,457	$ 25,604	$ -	$ 45,060
Study 4	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance of participants in cohort	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
MBS PBS Linkage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	**$ 472,966**	**$ -**	**$ 15,345**	**$ 5,115**	**$ 170,104**	**$ 152,011**	**$ 75,559**	**$ 54,831**	**$ -**	$ 472,966
										$ -
Project Total GST exclusive	**$ 4,257,132**	**$ 13,397**	**$ 118,473**	**$ 319,018**	**$ 827,960**	**$ 1,083,685**	**$ 786,473**	**$ 626,922**	**$ 481,204**	**$ 4,257,132**
GST	**$ 425,713**	**$ 1,340**	**$ 11,847**	**$ 31,902**	**$ 82,796**	**$ 108,369**	**$ 78,647**	**$ 62,692**	**$ 48,120**	**$ 425,713**
Project Total GST inclusive	**$ 4,682,845**	**$ 14,737**	**$ 130,320**	**$ 350,919**	**$ 910,756**	**$ 1,192,054**	**$ 865,121**	**$ 689,614**	**$ 529,325**	**$ 4,682,845**

	Cal 2008	FY0809	Cal 2009	FY0910	Cal 2010	FY10/11	Cal 2011	FY11/12 & Cal 2012	
Financial Years		$ 145,057		$ 1,261,675		$ 2,057,174		$ 1,218,939	$ 4,682,845
Calendar Years	$ 14,737		$ 481,239		$ 2,102,810		$ 1,554,735	$ 529,325	

CMVH
CENTRE FOR MILITARY & VETERANS' HEALTH

Updated Preliminary Study Report

Middle East Area of Operations (MEAO) Health Study

Deliverable 2
Financial Year 2009/10

28 April 2010

Centre for Military and Veterans' Health

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Document Administration

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21/8/09	1.0	Submitted to PMO	No
18/11/09	2.0	Updated version incorporating outcomes from three focus groups held with 7BDE	No
28/4/10	3.0	Revision based on feedback from the PMO	No

Approvals

This document requires the following approvals:

Name	Position	Signature	Date	Version
Prof Alexander McFarlane	Chair, Investigator Committee			
Prof Michael Moore	Scientific Advisory Committee			
BRIG Stephen Rudzki	Program Management Board			

Signed approval forms are filed in the Management section of the project file.

Distribution

This document has been distributed to:

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PMO	28/4/10	Electronic

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CAPT (RAN) Tim Maddern

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SQNLDR Michel Devine
A/Professor Susan Treloar
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Freya Goodhew
Miranda Van Hoof
Dr Annabel McGuire

Mapping of focus group outcomes and pilot testing of the questionnaire
Professor Alexander McFarlane
Dr Christopher Barton
Michel Devine
Jenelle Bauer
Daniel Barnes
Maria Abraham

Administrative and other assistance
Ashleigh Kenny

Abbreviations

ADF	Australian Defence Force
CMVH	Centre for Military and Veterans‟ Health
DCO	Defence Community Organisation
DHSD	Defence Health Services Division
DHSP	Deployment Health Surveillance Program
DSTO	Defence Science and Technology Organisation
DVA	Department of Veterans‟ Affairs
ESO	Ex-Service Organisation
JOC	Joint Operations Command
MEAO	Middle East Area of Operations
NNAI	Near North Areas of Influence
PMB	Program Management Board
PMO	Program Management Office
PTSD	Post Traumatic Stress Disorder
RAAF	Royal Australian Air Force
RAN	Royal Australian Navy
RSL	Returned Services League
SAC	Scientific Advisory Committee
SRT	Scientific Research Team
UA	University of Adelaide
UQ	University of Queensland

Executive Summary

Introduction

1. This report describes the activities and outcomes of the Middle East Area of Operations (MEAO) Health Study preliminary study. This planning stage undertaken during 2009 included meetings with stakeholders, focus groups and pilot testing the study questionnaire with the target population.

2. The objective of the preliminary study was to conduct pre-testing of the survey instrument by gaining broad stakeholder and consumer input to the development of the study instruments and mode of data collection.

Methods

3. The preliminary study involved three activities: meetings with stakeholders, focus groups with serving and ex-serving Defence Force personnel, and pilot testing of the questionnaire.

4. Meetings with stakeholders occurred both formally and informally to gain feedback on the proposed study design and assessments. These included ongoing input and support from Defence through the Deployment Health Surveillance Program Management Office, as well as input from:

- Defence Force Units
- Other Federal Government Departments
- Ex-Service organisations and veteran advocacy groups (both formal and informal)
- International military and veterans health research centres

5. Twenty-eight focus groups were completed between 28 April 2009 and 28 August 2009 at nine bases hosting Force Units who have deployed to the MEAO. Several focus groups were offered at each base to accommodate Service personnel with a variety of roles (e.g. commissioned and non-commissioned Officers, combat and combat-support personnel) and special groups such as medical staff and women. Two focus groups were held with MEAO veterans who had separated from the ADF.

6. In all, 147 individuals participated in these 28 focus groups, which were run by CMVH staff with training and experience in the conduct of focus groups. The initial analysis of focus group discussions utilised an abridged transcript that was created from the audio record and observer/scribe notes.

7. Findings from the focus group discussions were mapped to the draft questionnaire. Suggestions to amend the questionnaire were made and reviewed by a working group at the University of Adelaide (UA). A sub-set of participants who took part in a focus group (n=130) were subsequently provided with a hard copy of the amended questionnaire for pilot testing.

Results

8. Stakeholder meetings informed the development of the draft questionnaire and refinement of study protocols and procedures as presented in the Detailed Research Plan of May 2009.

9. Focus groups then enabled direct input to the selection of health hazards and health concerns for health surveillance. The focus group outcomes reported here focus on three key topics: 1) identification of health hazards, 2) identification of health concerns, and 3) conducting the study.

10. Health hazards fell into two broad areas – major stressors and physical hazards. Major stressors included: Working in a combat zone; Operational and organisational stress; Families and

returning to Australia and; Life on deployment. A wide range of physical hazards of concern were reported by MEAO veterans during the focus group discussions. Together, the stressors and physical hazards were mapped to the draft questionnaire. This revealed where an issue of concern to veterans was not assessed, or where fuller assessment of pertinent issues was required.

11. A similar approach was taken in the mapping of health concerns. These were grouped into those that were of concern on deployment, and those that were of concern to veterans now and looking toward the future.

12. Participants also discussed how the main study could be conducted to maximise recruitment and completion of the study questionnaires and procedures.

13. Amendments were made to the draft questionnaire based on the outcomes of the focus group discussions. The questionnaire was then mailed to these participants. Thirty questionnaires were completed. Each of these questionnaires was independently reviewed by two University of Adelaide CMVH staff – Dr Christopher Barton and Miss Jenelle Baur. Participant comments were noted along with missing items, entry of data in incorrect areas and any other problems with structure, flow and the organisation of items as indicated by the participant. A table of proposed amendments was developed and reviewed by the wider DHSP Project Team. The questionnaire was then refined based on these discussions.

Conclusions

14. The preliminary study complements the activities already undertaken in the development of the MEAO study protocol to identify health problems and health hazards for surveillance. This has included funded activities conducted as part of Phase 1a (review of the literature and review of health hazards) and Phase 1b (Detailed Research Plan). These previous activities drew on the published and grey scientific and medical literature, experience of the investigators and the input of the defence appointed Scientific Advisory Committee (SAC) and Program Management Board (PMB). The preliminary study complements this by incorporating the views of stakeholders (e.g. veterans‟ advocacy groups) and consumers (e.g. the veterans themselves).

15. The stakeholder meetings and focus groups largely confirmed the initial selection of health issues for surveillance and the priority attached to these issues. Where discrepancies were identified the questionnaire was amended such that veterans concerns would be appropriately addressed. Pilot testing of the questionnaire enabled the checking of content, structure and flow issues, which were then able to be resolved.

16. The outcomes of the preliminary study engender confidence that the MEAO Health Study survey has strong face validity (i.e. measures what is important to stakeholders and consumers to measure) and will produce data that can be analysed confidently to answer the MEAO Health Study research questions.

Introduction

1. The Middle East Area of Operation (MEAO) Health study is the next study to be initiated within the Deployment Health Surveillance Program (DHSP). This program has recruited Australian Defence Force (ADF) personnel and comparison groups for health studies focused on deployments to the Solomon Islands, East Timor, and Bougainville (collectively referred to as the Near North Area of Influence (NNAI) studies). The MEAO Health Study will add ADF personnel who participated in Operations in Afghanistan, Iraq, and areas supporting Operations in these countries. As the MEAO Health study was initiated at a time when the earlier DHSP studies were at advanced stages of implementation, it has been possible to incorporate lessons learnt from these studies.

2. The MEAO Health Study forms part of a coherent program of health surveillance of deployed ADF personnel and, as such, it is desirable that data collected on the MEAO deployed cohort are comparable to that collected in the previous DHSP studies. However, it is recognised that the MEAO deployments have been undertaken under very different conditions and largely different circumstances from most of the NNAI deployments that were the focus of the earlier DHSP studies. Hence, different exposures need to be assessed and the health issues for surveillance may be different to those assessed in the earlier studies.

3. The MEAO deployments are anticipated to be the greater source of risk, in terms of both the burden of disease and the cost of entitlements, compared to the other ADF deployments within the DHSP.

4. A preliminary study was initiated to conduct pre-testing of instruments for data collection. Pre-testing involves a series of activities that are designed to evaluate a survey instrument‟s capacity to collect the desired data, the capabilities of the selected mode of data collection, and the overall adequacy of the mode of data collection.

5. This report describes the activities and outcomes of the preliminary study. This planning stage undertaken during 2009 included meetings with stakeholders, focus groups and pilot testing the study questionnaire with the target population.

Objective

6. The objective of the preliminary study was to pre-test the survey instrument by gaining broad stakeholder and consumer input to the development of the study instruments and mode of data collection.

Aims

7. Focus groups with veterans of the MEAO were held to:

- Capture qualitative data on the experiences and health concerns of MEAO veterans that could be mapped to the health and exposure questionnaire to check the validity and relevance of items to be assessed; and,
- Begin the process of engaging ADF and ex-serving members in the MEAO Health study.

8. The subsequent aim was to refine the draft study questionnaire based on the input of focus group participants and to pilot test it as a check of face validity and to identify potential content, structure or flow problems.

Methods

Study Design

9. The preliminary study focused on pre-testing the survey instrument. It involved three primary activities: meetings with stakeholders, focus groups with serving and ex-serving Defence Force personnel, and pilot testing of the questionnaire.

Participants

10. Meetings with stakeholders were conducted to gain feedback on the proposed study design and assessments. These included ongoing input and support from Defence through the PMO, as well as input from:

- Defence Force Units
- Other Federal Government Departments
- Ex-service organisations and veteran advocacy groups (both formal and informal)
- International military and veterans health research centres

11. Focus group participants were drawn from eight bases hosting Force Units who have deployed to the MEAO. Several focus groups were offered at each base to accommodate different types of veterans (commissioned and non-commissioned personnel) and special groups such as medical staff, Commanding Officers and women. Two focus groups were held with MEAO veterans who had separated from the ADF.

12. Participants who took part in a focus group were invited to pilot test the study questionnaire.

Focus Group Method

13. The focus group method was selected to obtain information about the health and exposure experiences and concerns of the veterans. This approach enabled the research team to gain a broad understanding of the health issues and concerns of a variety of Service personnel in a short period of time and provided guidance on why these groups think and act the way that they do.

14. The focus groups were conducted according to the protocol and approach recommended by Kreuger and Casey[1], and Morgan and Kreuger[2].

15. Command endorsement was obtained from each of the Single Service Chiefs. A CMVH Liaison Officer from each of the three Services identified Commanding Officers and initiated contact to arrange access to personnel and suitable facilities. A point of contact was assigned at each of the military bases, which provided local promotion and coordination of the focus group. LTCOL Peter Nasveld, CMVH Research Manager, was instrumental in identifying points of contact and arranging Defence liaison for focus groups.

Selection of participants for focus groups

16. Stratified purposive sampling and quota sampling were used to select participants for the focus groups. Purposive sampling involved selecting individuals because they had particular features or characteristics that enabled exploration and understanding of issues of concern to a broad range of MEAO veterans.

17. Quota sampling was also applied to ensure that a wide range of sub-groups were included in the final sample; particularly those smaller groups of interest in Defence (e.g. women) were included in the final sample. Quota sampling is common in qualitative research and involves

selecting sub-populations of interest and the proportion of those sub-populations that will make up the final sample.

18. Quota was applied to gender (with one focus group restricted to female participants only), rank (Officer/other rank), role (Combat/Combat Support or Aircrew/non-aircrew/health) and Service (Navy, Army, Air Force).

19. Two of the focus groups (one in Adelaide and one in Brisbane) were restricted to MEAO veterans who had separated from the regular ADF. These ex-serving members were encouraged to participate through advertisements in the general media, veterans‟ publications, and personal contacts.

Focus Group Procedure

20. Focus group sessions were facilitated by Dr Christopher Barton, SQNLDR Michel Devine, or Ms Freya Goodhew from University of Adelaide and A/Prof Susan Treloar and Dr Annabel McGuire from University of Queensland.

21. Consent to record the session (either as notes or a digital audio recording) was sought at the beginning of each focus group. If verbal consent to take an audio record was not provided, the second investigator/research associate was instructed to take notes and to observe and note additional non-verbal information during the focus group.

22. Each focus group, other than four groups with Special Forces elements, was digitally audio recorded.

23. An interview guide (Annex 1) was developed according to the protocol of Morgan and Kreuger[2], and used by the moderator to guide the discussion. Questions covered four broad areas including:

- Health concerns
- Positive and negative aspects of the deployment
- Experiences after returning from deployment
- Strategies for recruitment to the study and the use of incentives.

Analysis of information gained from focus groups

24. Initially, in order to finalise the study questionnaire for pilot testing and meet the deadline for reporting, key themes and key issues were identified from the notes of the observer/scribe and from a review of the audio record. The latter involved listening to the audio file and making an abridged transcript to supplement the written notes of the observer. Thorough qualitative analysis of focus group transcripts will be conducted subsequently to fully explore the data provided.

25. The key themes and issues that were identified in this manner were mapped to the battery of assessments planned for the MEAO Health Study as a check that the key health and exposure concerns of personnel were assessed in the questionnaire.

26. Suggestions to amend the questionnaire were compiled. These were then reviewed and discussed by a working group at the CMVH UA Node. This group comprised Professor Alexander McFarlane, Dr Christopher Barton, SQNLDR Michel Devine, Miss Jenelle Baur and Mr Daniel Barnes.

27. Each item within the questionnaire was discussed until consensus was reached as to whether the item would be retained, amended or deleted. At this point, the questionnaire was considered „print ready‟, in preparation for pilot testing.

Pilot Testing the Study Questionnaire

28. At the conclusion of each focus group, participants were asked if they would be willing to pilot test the study questionnaire once the preliminary analysis of the focus group data had been undertaken and changes to the study questionnaire arising from the focus groups had been made.

29. On 21 July 2009, the first 118 focus group participants were emailed to advise them that shortly they would receive a hard copy of the questionnaire in the mail, and that they should complete this questionnaire and provide additional written feedback to the study investigators.

30. The questionnaire was mailed to participants the following day. Participants were advised that responses were required by 31 July 2009.

Analysis of pilot study data

31. Each of the returned questionnaires was independently reviewed by two UA Node staff – Dr Christopher Barton and Miss Jenelle Baur. Participant comments were noted along with missing items, entry of data in incorrect areas and any other problems with the structure, flow and organisation of items as indicated by the participant.

32. A table of proposed amendments was developed and reviewed by the wider DHSP Project Team (including staff from both UA and UQ Nodes). The questionnaire was then refined based on these discussions.

33. Nine focus groups were unable to be organised in time to meet the deadlines noted above. These focus groups involving Navy personnel at HMAS Kuttabul and Army personnel from 5 Aviation Regiment and 7 Brigade were held on 21 July 2009, 13 August 2009 and 28 August 2009 respectively. The revised questionnaire was provided to Navy and 5 Aviation Regiment focus group participants on 13 August 2009.

Results

34. The results are presented in three parts: I) Stakeholder meetings, II) Focus group outcomes, and III) Pilot Study outcomes.

Results Part I: Stakeholder meetings

35. Stakeholder meetings targeting key Defence and veteran stakeholders were conducted to gain feedback on the proposed study design and assessments, in addition to the ongoing input and support from Defence through the PMO.

36. These meetings included both formal (e.g. planned meetings with agenda and official representation) and informal discussion (including phone, email, or face to face meetings without agenda or official representation).

37. These discussions informed the development of the draft questionnaire and refinement of study protocols and procedures as presented in the Detailed Research Plan of May 2009.

Table 1.1: Stakeholder meetings held with individuals and organisations:

Formal meeting	*Informal discussion*
1. Department of Defence, Joint Health Command, Program Management Board	1. Joint Operations Command (JOC)
2. Defence appointed Scientific Advisory Committee to the DHSP	2. Aviation Medicine Unit at RAAF Base Edinburgh
3. Department of Veterans Affairs	3. Defence Science and Technology Organisation (DSTO)
4. National Younger Veterans" Consultative Forum (CMVH has a standing agenda item)	4. Australian Defence Association
5. Defence Force Units including: - 1 Psychology Unit	5. Returned Services League (RSL)
6. Millennium Cohort Group	6. Young Diggers
7. Professor Simon Wessely, Kings College London	7. Australian Peacekeepers and Peacemakers Veterans" Association
8. Mental Health Research Unit of the Dutch Armed Services	8. Directorate of Mental Health, Canadian Armed Forces
	9. Defence Force Units including - SAS-R

Results Part II - Focus Group Outcomes

38. Twenty-eight focus groups were completed between 28 April 2009 and 28 August 2009 (Table 1.2). These involved discussions with 143 MEAO veterans. The number of participants in each group ranged from 1 to 10. The majority of participants were still members of the ADF (n = 136), while seven ex-serving MEAO veterans participated in a focus group held in either Adelaide (n = 3) or Brisbane (n = 4). One focus group that was offered to Navy „sailors" failed to attract any participants (Table 1.2). However this focus group could only be held at a time when no ships were alongside at HMAS Kuttabul.

39. All focus groups were digitally recorded except for groups with Special Forces elements (SAS-R and 4RAR). A total of 24 hours of audio was collected. When a group was not recorded, detailed notes were taken by an observer/scribe.

40. No adverse incidents occurred during the focus group discussions and all but one individual consented to participate after discussing the study with the research team. The individual who did not participate after hearing more about the study did not specify a reason for non-participation.

Table 1.2: Focus groups offered and the number of participants attending each group

Service	*Date*	*Group type offered*	*No. Attending*	*Facilitator and Scribe*
Royal Australian Navy				
Fleet Base East, Potts Point, Sydney	21/7/2009	Officers Sailors Medical Women	1 0 1 2	CB and FG (FG facilitated women"s only group)
Australian Regular Army				
1st BDE, Robertson Barracks, NT	4/6/2009	Officers Combat Combat Support Medics	7 6 6 3	CB and FG
3rd BDE, Townsville, QLD	17/6/2009 and 13/8/2009	Officers Combat Combat Support Medics 5 AVN air crew 5AVN non-aircrew	2 10 10 4 7 5	CB and MVH CB and ST
7th BDE, Enoggera, QLD	28/8/2009	Officers Medics Women	4 4 6	ST and PN ST and PN AM and PN
SAS-R, Perth	4/6/2009	Officers Other Ranks	5 9	MD and CC
4RAR, Holsworthy, Sydney	26/6/2009	Officers Other Ranks	4 10	MD and CC
Royal Australian Air Force				
Edinburgh, Adelaide	28/4/2009 21/5/2009	Aircrew Non Aircrew Medical	6 6 4	CB and DB
Richmond, Sydney	27/4/2009	Aircrew Non Aircrew Medical	3 1 10	CB and DB
Ex Serving				
Brisbane	25/6/2009	Ex-serving	4	CB and ST
Adelaide	28/9/2009	Ex-serving	3	CB

Focus Group Findings

41. The initial analysis of focus group discussions utilised an abridged transcript that was created from the audio record and observer/scribe notes as described in the methods. The outcomes reported here focus on three key topics: 1) identification of health hazards, 2) identification of health concerns, and 3) conducting the study. These were chosen as the first topics to investigate as they could be used to enhance the study protocol and, in particular, the study questionnaire. A more complete analysis utilising the verbatim transcript will be conducted later in 2009.

Health Hazards

42. Health hazards fell into two broad areas – major stressors and physical hazards.

43. Major stressors fell into four broad thematic areas which were labelled:

- Theme 1: Working in a combat zone
- Theme 2: Operational and organisational stress
- Theme 3: Families and returning to Australia
- Theme 4: Life on deployment

44. Within each thematic area there were a number of sub-categories contributing to the broader theme. The themes and sub-categories within each theme are detailed in Annex 2. For each sub-category the issue of concern is noted, as well as the group who raised the issue (individuals are not identified), an example of the issue using quotations taken from the focus group audio recording, how this issue is currently assessed in the draft study questionnaire, and a suggestion for how it could be assessed differently or more fully (as appropriate).

45. The physical hazards reported during focus group discussions are presented in Annex 3. It can be seen that they are organised alphabetically rather than thematically. Organising identified hazards this way was done for pragmatic reasons and facilitated the mapping process for these issues. The information is presented in a table that includes the issue identified, the group identifying the issue, an example from the audio recording, how this is currently assessed in the questionnaire and finally a suggestion for how it could be assessed differently or more fully (as appropriate).

Health concerns

46. Health concerns were grouped into those that were of concern on deployment (Annex 4), and those that were of concern to veterans now and looking toward the future (Annex 5).

47. For the mapping exercise, these were listed alphabetically rather than thematically. As can be seen in the tables presented in the annexes, only minor amendments were suggested to ensure that health concerns on deployment and in the long term were being assessed in the survey instruments.

Conducting the study

48. Participants were asked how the study could be conducted to maximise recruitment and completion of the study questionnaires. The outcomes of this aspect of the focus group discussion are summarised in two tables (Table 1.3 and Table 1.4) and have been reported as „do‟s“ and „don‟ts“.

Table 1.3: Focus group participants‟ views on the style of the survey instrument

Do	*Don't*
• Keep it short, succinct • Provide opportunity for respondents to tell their story (e.g. use open ended questions) • Make the survey relevant to the role of the member (e.g. dead bodies rarely seen by support staff) • Include families • Use pre and post assessments	• Make it too long > 5 minutes 10-20 minutes max > 30 minutes • Assume one size fits all

Table 1.4: Focus group participants‟ views on promoting the study and recruiting veterans

Do	*Don't*
Use financial incentives (except for one combat-support group who were against and some 7BDE Officers + Medics who did not think it needed) • offer motor vehicle • offer $10,000 (i.e. significant amount) • offer leave • offer travel to exotic location • offer time off of work • offer movie vouchers • raffle • offer IPod	Email. Email is often deleted if optional • too busy • too many other things to do
Use chain of command. Get support of CO‟s/Flight Commanders. The CO must order „do not touch this person‟ so they can complete the questionnaire.	Link survey to medical or psychology health checks. Members want to deploy and will avoid anything that threatens deployability.
Serving ADF personnel need to be "voluntold"	Promote it as a „health study‟. Health does not appeal as ADF members already do so many health related checks/questionnaires.
Provide an opportunity to complete the survey on base	Make it a burden (on time). A lot of hoops to jump through pre-deployment – minimise additional burden.
Use RAAF/RAN/Army Newspapers	Convey perception that a health problem is a weakness.
Consider promoting study participation into pre-deployment briefings. • Pre-deployment Environmental Health Lecture • Family nights • Pre-deployment psychology briefing	Use a „brand‟ name like MilHOP or another acronym to name the study. Don‟t care what it is called. Just state clearly what the key objectives and key outcomes are going to be.
Consider link to AHA pre/post medical exam	Don‟t assume all individuals in the ADF will have access to a computer.
Respondents want to know that defence/others understand the pressures they face	
Focus recruitment on individuals while they	

are in the ADF. Once out of defence system they will be lost	
Respondents want to know that Defence take the research seriously.	
Respondents want to know that if there are issues, they will be identified and acted on.	
Use RAR associations	
Emphasise independence from the ADF. Respondents need to be sure confidentiality is maintained, as they do not want to risk not being deployed. Sceptical of hidden agendas through the organisation.	
Respondents want good feedback and results to be applicable to the individual or at a local level (tangible outcomes from participation)	
Use Def Web and DRN pop ups.	
Clearly communicate what project is about, goals and benefits to health.	

Pilot Test Outcomes

49. The questionnaire presented to the PMO and SAC in the Detailed Research Plan of May 2009 formed the draft questionnaire, which was the starting point for the development of the questionnaire that was ultimately pilot tested.

50. The issues identified by focus group participants were mapped to this questionnaire by the Research Fellow as described above as part of the focus group study. At that point, the focus group study was considered to have concluded and the pilot testing of the study questionnaire to have begun.

51. The mapping exercise revealed where there was a lack of assessment of a health concern or hazard, or where a higher priority was placed on an issue than was comparable to the level of assessment in the draft questionnaire. Potential alternative questions were identified by the Research Fellow.

52. A working group was formed to review the suggested amendments and make a final decision on what questions would be included for pilot testing. This working group was led by Professor McFarlane and included Dr Christopher Barton (Research Fellow), SQNLDR Michel Devine (CMVH liaison officer with RAAF nursing background), Mr Daniel Barnes (research officer) and Miss Jenelle Baur (research officer), who were each involved in the development of the questionnaire or the conduct of the focus groups.

53. Each of the suggested changes to the questionnaire were debated in the context of the overall aims of the DHSP and the MEAO health study and requirements to maintain contemporary standards of scientific quality and annotations made against the items for review in the questionnaire.

54. Further, the phrasing and wording of instructions and questions was reviewed and amended to reflect the colloquial use of language by sailors, soldiers, and airmen, as much as possible.

55. These changes were incorporated into the questionnaire and a hard copy in teleform format was created for pilot testing. This version of the questionnaire was mailed to the first 118 focus group participants on 21 July 2009 (focus group participants from the RAN and 5AVN Regiment were not included at this stage).

56. In completing the pilot questionnaire these participants were asked to comment on:

- The questions: do they address your health and exposure concerns?
- Do the questions address the health and exposure concerns of your mates and colleagues, who were not able to participate in a focus group?
- How long did it take you to complete the questionnaire? Is it too long, or about right?
- What else can we do to ensure any health concerns or exposure concerns you or your colleagues have are picked up on?

57. Feedback was requested by the 31 July 2009. However, it was apparent that some individuals did not receive the questionnaire until the first week of August. A reminder was emailed on 12 August 2009. Thirty-two participants returned the questionnaire (to 20 August 2009), six questionnaires were „returned to sender" and three individuals had deployed before receiving the questionnaire. Excluding those who did not receive the questionnaire, the response rate was 29%.

58. On 3 August 2009, the returned questionnaires were reviewed by Dr Barton and Miss Baur. They reviewed hand-written comments made by the participants in the questionnaire and identified issues apparent in the structure and flow of the questions. These problems are listed in Table 1.5, together with the list of suggested amendments to remedy the issue and the rationale for the amendment.

Table 1.5: Problems with the pilot questionnaire and rationale for each change to the instrument

Section / Question Number	*Question*	*Suggested Amendment*	*Rationale*
Part I - Deployment History Section			
Pre-Deployment History	Other Deployments – OP RESOLUTE	Add 2006, 2007 and 2008.	As indicated by one participant
Part II - Health Section			
Section 2, 2.3	Medically diagnosed conditions	Add asthma	Dr diagnosed asthma was removed from section 5 and added here.
Section 2, 2.7	Medically diagnosed conditions	Add malaria	Several cases of malaria were reported during focus group and so this has been added as an option here.
Section 2	Medically diagnosed conditions	Add „any other condition?"	Currently no option for any other conditions so this has been corrected here.
Section 2		Underline „medical doctor"	
Section 3, 3.7	Was your smoking pattern different on deployment?	Add option for "I began/restarted smoking on deployment"	This addresses a gap in the current questions were smoking is only considered active prior to deployment.
Section 4, 4.21	Is there any other event that has caused you to have similar reactions?	Underline „other"	
Section 5	Respiratory Health	Delete 5.3, 5.4, 5.7,	Questions amended so that

		5.8, 5.9, 5.10, 5.11, 5.12	they are identical to the ECRHS screening questions.
Section 6, 6.3	Have you had problems with infertility?	Move to 6.1	Individuals are missing this question. It also makes sense to ask it at the beginning as may explain no children.
Section 6, 6.2	How many weeks were you pregnant for?	CHANGE TO „how many weeks was the pregnancy“	Majority of individuals will be male and some not answering this question as not themselves pregnant
Section 6	All	Underline key words	Clarify key issues to answer
Section 6	How many weeks pregnant “37 or more“?	Add words “37 or more (full term)“	Clarify meaning
Section 8 Background demographics	All	Move to end of questionnaire	Currently sits in middle of questionnaire, which is inappropriate. Moved to beginning of questionnaire.
Section 8	New Question	Add today“s date	For calculation of age and data checking
Section 8, 8.14	What year did you discharge?	Add option for discharge to the Reserves	Some participants will discharge from regular to reserve service, so not out of ADF entirely
Section 8, 8.17	Specify what health problems led to unemployment?	Add more area for participants to respond	Allows for multiple health problems to be identified.
Section 8, 8.9	How many hours per week do you work?	CHANGE TO „how many hours per week are you in paid employment	This is a question about under-employment. 1 participant raised issue of how to report retirement and volunteer work.
Part III - Deployment Experiences			
Instructions on front cover	New Question	Add – deployment to supporting regions	2 participants did not complete experiences form indicating they were in other areas supporting operations in Afghanistan.
Free text fields		ADD „Please write clearly in capital letters“	Some handwriting illegible.
Section 10, 10.2 Section 17, 17.2	Main Duties	Add - Oil Platform protection	Navy exposure
Section 11, 11.24 Section 18, 18.24	Did you have sex with locals?	Delete	Uncertain if this is going to generate valid result due to Australian cultural attitudes.

Section 11, 11.62 Section 18, 18.62	Any additional experiences	Make this box bigger	
Section 12, 12.7 Section 19, 19.7	„During your deployment did you?“	Make it more obvious that if answer yes to any of these activities than must indicate if this benefitted the local community	Some individuals indicated activities but did not report if they perceived a benefit to community of this activity.
Section 15, 15.7 and 15.8 Section 22, 22.7 and 22.8	Scanning the environment for risk	Add an option „Immediately“	Need to have a 0 time point.
Section 13, 13.2 Section 20, 20.2	Were you temporarily not fit for duty?	Delete	Participants not completing this series of questions correctly. If attended sick parade will now be able to indicate the reason. If medically not fit will indicate this by recording time out of role.
Section 13, 13.2 If Yes (i) Section 20, 20.2 If Yes (i)	Respiratory Illness	Add If yes „did you experience a fever“	This will discriminate against flu and cold.
Section 15, 15.14 Section 22, 22.14	Quality of marriage and relationships	Add numbers to boxes	To provide an indicator of scale.

59. The changes indicated above were incorporated into the questionnaire to produce the „print ready“ questionnaire (MEAO Deliverable 4) (Annex 6). As a final check, this print ready questionnaire was mailed to focus group participants from the RAN and 5 Aviation Regiment on the 13 August 2009.

Discussion

60. As part of the planning phases of the MEAO Health Study, a preliminary study that involved pre-testing of the survey instruments was conducted. This comprised formal and informal meetings and discussion with stakeholders, focus groups with veterans of the MEAO, and pre-testing the study questionnaire.

61. The preliminary study complements the activities already undertaken in the development of the MEAO study protocol to identify health problems and health hazards for surveillance. This has included funded activities conducted as part of Phase 1a (review of the literature and review of health hazards) and Phase 1b (Detailed Research Plan). These previous activities drew on the published and grey scientific and medical literature, experience of the investigators and the input of the Defence appointed Scientific Advisory Committee and DHSP Program Management Office and Board. The preliminary study complements this by incorporating the views of stakeholders (e.g. veterans‟ advocacy groups) and consumers (e.g. the veterans themselves).

62. The stakeholder meetings and focus groups largely confirmed the initial selection of health issues for surveillance and the priority attached to these issues. In particular, focus group participants revealed concerns about long-term mental health issues (especially depression, PTSD and alcohol abuse), medically unexplained symptoms (especially irritable bowel-like symptoms), and the long-term effects of dust on the respiratory system.

63. Health concerns in theatre were also mostly consistent with the literature and those identified in ADF Hazard Assessment Team reports. These included viral conditions associated with living in dense accommodation (e.g. diarrhoea and respiratory infections), as well as combat and non-combat related injuries, in particular musculoskeletal injuries. Importantly, the latter was often attributed to the weight of issued body armour and some individuals reported either not wearing assigned armour as directed, or alternatively, purchasing their own lighter weight armour from local (non-ADF) sources.

64. The assessment of health hazards (including psychological stressors and physical hazards) has always been a priority of the DHSP[3], more so than in comparable international studies (e.g. Millennium Cohort Study, King‟s College Gulf War Research group). The investigators initially based decisions on the inclusion of exposures on reports by ADF Hazards Assessment Teams, hazards assessed in the NNAI studies, hazards assessed in the 1990/91 Australian Gulf War Veterans Health Study, and hazards assessed in international studies from the King‟s College group, Millennium Cohort group and the Deployment Risk and Resilience Inventory. The focus groups revealed that the exposures assessed in these studies are not directly equivalent to the Australian experience of exposure to health hazards in the MEAO. For example, refinement to the questionnaire was made in the area of roles and responsibilities in the MEAO and we have been able to better tailor the questionnaire to the specific experiences of the Australian deployed cohorts.

65. The focus groups were also able to clarify the relative priority that should be placed on the assessment of various exposures. For example, the focus groups clarified which hazards were context, location, time or role dependent. One example is the risk (psychological and physical) from indirect fire. Indirect fire has persisted throughout the campaign and is a common exposure to personnel located in both Iraq and Afghanistan, but not supporting areas outside of these countries (e.g. .2, .4). The fear associated with indirect fire was significant and negatively affected some individuals; however, this fear tended to diminish over the length of the deployment and focus group participants reported becoming blasé to the threat by the end of the deployment.

66. Stress associated with separation and re-integration with family and re-establishing relationships on return to deployment was a more significant area of concern than initially envisaged by the research team. Similarly, the impact of organisational factors was of higher

priority to MEAO veterans than originally anticipated and consequently the assessment of these factors was enhanced.

67. The hard copy questionnaire was then pre-tested using an approach similar to one mode of response that will be used in the main surveillance program, that is, self-report. It is important to pre-test in this fashion to ensure that participants understand the questions, are provided with suitable response options and that they are able to navigate skip patterns. It will be important to „process pilot" test the questionnaire in each mode that it is to be delivered (i.e. web-based and hard copy), but the current testing has enabled issues of language, content and flow to be refined.

Future Directions

68. This preliminary study report describes activities undertaken as part of development that are best described as "pre-testing" of the survey instrument. Pre-testing is distinct from pilot testing, which involves testing all the procedures and materials involved in data collection. Pilot testing of the full MEAO protocol is scheduled for the first half of 2010.

69. The focus groups were wide ranging and provide opportunities for more detailed analysis of content. At a later date, the audio files obtained from focus groups will be transcribed verbatim. The transcript will be prepared such that future analysis may be facilitated by the use of the qualitative data management program NVivo 8 (QSR International). This information can then be accessed by researchers according to standard protocols for requesting access to DHSP data.

70. One example that has already been identified for further investigation is the provision of support to families of deployed personnel, which was an issue of special concern highlighted during the focus group discussions. A brief report on these issues was provided to the Defence Community Organisation (31 July 2009) to facilitate a review of their policies in relation to activities with families of deployed personnel (Annex 7). Further thematic analysis of the focus group discussions will explore this and other issues in greater depth, leading to the submission of manuscripts to peer reviewed general, military and veterans" health journals.

Conclusion

71. Pre-testing is an important activity in the development of survey instruments. The three pre-testing strategies utilised in the MEAO Preliminary Study have provided important consumer input to the content and language of the survey tools. Combining pre-testing techniques in this fashion provided a more comprehensive design then undertaking just one of these activities. Similarly, pre-testing of the survey tools at this stage, rather than the whole study protocol, meant that content, structure and flow issues could be investigated more thoroughly and these problems fixed prior to pilot testing of study procedures.

72. The outcomes of the preliminary study engender confidence that the MEAO Health Study survey has strong face validity (i.e. measures what is important to stakeholders and consumers to measure) and will produce data that can be analysed confidently to answer the MEAO Health Study research questions.

Annexes

Annex 1 – Interview Guide

Annex 2 – Identification and Mapping of Major Stresses

Annex 3 – Identification and Mapping of Health Threats

Annex 4 – Identification and Mapping of Health Concerns on Deployment

Annex 5 – Identification and Mapping of Current and Long Term Health Concerns

Annex 6 – Final Print Ready Questionnaire

Annex 7 – Information provided to Defence Community Organisations about MEAO veterans concerns about deployment

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Dear Dr Treloar

Protocol 488/07 - Defence Deployed Middle East Area of Operations Health Study

ADHREC has considered your protocol modifications and has cleared your project to proceed. Please note that ethical clearance from ADHREC does not automatically confer access to Australian Defence Force (ADF) personnel; this will have to be sought from the relevant military commanders. Similarly, ADHREC approval is not to be interpreted as endorsement by the wider Defence organisation.

Although ADHREC has approved your study there was some concern at the standard of the submission, as it noted the lack of attention to detail. . This is an important study, and yet it has inconsistencies throughout. ADHREC expects that the appropriate level of staffing be applied to future applications.

Your protocol has been allocated **ADHREC Protocol Number 488/07** and this number should be quoted in all correspondence. Your protocol has been approved for a period of three years. If your research is to continue over the three year approval time, ADHREC approval for an extension is to be sought in writing.

ADHREC requires you to provide six-monthly progress reports. **The first report is due on 30 October 2009. As part of your report would you please include:**

A narrative describing the progress to date;

Any events of significance occurring in the conduct of the protocol, in particular any adverse outcomes;

Outcome in the case of completed research;

Maintenance and security of your records;

Compliance with the approved protocol;

Any amendments or modifications to the protocol; and

Compliance with any other special conditions that ADHREC may have required.

If your protocol requires any modification, ADHREC approval must be sought in writing, detailing all modifications required.

For Clinical trials, ADHREC is to be notified in writing of all Serious Adverse Events (SAE) within 72 hours of the event occurring.

For completeness, would you please sign and initial the enclosed **Researcher's Agreement** and return it to me at your convenience.

I have also attached ADHREC's *Guidelines for Volunteers*, a copy of which is to be given to each study participant.

The Committee wishes you well with your research. Please contact me if I can be of any assistance.

Yours sincerely,

Lieutenant Colonel Rosemary A. Landy
Executive Secretary
Australian Defence Human Research Ethics Committee
CP2-6-105
Campbell Park Offices
CANBERRA ACT 2600

Tel (02) 62663837
Fax (02) 62663881
E-mail: ADHREC@defence.gov.au

28 April 2009

Attachment:
A. ADHREC *Researchers Agreement*
B. ADHREC *Guidelines for Volunteers*

Australian Government
Australian Institute of Health and Welfare

Better information and statistics for better health and wellbeing

15 January 2010

Professor Alexander McFarlane
Head UA Node
Centre for Military and Veterans' Health
University of Adelaide
Level 2/122 Frome Road
ADELAIDE SA 5001

Dear Professor McFarlane

RE: EC 2009/3/30 – Middle East Area of Operations Health Study

Thank you for your letter of 23 November 2009 in which you provided the following additional information:

1. Copy of the ethics approval from the University of Adelaide.
2. Copy of the ethics approval from the University of Queensland Medical Research Ethics Committee for the preliminary study.

You also clarified the issues raised by the AIHW Ethics Committee around publication of the results of the research.

Based on the information provided, the Committee is happy to approve your application in which you were seeking approval to link 25,000 records with the National Death Index, held by the AIHW, subject to receipt of a copy of the ethics approval from the University of Queensland ethics committee for the second phase of the project.

Enclosed is a copy of the certificate for your records.

Yours sincerely

Dr Ching Choi
Chair
Australian Institute of Health and Welfare Ethics Committee

Australian Government
Australian Institute of Health and Welfare

Better information and statistics for better health and wellbeing

Professor Alexander McFarlane
Head UA Node
Centre for Military and Veterans' Health
University of Adelaide
Level 2/122 Frome Road
ADELAIDE SA 5001

Title of Activity: **Middle East Area of Operations Health Study**

Date of Meeting: **23 December 2009 (out of session)**

Ethics Committee Register Number: **EC 2009/3/30**

The Australian Institute of Health and Welfare Ethics Committee have considered your ethics application and is of the opinion that this written submission held in the Committee's records (09/309), for the purposes of linking 25,000 records with the National Death Index, held by the AIHW, to obtain fact of death, at this date is acceptable on ethical grounds, subject to the following conditions:

(a) receipt of a copy of the ethics approval from the University of Queensland Medical Research Ethics Committee for the second phase of the project.

This Ethics Committee approval is valid until 31 December 2013.

The Committee will undertake an annual monitoring of your project until the project has been completed. The Committee needs to be informed of any proposed changes in the conduct of your project and of any adverse effects or unexpected ethical issues which arise so that the Committee can fulfil its function of informing the Institute of whether the activity continues to be acceptable on ethical grounds.

The AIHW requests that assistance provided be recognised in all publications and reports resulting from this submission.

You should now contact Ms Barbara Chan by email (barbara.chan@aihw.gov.au) or by telephone (02) 6249 5078 who can give you instructions on how to submit your dataset for linkage.

The cost of your project will be charged on a cost recovery basis. Once your dataset is received, a quote will be sent to you and further work on your project will not be undertaken until the quote is approved. If your project requires substantial data cleaning, an additional fee will apply.

Projects are generally completed within 5 weeks from the quote being accepted, but the exact length of time it will take to complete your project will depend on the length of the record linkage queue at the time and the complexity of the project.

If you have any queries, please do not hesitate to contact the secretariat on (02) 6244 1123.

Signed .....

(Dr Ching Choi) Chair
Australian Institute of Health and Welfare
Ethics Committee

Australian Government
Department of Veterans' Affairs

Reference: E008/025
Contact: Ms Sue-Ellen Keir
Telephone: (02) 6289 6204
Facsimile: (02) 6289 6173
E-mail: ethics.committee@dva.com.au

Professor GPCAPT Alexander McFarlane
Centre for Military and Veterans' Health
Level 2/122 Frome Road
ADELAIDE SA 5001

Dear Professor GPCAPT McFarlane

Defence Deployed Middle East Area of Operations Health Study - Study 1 (Prospective)

Thank you for submitting the above proposal for consideration by the DVA Human Research Ethics Committee (HREC). The Committee considered the proposal at its meeting on 6 June 2008 and agreed that it meets the requirements of the *National Statement on Ethical Conduct in Research Involving Humans*.

The Committee recognises that this is an important area of research and **approved** the proposal as submitted.

DVA HREC approval does not of itself guarantee access to any DVA information requested. Such access is a matter for the appropriate section of DVA, and the Researcher remains responsible for negotiating directly with the section owning the data about the requirements for release.

As a requirement of monitoring, the Committee will seek six-monthly reports on the project until it has received a final report specifying the outcome of the research, or advice that the project has been suspended or abandoned. Any variation to the agreed protocol or conditions of approval will require separate Ethics Committee consideration.

The Committee looks forward to receiving your progress report by **6 December 2008.**

The report should contain a brief statement on each of the following:

- progress to date;
- any events of significance that have occurred during the study, particularly in relation to adverse outcomes;
- maintenance and security of records;
- compliance with the approved proposal and protocol; and
- compliance with any conditions of approval.

Reports can be made by mail, email or facsimile. Please quote reference number **E008/025.**

The Committee reserves the right to seek further information which may affect the continuation of its approval.

If you would like to discuss this matter further, please contact Ms Sue-Ellen Keir in the first instance on (02) 6289 6204 or via the Committee's e-mail address (ethics.committee@dva.gov.au).

Yours sincerely

Sue-Ellen Keir
Secretariat DVA Human Research Ethics Committee

19 June 2008

THE UNIVERSITY
OF ADELAIDE
AUSTRALIA

RESEARCH BRANCH
RESEARCH ETHICS AND COMPLIANCE UNIT

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CRICOS Provider Number 00123M

5 February 2009

Professor AC McFarlane
Centre for Military and Veterans' Health

Dear Professor McFarlane

PROJECT NO: *Defence deployed Middle East area of operations health study - preliminary study*
H-063-2008

I write to advise you that the Human Research Ethics Committee has approved the above project. Please refer to the enclosed endorsement sheet for further details and conditions that may be applicable to this approval.

Approval is current for one year. The expiry date for this project is: 28 February 2010

Where possible, participants taking part in the study should be given a copy of the Information Sheet and the signed Consent Form to retain.

Please note that any changes to the project which might affect its continued ethical acceptability will invalidate the project's approval. In such cases an amended protocol must be submitted to the Committee for further approval. It is a condition of approval that you immediately report anything which might warrant review of ethical approval including (a) serious or unexpected adverse effects on participants (b) proposed changes in the protocol; and (c) unforeseen events that might affect continued ethical acceptability of the project. It is also a condition of approval that you inform the Committee, giving reasons, if the project is discontinued before the expected date of completion.

A reporting form is available from the Committee's website. This may be used to renew ethical approval or report on project status including completion.

Yours sincerely

S. Schreiber

p/p Professor Garrett Cullity
Convenor
Human Research Ethics Committee

THE UNIVERSITY OF QUEENSLAND
Institutional Approval Form For Experiments On Humans Including Behavioural Research

Chief Investigator:	Professor Alexander McFarlane, Professor Annette Dobson, Associate Professor Susan Treloar, Professor Philip Ryan
Project Title:	Defence Deployed Middle East Area Of Operations Health Study - Preliminary Study
Supervisor:	None
Co-Investigator(s):	Professor Malcolm Sim, Dr Keith Horsley, Professor Cate D'Este, Dr Christopher Barton, LTCOL/Dr Stephanie Hodson, Professor John Spencer, Professor Justin Beilby
Department(s):	Centre for Military and Veterans' Health, University of Queensland and University of Adelaide
Project Number:	2008001705
Granting Agency/Degree:	Department of Defence
Duration:	31st December 2013

Comments:

Name of responsible Committee:-
Medical Research Ethics Committee
This project complies with the provisions contained in the *National Statement on Ethical Conduct in Human Research* and complies with the regulations governing experimentation on humans.

Name of Ethics Committee representative:-
Dr Dennis Taaffe
Deputy Chairperson
Medical Research Ethics Committee

Date: 4/2/09 Signature: D Taaffe

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THE UNIVERSITY OF QUEENSLAND
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