

# Evidence on the effectiveness of health screening at the 2009 Ag-Quip Agricultural Field Days

**Australian Centre for Agricultural Health and Safety,  
School of Public Health, University of Sydney, Moree<sup>1</sup>**

**Hunter New England Health Service<sup>2</sup>**

**Barwon Division of General Practice<sup>3</sup>**

**Julie Depczynski<sup>1</sup>, Lyn Fragar<sup>1</sup>, Lyn  
Boylan<sup>2</sup>, Fiona Strang<sup>3</sup>**



THE UNIVERSITY OF  
**SYDNEY**



**Australian Centre for Agricultural Health & Safety**

# Ag-Quip Agricultural Field Days - Rural Health Checkpoint

The 2009 *Ag-Quip Rural Health Checkpoint* was a health promotion and screening program held at the annual Ag-Quip Field Days event in north-western NSW

The health screening component:

- a co-joint initiative of ACAHS, HNEAHS and Barwon Division of GP.
- aimed to provide farmers and others with information to help them reduce personal health risks.



# Ag-Quip Agricultural Field Days - Rural Health Checkpoint

The research component involved a formal evaluation study of the health screening program to determine:

- health risks and lifestyle factors impacting upon the health of farmers and other rural people
- whether participants found the program helpful for reducing health risks
- whether participants had taken recommended health actions provided through the program
- the benefits and costs of the program to the organisations conducting it.



# Ag-Quip Agricultural Field Days - Rural Health Checkpoint

## The health screening program:

Participants asked /simple measurements on

- › Medical history
- › Lifestyle factors - smoking, nutrition, alcohol use and physical activity
- › Heart health
- › Risk of diabetes
- › Skin and bowel cancer awareness / skin check
- › Falls risk (over 55's only)
- › Hearing status (farmers only)
- › Emotional well-being and stress management

A '*Check-list*' sheet completed and recommendations for reducing health risks



## Evaluation component

A follow-up evaluation survey asked simple questions about whether:

- › a health consultation was sought since Ag-Quip
- › the participant commenced any of the health actions recommended at Ag-Quip
- › the level of satisfaction with the health screening program.
- › Survey mailed in mid-November 2009, mid-December 2009 and again in mid-February for not respondents



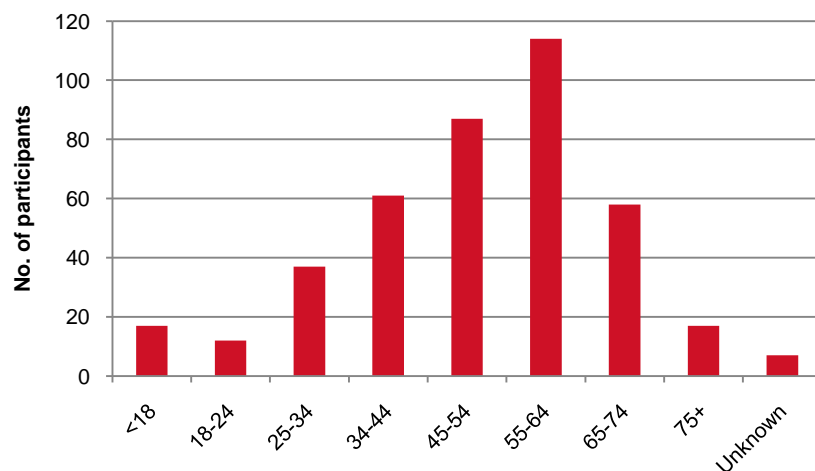




# Sample characteristics

	Ag-Quip Participants (n=410)		Evaluation survey (n=244) (59.5%)	
	Men	Women	Men	Women
n , %	262 (63.9%)	146 (35.6%)	135 (61.4%)	85 (38.6%)
Average age (yrs)	50.9	50.4	54.2	53
Farmers	157 (59.9%)	73 (50.0%)	93 (68.9%)	46 (54.1%)

Age group of participants,  
2009 Ag-Quip Rural Health Checkpoint (n=410)



*A significantly higher proportion of farmers responded to the evaluation survey than non-farmers*

## Medical history

- › 35.5% of men and 34.5% of women had a pre-existing condition
- › 79.3% had seen a GP in the last 12 months before Ag-Quip
- › 41.9% of participants were already on medications

## GP Referral and advice patterns:

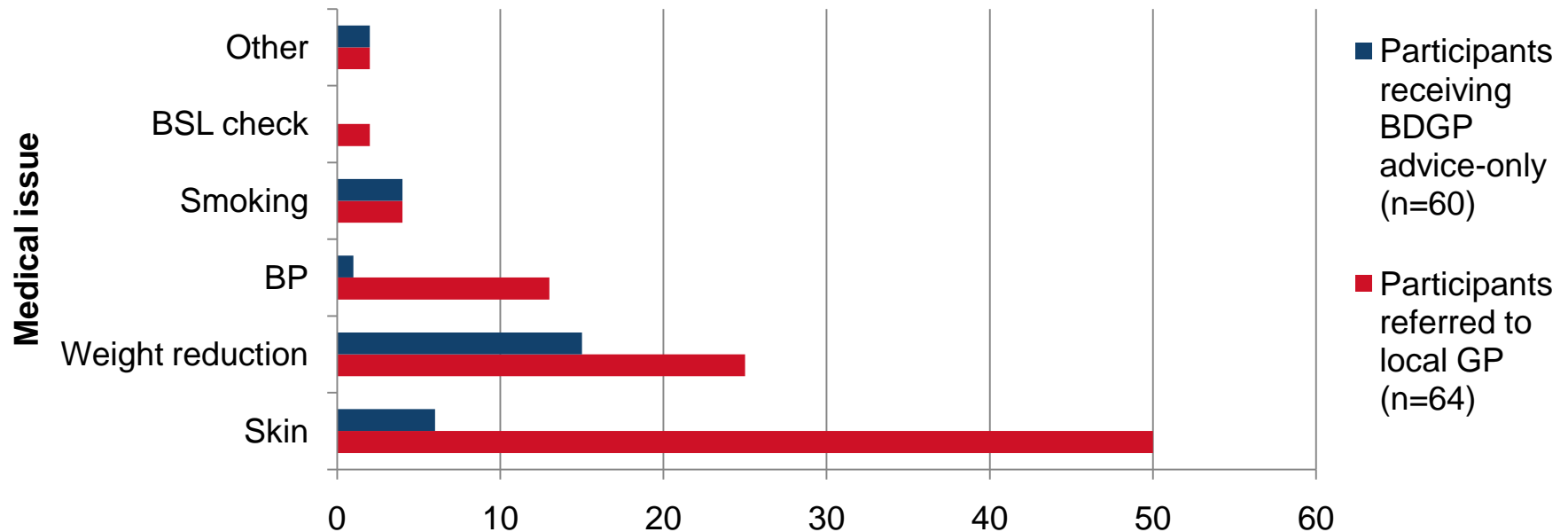
137 participants were recommended to have a GP exam (33.3%)

124 participants had a GP examination form completed (30.2% of all).

One half of these were referred to local GP - mainly for skin treatment (78.1%), followed by weight loss (39.1%) and BP



## Medical issue highlighted by BDGP

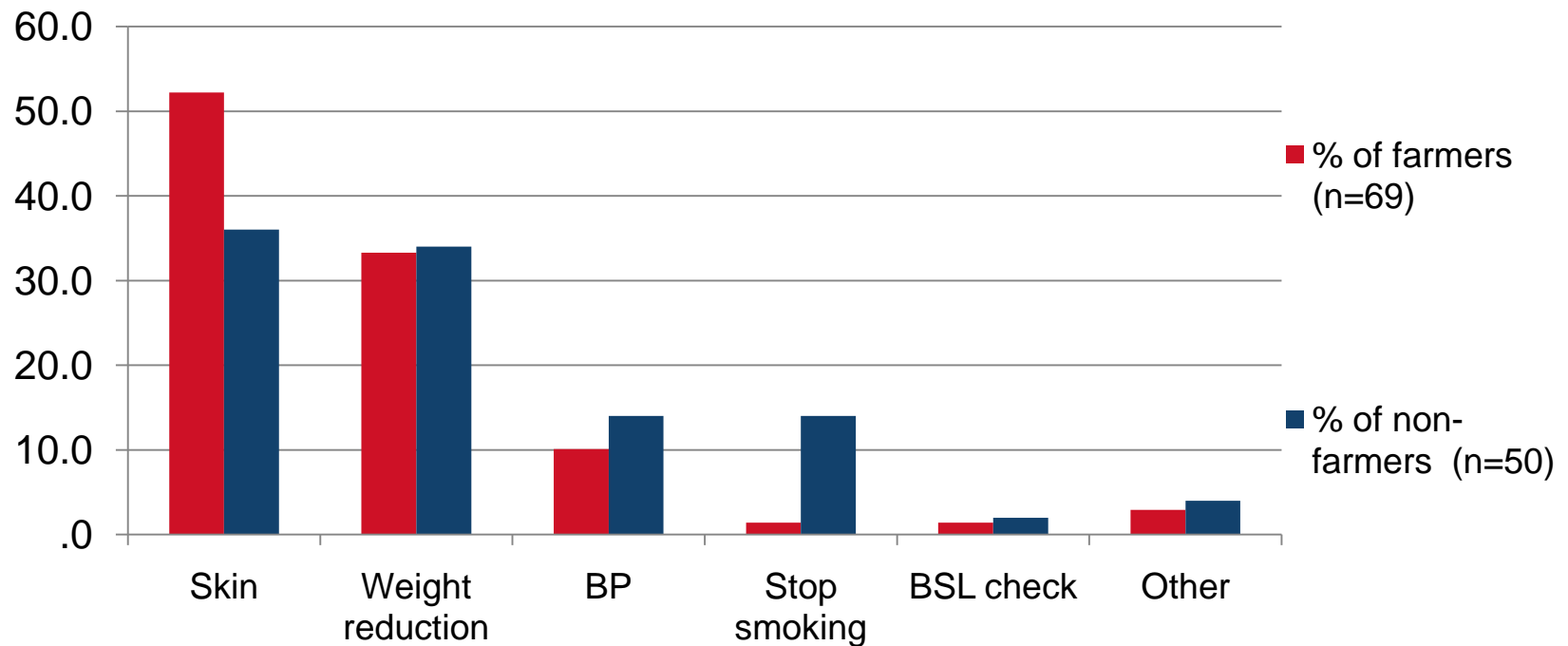


Number of participants with specified medical issue  
(\*NB. Categories not exclusive. Some participants had multiple issues)





Percentage of farmers and non-farmers referred to local GP by on-site GP, with specific health issue highlighted (n=119)



# Pre-existing medical issues and referrals

*\* NO significant differences in medical history / conditions of farmers & non-farmers*

- › There was no statistical difference between farmers and non-farmers for :
  - pre-existing Diabetes, Arthritis, Asthma, \*Heart disease, Other
  - % who had seen a GP in past 12 months
  - % who were on medications
  - proportions who had an on-site GP examination (around one third for both men and women, farmers & non-farmers).
  - % referred to their local GP by the on-site GP. (57.1% of farm men compared to 54.5% of non-farm men )



## FALLS

- › Two-thirds of falls station participants (over 55) had a falls risk score that met the standard

## EMOTIONS /STRESS

- › Less than a half (44.7%) were managing stress OK (but low numbers)

## SMOKING

- › 92.5% of farmers were non-smokers, compared to 83.7% of non-farmers - **a sig dif for men ( $\chi^2=5.04$   $df=1$   $p<.05$ )**



## ALCOHOL

- › There was no difference between farmers and non-farmers in proportion who had:
  - "At least 2 alcohol-free drinks/week" (67.9%) , overall or for either gender
  - "2 or less drinks/day (genders combined), although 84.4% of farmers and 61.5% of non-farmers did so.

## DIABETES

- › There was no difference between farmers & non-farmers for:
  - The average RBGL for farm men was 5.7 compared to 6.1 for non-farm men; and 6.1 for farm women compared to 6.2 for non-farm women.
  - › The average AUSD Risk for farm men was 12.7 compared to 12.4 for non-farm men; and 11.8 for farm women compared to 10.4 for non-farm women.
  - › Around 8.2% of men and 14.0% of women had an AUSD Risk <6 . Around a third of women had a RBGL <5.5.
- › However, **significantly more farm men had a RBGL that met the standard (48.6%) than non-farm men (29.9%).** ( $X^2=6.5$  df=1  $p<.05$ )

## HEART HEALTH - averages

- › There were no significant differences between farm & non-farm men or women for mean waist size, BMI, BP
- › The average waist size for farm men was 103.7 cm compared to 102.9 cm for non-farm men, 91.9 for farm women vs. 93.0 for non-farm women
- › The average BMI for farm men was 28.6 compared to 28.2 for non-farm men - 26.6 for farm women compared to 27.2 for non-farm women
- › The average BP for farm men was 137/80 compared to 140/84 for non-farm men



## HEART HEALTH – % IN STANDARD CATEGORIES

- › For women, there were no significant differences in the proportions of farmers and non-farmers meeting standard cardiovascular risk standards.
  - › For men, the only indicators with significant differences in % between farmers and non-farmers, was for blood pressure (more farmers had normal BP than non-farmers)
    - Around 20.3% of men & 15.2% of women met the standard waist measurement.
    - Around 20.8% of men & 32.6% of women met the BMI standard of <25.
    - Around 32.4% of farm men & 35.7% of farm women met the moderate exercise standard, compared to 44.7% of non-farm men & 46.3% non-farm women.
    - Farm men appeared more likely to have normal BP (29.8%) compared to non-farm men (15.6% ), **significantly so ( $X^2 = 6.27$  df=1 p<.05)** . There was no real difference in proportions with normal BP between farm (50.0%) and non-farm women (42.2%).
-

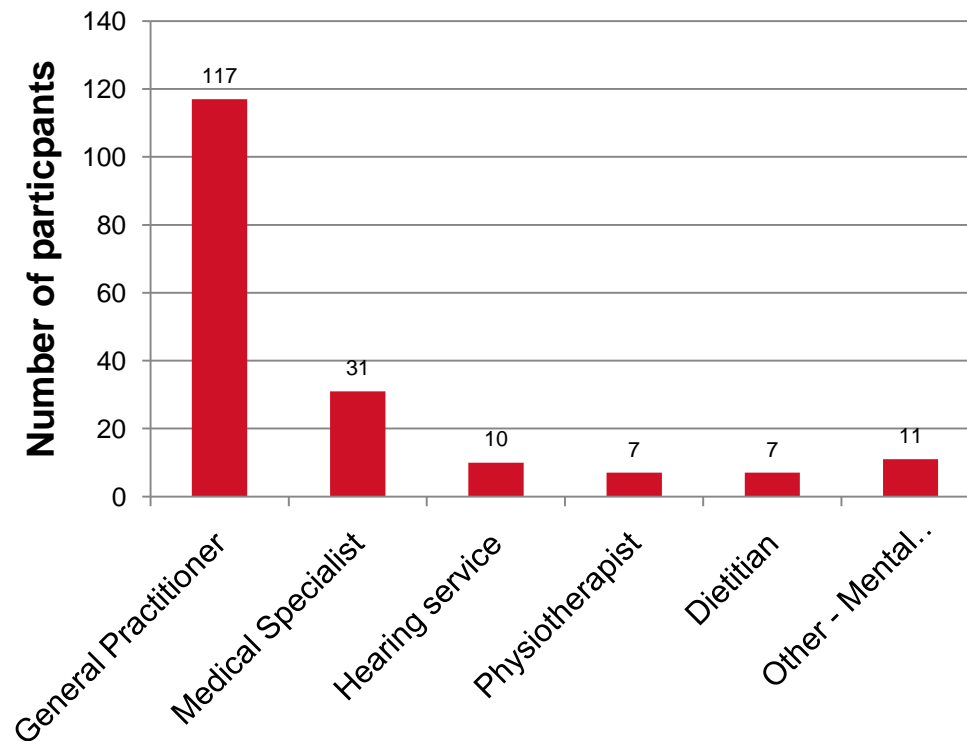


## BOWEL & SKIN CANCER INDICATORS

- › Nine men (27.3%) and 4 women (15.8%) were advised to seek medical advice for bowel cancer - all had seen a GP in the past 12 months & 12 out of 13 were farmers
- › Only around half (52.8%) of farmers met the skin standard, compared to 71.6% of non-farmers. **(Sig Dif  $X^2=6.42$  df= 1  $p=.01$ )**



- › Nearly two-thirds (59.1%) had sought further health professional advice since Ag-Quip. 56.9% had sought a GP for advice, 30.1% had sought a GP plus another health professional, 13.0% sought another health professional (non-GP). No differences between farmers & non-farmers in these.



## Program satisfaction

- › All station-topics performed over 90% for satisfaction with those for whom station/topic was relevant
- › The best performing ‘health topics’ for ‘helpfulness’ and ‘relevance’ were (1) Heart health, followed by (2) Bowel/skin, (3) Hearing and (4) Diabetes.

## Should the program continue?

- › A total of 238 (97.5%) respondents answered YES to the question “*Do you think health promotion programs like this should continue?*”

## Recommending the program to others

- › A total of 237 (97.1%) respondents answered YES to the question “*Would you recommend this program to others?*”



## › Behavioural changes - Falls

- Of respondents over 55, 7.8% of men & 6.9% of women had a fall since Ag-Quip
- Those who attended the falls station were 4 times more likely to commence balance & strength exercises (20.8%) than those who didn't (5.3%), **Sig. ( $\chi^2=5.3$  df=1  $p<.05$ )**

## › Significant difference between farmer & non-farmer follow-up action for falls could not be determined due to small numbers , but ...

- Farmers were twice as likely to have commenced strength and balance exercises (11.7%) than non-farmers (5.1%),
  - Farmers were 2.4 times as likely to have done something around the farm/home to reduce falls (25.0%) than non-farmers (5.1%).
-

## › Smoking & alcohol\*

- Of the 174 who attended the smoking station, 13 identified as smokers, (9.8%). Three had quit smoking since Ag-Quip & another two of the remaining 10 smokers (20.0%) , had sought help to quit smoking.
- 35.4% of men & 44.1% of women had reduced alcohol intake since Ag-Quip.

## › Hearing\*

- Two thirds of male farmers (64.2%) had increased use of PHP and one third of had reduced noise on farm (38.4%)
- › Overall, two-thirds (57.1%) of respondents said involvement in Ag-Quip had influenced their decision to seek further help



## Summary

- › Health indicators suggest an 'unhealthy' rural population attending the Ag-Quip field days
- › A high proportion had pre-existing medical conditions (1/3); were on medications (2/5) ; had seen a GP in the past 12 months (4/5)
- › Skin, weight reduction & BP were the main referral issues
- › Little difference between farmers and non-farmers for most health indicators
- › So far, positive evaluation indicators for follow-up, changes made and satisfaction. Further analysis to be completed on cost-benefit & cardiovascular and cancer prevention behaviours since Ag-Quip

