The most important aspect to a healthy Australian farm?

A healthy farm family
ICOH, Cancun, Mexico March 22, 2012

Special Session SS048
Susan Brumby, Clinical A/Professor and Director
Hamilton, Australia
www.farmerhealth.org.au

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Sustainable Farm Families

• Introduction
• Australian Agriculture
• The Sustainable Farm Families Program
• Results
• Conclusion
• Acknowledgment of the farm families, colleague Dr. Ananda Chandrasekara, the SFF team & Dr. Claudio Colosio

Australia

• 7,686,850 sq.km
• Largest island smallest continent
• Pop. 22.4 million
• Literacy 99%
• Agriculture Production
• Mining- minerals, alumina, gold, coal

Hamilton

7,686,850 sq.km
Largest island smallest continent
Pop. 22.4 million
Literacy 99%
Agriculture Production
Mining- minerals, alumina, gold, coal
Background - hard to reach places

- Population 22.4 million people
- Mostly eastern seaboard and south east corner of continent
- 80% of land is either desert or grassland
- 61% is used for agriculture (Australian Government Department of Agriculture, Fisheries and Forestry, At a Glance, 2010.)
- Gross value of Australian farm production 41.8 billion (farm gate) (Australian Bureau of Statistics, Value of Principal Agricultural Commodities Produced 2008/09)

Australia’s Agricultural Community

- Oldest workforce across Australia and Victoria
- Predominantly family owned and operated (NFF 2012)
- High rates of preventable illnesses, injury, suicides
- Lower computer and internet use vs other businesses
- 2007-08 over 60% exceptional circumstances

Drought and floods

Health Challenges in rural Australia
Chronic disease and farmers
Rural Australians face a risky environment.
Increased:

• Occupational hazards
• Mental health burden
• Adverse climatic conditions
• Socio-economic constraints
• Food insecurity – ↓ access to fresh food
• Alcohol misuse

And reduced access to health services

Why does farmer health matter?

National Impacts:
health, injury and social costs, reduced productivity, environmental, workforce

Health issues of farming families

✓ High demands of job
✓ Aging workforce
✓ Unrealistic attitudes
✓ Diet and alcohol abuse
✓ Limited access health information
✓ Limited knowledge health system
✓ Multipronged stressors

Sustainable Farm Families (SFF) Program
Previous Intervention Studies

- Worksite and community intervention studies targeting cardiovascular disease (CVD) tend to produce small, statistically significant changes (Lupton, Fønnebø & Søgaard, 2000; Schulz et al., 2006; Martinez-González et al., 1998).
- Interventions in agricultural tend to target injury prevention, rather than chronic disease.
- In Australia, and overseas, few interventions in agricultural populations have been published in scientific literature.

Sustainable Farm Families

Addresses health, wellbeing and safety by:

- Identifying and tracking farm families health indicators
- Delivering health and safety training to farmers
- Communicating findings of the project
- Providing information on family health, health as a social issue and farm productivity.

Theoretical Approach

- Ajzen and Fishbein - theory of reasoned action and planned behaviour (Ajzen, 1980)
- Kolb - theory of adult learning (Kolb, 1984)
- Kirkpatrick - evaluation framework (Kirkpatrick, 1984)
- Rogers - work on diffusion of innovation (Rogers, 1998)
- Watts – propagation of a concept through networks

SFF and the triple bottom line

Triple bottom line – financial, environmental, human (social)

Death and illness could be prevented with:-

- improved health behaviours
- better access to health services/information and
- effective collaboration between health, government and primary industry services

Farmers to see good health, wellbeing and safety as good business

SFF Program what does it do?

2003-04 Workshop 1 - Physical assessment and referrals 2-days with focus on rural health, cancer, heart, stress, diet, OHS, gender specific issues and taking action

2004-05 Workshop 2 - Physical assessment and referrals 1-day program with focus on anxiety, depression Gender specific issues to opposite sex. Action planning

2005-06 Workshop 3 - Physical assessment and referrals 1-day program focus on health and business, Diabetes, physical activity and action plan review

2009-10 Workshop 4 - 6 years Physical assessment, data, 1-day program focus on health, business, climate, respiratory and SFF program affecting farming practices

Recruitment and close collaboration with industry partners and health services to optimise delivery of programs
Results and discussion

Mean change clinical parameters base to y2&y3

Statistics for all participants that attended both years

<table>
<thead>
<tr>
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<th>Year 2 Mean</th>
<th>Year 3 Mean</th>
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<tr>
<td>N</td>
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<tr>
<td>Range (SD)</td>
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<tr>
<td>Age (years)</td>
<td>1619</td>
<td>18-79</td>
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<tr>
<td>Weight (kg)</td>
<td>1619</td>
<td>37.0-171.0</td>
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<tr>
<td>BMI (kg/m²)</td>
<td>1619</td>
<td>14.8-59.3</td>
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<tr>
<td>Fasting blood glucose (mmol/L)</td>
<td>1617</td>
<td>3.6-10.0</td>
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<tr>
<td>Fasting blood Cholesterol (mmol/L)</td>
<td>1616</td>
<td>3.5-8.5</td>
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<tr>
<td>Systolic blood pressure (mmHg)</td>
<td>1619</td>
<td>60-210</td>
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<tr>
<td>Diastolic blood pressure (mmHg)</td>
<td>1619</td>
<td>50-120</td>
</tr>
<tr>
<td>Body Fat %</td>
<td>Male</td>
<td>10.2-46.5</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>10.2-46.5</td>
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<tr>
<td>Waist circumference (cm)</td>
<td>Male</td>
<td>69.0-200.0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>63.0-134.0</td>
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<tr>
<td>Psychological distress (Kessler-10) score</td>
<td>1277</td>
<td>10-38</td>
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Prevalence (%) of cardiovascular risks (age standardised data) compared with Australian national population data

Mean change clinical parameters (at risk)

Statistics for all participants that attended both years that were at risk

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<tr>
<td>Range (SD)</td>
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<tr>
<td>High Body Mass Index (BMI ≥25)</td>
<td>1102</td>
<td>42.0±5.4</td>
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<tr>
<td>High total cholesterol level (TC≥5.5mmol/L)</td>
<td>1102</td>
<td>7.9±1.10</td>
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<td>High glucose (G&lt;9.5mmol/L)</td>
<td>1102</td>
<td>3.3±0.47</td>
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<tr>
<td>High Waist circumference (WC&gt;102cm, women&gt;88cm)</td>
<td>1102</td>
<td>1.65±0.23</td>
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<tr>
<td>Systolic blood pressure (SBP&gt;140mmHg)</td>
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<td>2.4±0.79</td>
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<tr>
<td>Diastolic blood pressure (DBP&gt;90mmHg)</td>
<td>1102</td>
<td>3.3±0.32</td>
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Significance values: *** p≤0.001, ** p≤0.01, * p≤0.05. Based on two-tailed significance tests.
Action Planning Choices y.r.1 (multiple responses) (n = 1792)

Has SFF prompted you to think differently about work on the farm (n=1254)

SFF making a difference

Has SFF made a difference?

- More aware of themselves and family
- Think first myself – family - farm business
- Better understanding of improved health outcomes
- Connection made health, well being, safety, farm business
- Improved health risk factors (Brumby et al 2008)
- Social learning framework important

In conclusion

- Agriculture - the most healthful industry
- Knowledgeable rural health and agricultural professionals
- Farmer Health fundamental to sustainability
- Ill health and injury not normalised
- Work collaboratively - ”keeping farmers, families and workers alive and well in agriculture”

National Centre for Farmer Health Biennial Conference

‘Sowing the Seeds of Farmer Health’

17-19 September 2012
Hamilton, Victoria, Australia

For more details visit:
www.farmerhealth.org.au
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