



Australian farmers - a high risk population for rural health

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Background – health and injury in farmers

- Higher rates of on-farm injury and road traffic accidents amongst farmers well known through research (eg. using NCIS & hospital separations data)
- Information on non-injury related health status and main causes of death to Australian farmers as a sub-set of the rural population is less well known.
- Literature suggests some health problems may be greater amongst farmers relating to:
 - Cardiovascular disease - including acute M/I
 - Some cancers – prostate, colo-rectal, melanoma, lymphopoietic and haematopoietic cancers
 - Mental stress and suicide (not necessarily mental illness)

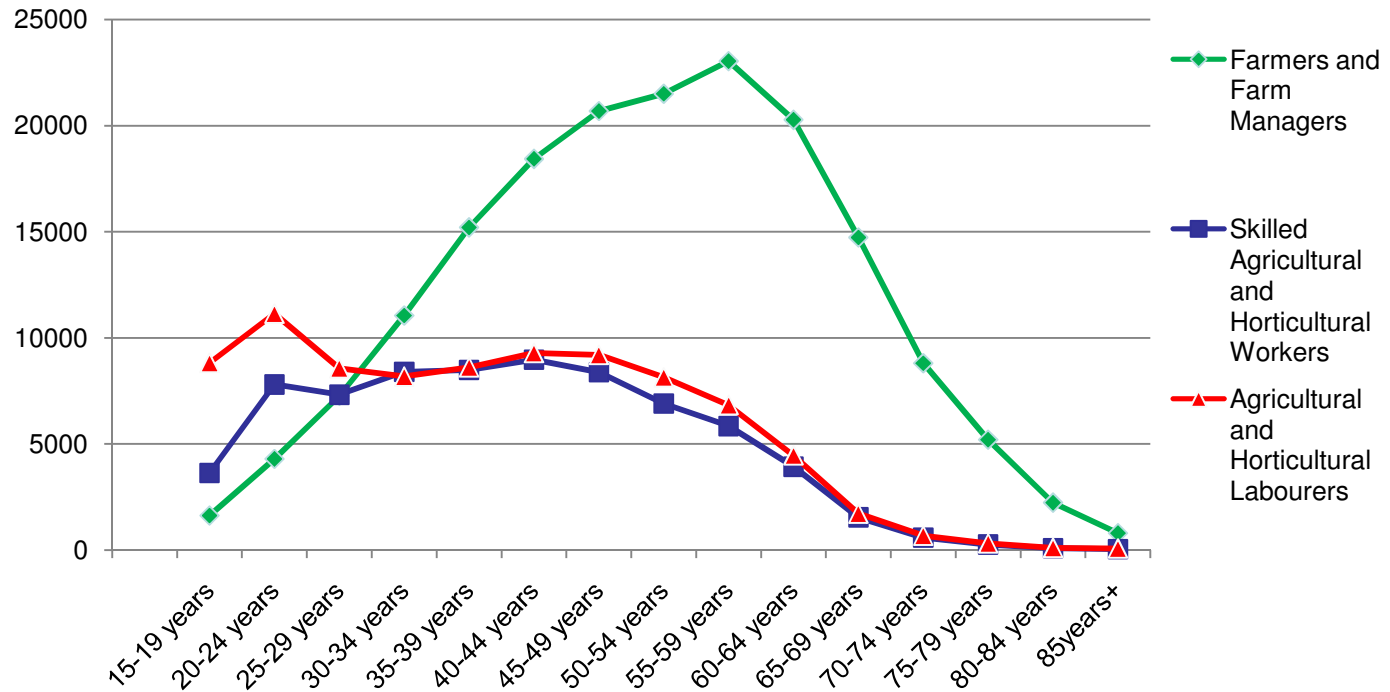


Background – likely contributors

- Poorer access to / availability of primary health services
- Environmental factors - machinery, livestock, sun, noise, zoonoses , distances travelled on unsealed roads
- Physical and social isolation
- Lifestyle factors (ie. as rural Australians) ...
 - higher rates of alcohol consumption, smoking, obesity in rural Australians
 - lower levels of exercise, seatbelt wearing, helmet usage and health care service utilisation.
- Ongoing drought, changing rural economy and declining terms of trade – increased levels of mental stress
- Farmers are getting older - % over 55 years rose from 38% in 2001 to 43% in 2006



Age of Australian Farmers



- ABS 2006 census – 175,000 Farmers & farm managers are getting older & work beyond retirement age
- Most farms are small businesses - farmer works alone. Beef & sheep producers are older than dairy, grain, hort producers



Aim and methods

- To compare the death rates from major causes for Australian male farmers and farm managers, compared to other Australian males – as one indicator of health status (amongst others)
- Age -standardised death rates of male farmers and farm managers were calculated and compared to the general Australian male population using:
 - ABS Deaths data 1999-2002, using occupation code '1400' (ASCO 1)
 - 2001 Australian population census data , using occupation code '1300' (ASCO 2)
- Results focus on male farmers and farm managers aged 25-74 years, for which occupation codes were deemed more reliable



Results – overview

- Male farmers and farm managers 25-74 yrs had a significant 33% higher overall death rate due to all causes compared to the Australian male population of the same age

Number of deaths and death rates (all causes), for male farmers /farm managers 25-74 years, by state (1999-2002)

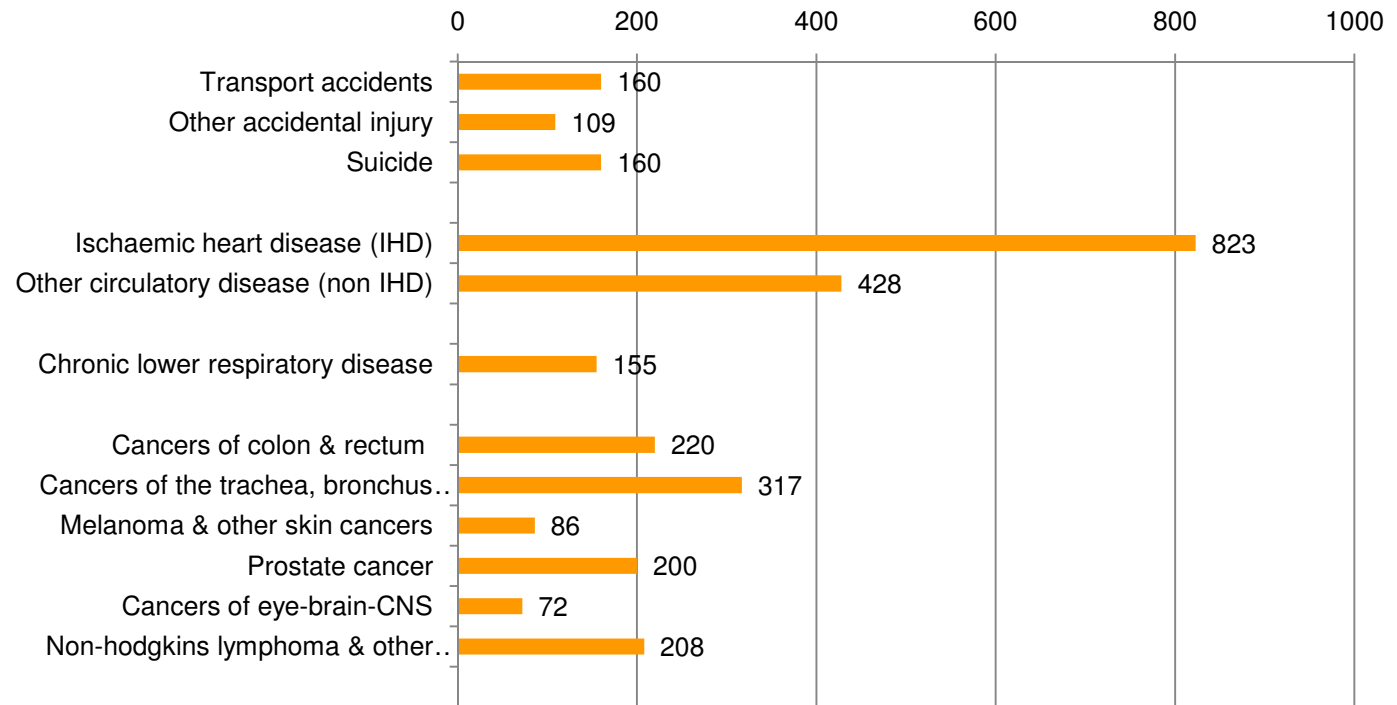
State	No. of deaths - farmers / farm managers	DSDR / 100,000	Rate relative to all Australian farmers	*Statistically significant
NSW	1520	888	1.2	*higher
Vic	1360	1015	1.4	*higher
Qld	453	374	0.5	*lower
SA	199	350	0.5	*lower
WA	388	712	1.0	
Tas	93	609	0.8	
NT	6	252	0.3	Low numbers
ACT	6	722	1.0	Low numbers
Australia	4025	730	1.0	
All Aust males	120311	549		



Results -

- Cancers were the main cause of death for farmers 25-74 yrs by category, with 1633 deaths, followed by 1251 deaths from cardiovascular disease and 433 injury deaths

Number of deaths by major causes (ABS), male farmers and farm managers aged 25-74 years , for the period 1999-2002 (n= 4025)





Results -

- Compared to the general Australian male population , death rates for male farmers and farm managers 25-74 yrs from 1999-2002 were higher for:
 - cardiovascular disease (40.8% higher) **
 - prostate cancer (136.7% higher)**
 - haemopoietic and lymphatic systems (79.5% higher) **
 - skin cancer (58.7% higher)
 - cancers of the colon and rectum (38.5% higher)
- Reasons for these higher rates were not within the scope of this project, but may include higher risk factors, delays in initial consultation and diagnosis; and difficulties accessing treatment services. These need to be further investigated.

** Statistically significant (95% CI)



Results - injury

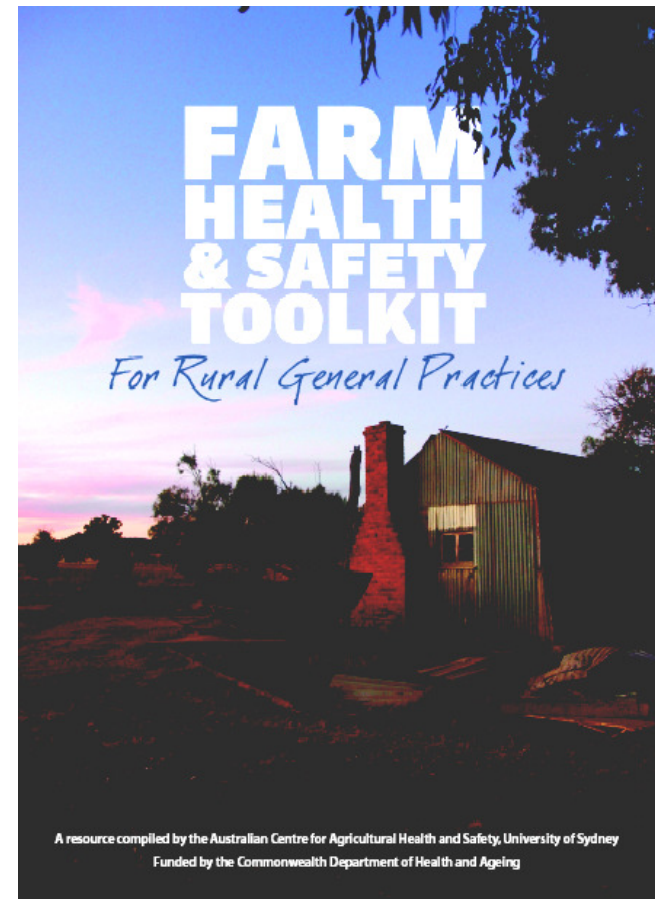
- For male farmers and farm managers 25-74 yrs 199-2002, death rates were higher for all categories of injury:
 - Road transport accidents were higher by 209.3%**
 - Other non-intentional injury by 19.5%
 - Intentional injury (suicide) by 20.5%
- Suicide (intentional injury) is a greater concern amongst older farmers. Male farmers / farm managers 65-74 yrs had more than double the rate of suicide of Australian males of the same age (and higher again for 75yrs+)
- (Other studies by ACAHS have shown young farm workers are also at higher risk of suicide).

** Statistically significant (95% CI)



Resource development -

- This research on major causes of death for farmers has been incorporated (along with other research) into a health promotion resource entitled: *The Farm Health and Safety Toolkit for Rural General Practices*
- The GP *Toolkit* aims to help rural General Practitioners and others (especially those new to a rural area), better understand key health and injury issues affecting farmers





Farm Health and Safety Toolkit

The *GP Toolkit* includes :

- A farmer's check-up checklist (memo) for GP's that summarises farmers relative risk associated with a range of disease and injury categories.
- A summary booklet for rural health professionals on farmers' health and safety
- Take home resources for farmers
- Clinic posters to promote farmer's health and safety
- A complimentary *Preventing falls for older farmers* resource

THE FARMER HEALTH CHECK-UP CHECKLIST FOR GENERAL PRACTITIONERS
SPECIFIC HEALTH RISKS*

<p>RISK OF LIFE-THREATENING INJURY ON FARMS AND ROADS</p> <p><input type="checkbox"/> Check medications, neurology and mobility</p>	<ul style="list-style-type: none"> • Double the rate of transport accident deaths amongst male farmers and farm managers¹ • Very high rates of on-farm injury and death in male farmers and farm workers^{2,3}
<p>RISK OF SUICIDE</p> <p><input type="checkbox"/> Early assessment of mental health symptoms and effective suicide risk management, including access to means of suicide</p>	<ul style="list-style-type: none"> • Risk of suicide in male farmers and managers increases with age. More than double the Australian male suicide rate for those 65 yrs+⁴ • High rates of suicide in young male farm workers^{5,6}
<p>RISK OF EARLY DEATH FROM CARDIOVASCULAR DISEASE</p> <p><input type="checkbox"/> Early cardiovascular health monitoring</p>	<ul style="list-style-type: none"> • 40% higher rate of death from cardiovascular disease for male farmers and farm managers⁷
<p>RISK OF LIFE-THREATENING SKIN CANCER</p> <p><input type="checkbox"/> Regular skin checks, early investigation of lesions</p>	<ul style="list-style-type: none"> • 60% higher death rate due to melanoma and other malignant skin cancers, male farmers/ managers⁸ • Skin cancer deaths in older farmers more than double the rate of other Australians (65yrs & over)⁹
<p>RISK OF PROSTATE CANCER DEATH</p> <p><input type="checkbox"/> Prostate pathology history and screening</p>	<ul style="list-style-type: none"> • More than double the risk of death from prostate cancer in male farmers and farm managers⁸
<p>RISK OF DEATH FROM CANCERS OF THE COLON AND RECTUM</p> <p><input type="checkbox"/> Bowel health history and early assessment of symptoms</p>	<ul style="list-style-type: none"> • 40% higher rate of deaths from cancer of colon and rectum, male farmers and farm managers¹
<p>RISK OF LYMPHATIC/HAEMOPOIETIC CANCER DEATH</p> <p><input type="checkbox"/> Early assessment of symptoms, blood monitoring</p>	<ul style="list-style-type: none"> • Almost double the death rate due to cancers of haemopoietic and lymphatic systems¹
<p>RISK OF HEALTH EFFECTS OF ORGANIC DUSTS</p> <p><input type="checkbox"/> Ask farmers with asthma about dust exposure</p>	<ul style="list-style-type: none"> • Exposure to grain and animal dusts can trigger serious asthma episodes in affected farm workers⁶
<p>RISK OF ZOOONIC DISEASE AND ARBOVIRUSES</p> <p><input type="checkbox"/> Consider zoonoses in case of febrile illness</p>	<ul style="list-style-type: none"> • Exposure to farm animals is a risk factor for Q-fever, leptospirosis, cryptosporidiosis, Ross River Fever and other zoonotic diseases⁶
<p>RISK OF HEARING LOSS</p> <p><input type="checkbox"/> Consider hearing difficulties and noise exposure as indicators for a full hearing assessment</p>	<ul style="list-style-type: none"> • Around two-thirds of farmers have a measurable hearing loss and around 50% have tinnitus⁷ • Hearing loss commences in youth exposed to farm noise, including firearms⁷

*85 Higher death rates expressed as percentages or double refers to working age male farmers and farm managers aged 25-74 years, unless otherwise specified. Occupational coding via ABS Death Data is likely to be more reliable for this group compared to farm workers, older and younger age groups. © Australian Centre for Agricultural Health and Safety 2009

1. Cappuccinelli J, Pegg G (in preparation) Causes of deaths of Australian male farmers and farm managers 1999-2002.
2. Pollock, P, Page L, Morton C. Reported deaths in Australian agriculture - the Farm Safety Research and Development Corporation 2007.
3. Page AL, Page L, Laidlaw in Australian Farming, 1980-1997. *ARC J Psychol* 2002;30.
4. Page L, Henderson A, Morton C, and Pollock C. The mental health of people on Australian farms - The Facts. RIRDC & ACARS Report 2007.
5. Page L, Frank B, Gray L, Petruschak V. The health of Australian farm populations - a report. In *Rural Public Health in Australia 1997* - proceedings of the National Rural Public Health Forum.
6. Page L & Frank B. The health and safety of Australian farming communities. RIRDC & ACARS 2000.
7. Petruschak V. Noise exposure assessment strategy for the Australian farming community. ACARS & FSA 2002.

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Farm Health and Safety Toolkit

The *Farm Health and Safety Toolkit for Rural General Practices* is available on-line at www.aghealth.org.au.

Hard-copies are also available on request from:

The Australian Centre for Agricultural Health and Safety

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