SENATE COMMUNITY AFFAIRS REFERENCES COMMITTEE

INQUIRY INTO HEARING HEALTH IN AUSTRALIA

Submission No: **33**

Organisation/Individual: **FARMSAFE AUSTRALIA**

Submission to:

Hearing Health in Australia –
Senate Community Affairs Committee

October 2009

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Executive Summary

Farmsafe Australia is the peak national body addressing farm health and safety in Australia. This submission is made on behalf of the reference committee overseeing the implementation of the *Noise Injury Prevention Strategy for the Australian farming community 2009-2012*.

Recommendations

1. Extent, causes and costs of hearing impairment

1.1 Extend audiometric screening to all states and territories as one instrument to assess progress in hearing health in the agriculture sector, with a particular focus on preventative screening and impacts for younger farmers.
1.2 Further assess through audiometric and behavioural assessments the factors that influence hearing health in the range of commodity groups involved in agriculture.
1.3 Thoroughly analyse the economic impact and potential cost-benefit savings from improved adoption of hearing health approaches drawn from the hierarchy of controls.

2. Implications of hearing impairment

2.1 Identify and clarify potential links between hearing impairment, social isolation and mental health issues, with methods for early intervention.
2.2 Define practical and effective steps that may be taken in a farm family business environment to reduce the negative impacts of hearing impairment on familial relationships.
2.3 Clearly determining potential work-based injury hazards that arise due to hearing impairment and identify mechanisms / approaches to limit their impacts in the agricultural sector.
2.4 Rural specific promotion of preventative, support and treatment services in communities to provide clear direction on access options for services.
2.5 National promotion to counter negative perceptions regarding the capability of individuals with a hearing impairment and the substantial services / inputs they can continue to provide to build their communities.

3. Access to hearing services and hearing technologies

3.1 Inclusion of adult hearing assessments and a greater preventive focus in state/ territory health functions, potentially with the capacity for mobile-audiometry at farmer-friendly locations.
3.2 Introduction of preventive, assessment and support services for remote agricultural settings.

3.3 Modification to the inclusion criteria for access to Australian Hearing services, removing the value of the property as an asset.
3.4 Introduction of a national program of audiometric assessment, preventive advice and referral based on the Rural Noise Injury Prevention Program.
3.5 Ensuring all subsidised private providers can meet a set of minimum standards established by the Office of Hearing Service to fit hearing aids.
3.6 Developing a national agriculture specific promotion for Telscreen II.
3.7 Increasing options for purchase of aids / devices by examining potential for consignment to services within rural areas.
3.8 Improving existing hearing loops and extending them in rural communities.

4. Current hearing health and research programs, including education and awareness programs

4.1 Extend the Rural Noise Injury Prevention Program approaches to all states / territories.
4.2 Introduce a nationally based communications strategy to increase the profile of hearing health and specific approaches to prevent noise injury in the agricultural sector.
4.3 Utilize social network analysis or other forms of assessment to clearly define local contexts and to maximize returns on communication approaches
4.4 Emphasize higher order solutions in addition to the appropriate selection and use of hearing protection to reduce noise injury.
4.5 Incorporate financial incentives to stimulate the uptake of higher order noise injury prevention approaches.
4.6 Maintain / extend links with state / territory work health authorities to target the agricultural sector in their hearing related occupational health promotions
4.7 Extend the availability of mobile audiometric services for screening in rural areas.
4.8 Link and build upon inputs to existing rural health initiatives such as those addressing mental health and men's health.

5. Issues affecting Indigenous communities

5.1 Examine the contribution of noise exposure in the agricultural commodity groups that Indigenous Australians work in.
5.2 Develop relevant preventive, support and treatment services to assist employees in collaboration with local Aboriginal Medical Services.
5.3 Implement preventative programs with major Aboriginal owned and operated agricultural enterprises, on hearing health and occupational health and safety more generally. This must be undertaken by locally recognised and approved Aboriginal agencies.

Introduction

Farmsafe Australia welcomes the opportunity to provide a submission to the Senate Community Affairs Committee in relation to the review of Hearing Health in Australia. In making this submission, Farmsafe Australia has focused on the burdens and impacts of noise injury on the agricultural sector in Australia.

This submission is structured according to the Committee's Terms of Reference, specifically:

1. the extent, causes and costs of hearing impairment in Australia;
2. the implications of hearing impairment for individuals and the community;
3. the adequacy of access to hearing services, including assessment and support services, and hearing technologies;
4. the adequacy of current hearing health and research programs, including education and awareness programs; and,
5. specific issues affecting Indigenous communities.

About Farmsafe Australia

Incorporated in 1993, Farmsafe Australia is the peak national body addressing farm health and safety in Australia. It is recognized internationally as a leader in research, information provision and its translation to improve safety policy and practice in agricultural communities.

Farmsafe Australia is a unique partnership of industry and government agencies with a mission to lead and co-ordinate national efforts to enhance the well-being and productivity of Australian agriculture, through improved health and safety awareness and practices. Farmsafe Australia plays a key role in drawing together the experience and multi-disciplinary expertise necessary to form partnerships for a unified and co-ordinated approach to address farm safety issues.

As one of Farmsafe Australia's four priority health goals and targets, it is committed to enacting processes and programs that aim to reduce the incidence and impact of noise injury amongst farmers, farm families and farm-workers involved in agricultural production.[1] Noise injury has been a focus of Farmsafe Australia and its affiliated agencies since 1985. In 2001, Farmsafe Australia convened a reference group of farmer representatives, hearing and Occupational Health and Safety (OHS) professionals, to develop a strategic approach to address noise injury. This resulted development and implementation of the *Noise Injury Prevention Strategy for the Australian farming community*.[2] The aim of the Strategy is to structure efforts to reduce the incidence, severity and impact of noise injury across farming communities. This submission is made on behalf of the reference group.

1. Extent, causes and costs of hearing impairment

Extent

Noise injury is a significant problem in the Australian farming community as illustrated by the results from hearing screening at agricultural field days that initially commenced in 1985. Data collected predominantly from New South Wales through the Rural Noise Injury Program (1994-2008)[3], which includes over 8,000 hearing assessments of farmers, indicate that:

- the proportion of farmers with 'normal hearing' has increased. In left ears, this increased from 21.5% in 1994-2001 to 34.9% for the 2002-2008 period. For younger farmers 15-24 years, those with normal hearing increased from 57.3% in 1994-2001 to 77.0% for the 2002-2008; and,

- mean hearing thresholds (MHT) between 3-8KHz were lower (better) in all age groups for 2002-2008 compared to 1994-2001. In particular, MHT's at 6KHz in left ears, were almost 5dB better for the 15-24 yrs and 35-44 yrs age groups in the 2002-2008 period. For younger farmers, MHT's declined (improved) progressively between 1994 and 2008.

Despite improvements in hearing over time, approximately 65% of farmers have a measurable hearing loss, this compares to an estimated 22-27% for the general Australian community.[4] An alternate way to view this issue is that hearing loss in participating farmers was on average 10 to 15 years worse than that of the rest of the population.[5] The data also demonstrate that there remains a relatively significant prevalence of younger farmers 15-24 with measurable hearing loss. The relationship between aging and hearing loss (presbycusis) is well documented, however as hearing loss once incurred is permanent, preventing damage at younger ages is also particularly important.

Causes

All those who are exposed to noisy farm activities are at risk of sustaining a noise injury. This includes farmers, farm-workers, bystanders and farm families - including children, who may be assisting with farm tasks. Approximately 40% of all farmers are over the age of 55 years, with those over 65 years representing 18% of all farmers[7] and hence, the issue of presbycusis is relevant.

Damage to hearing can be caused by the prolonged and cumulative effects of noise above 85 dB(A) over many years, such as tractors, chainsaws and workshop equipment including angle grinders and generators[8]; or by instant trauma associated with peak noise levels over 140 dB(C) [9], such as shooting.

The 2009 Rural Noise Injury Program assessment has indicated that several factors are associated with measurable hearing loss.[3] These include:

- only around one third of farmers reported adoption of higher order noise reduction strategies including upgrading to quieter equipment and dissipating workshop noise, (records commenced in 2003);
- middle-aged farmers 35-44 years had significantly higher (worse) mean hearing thresholds in left ears from 3-8KHz for use of firearms, chainsaws, workshop tools, heavy machinery and tractors with cabins. In particular, those exposed to firearms had a 2-7dB higher mean hearing threshold in left ears between 3-8KHz, than those who were not; and,
- for younger farmers 15-24 years, the group who 'always' used hearing protection had a significant 2-4dB better mean hearing thresholds in left ears than the group who 'never' used hearing protection, for both firearms and tractors without cabins.

In summary, farm noise exposures, failure to rigorously adopt higher order risk management controls on noise and relatively poor historical use of hearing protection, have been suggested causes. However, these results also indicate that despite presbycusis and the purported damage to younger persons from excessive noise exposure from personal music devices (iPods etc)[10], that gains in hearing prevention have been made.

Costs

Little is known of the hearing related costs to those involved in the agriculture sector and as such, this is an area that requires significant work. The Listen Hear Report (2006) indicated that one in six Australians is affected by hearing loss and that the real financial cost of hearing loss was $11.75 billion or 1.4% of GDP, representing an average cost of $3,314 per person per annum.[11]

While only crude estimates can be made using these data, it is known that:

- in 2006, there were 240,000 people classified occupationally as farmers;[7]
- approximately two out of every three farmers have a hearing loss (~156,000 people);
- if the average cost is $3,314 per person - then the total economic loss may be in the vicinity of $517 million per year in the agriculture sector alone; and,
- this does not include the net cost of the loss of wellbeing (disease burden) associated with hearing loss, which was estimated as being roughly on the same scale as the real financial cost. Thus, the total cost for agriculture alone could potentially exceed $1 billiion per year, this compares to agricultural export income for 2008 of 29 billion[12] and a total value of agricultural production around 35 billion (2004-05).[13]

Irrespective of the precise costs, which require much greater scrutiny, it is apparent that there is a significant cohort within the agriculture sector that have measurable hearing loss and that this will result in negative economic impacts.

Recommendations

There remain unanswered issues regarding the extent, causes and costs of noise injury in the agricultural sector. Consideration should be given to:

- extend audiometric screening to all states and territories as one instrument to assess progress in hearing health in the agriculture sector, with a particular focus on preventative screening and impacts for younger farmers;
- further assess through audiometric and behavioural assessments the factors that influence hearing health in the range of commodity groups involved in agriculture; and,
- thoroughly analyse the economic impact and potential cost-benefit savings from improved adoption of hearing health approaches drawn from the hierarchy of controls.

2. Implications of hearing impairment

From an individual perspective the impact of hearing impairment on those operating within the agriculture sector is difficult to quantify. However, it is rare indeed to find anyone with a close connection to the sector that cannot quickly recount numerous stories of how the hearing status of their parents, siblings, grandparents and friends has had an impact on both the person with the hearing loss and significant others within the family and social group.

These impacts will vary markedly depending on the personal situation farmers are in. For example, the majority of producers tend to work as sole operators and hence, the requirement for frequent verbal exchanges with other people may not be high. This requires extensive periods of working in isolation and therefore those opportunities when interaction does occur, become highly valued. However, producers with a hearing impairment will often retract from both family and community events. It is worth noting that approximately 98% of the agriculture sector remain family farming businesses,[14] hence impacts on relationships within this context can be considerable. From a community perspective, local farmers with hearing impairments will often avoid social or professional gatherings - e.g. local farmers meetings or even sporting events - as they find it difficult to contribute and “fear” saying something that may embarrass them or be deemed inappropriate because of their failure to hear and follow relevant conversations.

On an individual basis farmers commonly report hearing difficulties. Around 40% have trouble hearing the TV; two thirds have trouble hearing in background noise; and almost 50% have tinnitus. Some factors are also associated with measurable hearing loss. For example, farmers who had family or friends suggest they had a hearing loss, or who

reported having difficulties hearing in specific situations (eg. TV, phone, at work or in conversation), had hearing 5- 15dB worse than those who did not.[3]

Given the prevalence of mental health conditions in the general population and specifically in rural areas, the social distancing aspect of hearing impairment will not only increase tensions within a family environment, but may also exacerbate social isolation of individuals. Therefore, hearing impairment reinforces social isolation as a coping mechanism. As such, it is hypothesized that hearing impairment compounds the considerable impacts arising as a result of the continuing long-term drought, fluctuations in commodity prices and the viability of many agricultural enterprises, with a flow on effect to individual and community morale, and consequently, mental health issues. The link between hearing health and mental health is an area that requires further detailed assessment.

For larger agricultural operations where a team of staff may be functioning, this will by necessity, require greater regularity of verbal interactions. In these circumstances, significant tensions can grow if one or more of the team have a hearing impairment that may potentially also be accompanied by increased safety risks.

From a community perspective, it is well acknowledged that communities in rural Australia (with the exception of some with significant mining interests), are declining in terms of their population base and locally available services. Individuals from within the local agricultural community often voluntarily assist community agencies and service groups. The high profile of such individuals and the considerable work that they undertake for these rural communities, adds significantly to the social capital of these communities. However, deteriorating hearing health by many primary producers is having a significant impact on voluntarism, as many feel uncomfortable in maintaining or adopting these roles due to the impact of their hearing impairment in actively engaging in community consultations / gatherings. Consequently, not only is the social capital of rural communities under siege from external forces (climate, economics, environmental considerations), but the pool of those individuals willing to take leadership is also diminishing, in part due to hearing impairments.

Recommendations

The implications of hearing impairment on the agricultural sector and rural communities more broadly are likely to be significant. Issues for clarification include:

- identifying and clarifying potential links between hearing impairment, social isolation and mental health issues, with methods for early intervention;
- defining practical and effective steps that may be taken in a farm family business environment to reduce the negative impacts of hearing impairment on familial relationships;
- clearly determining potential work-based injury hazards that arise due to hearing impairment and identify mechanisms / approaches to limit their impacts in the agricultural sector;
- rural specific promotion of preventative, support and treatment services in communities to provide clear direction on access options for services; and,
- national promotion to counter negative perceptions regarding the capability of individuals with a hearing impairment and the substantial services / inputs they can continue to provide to build their communities.

3. Access to hearing services and hearing technologies

Access to hearing services in rural Australia is highly fragmented and variable, both in terms of scope of services and coverage. In broad terms there are two systems - publicly funded and for-profit.

Within the publicly funded services run by the various jurisdiction health services, the focus has been on children. This is acknowledged as important and appropriate, however it has left a considerable cohort of individuals within the agricultural sector and rural communities more broadly, under serviced. In remote areas, considerable efforts have justifiably been targeted to Indigenous populations. However, this has also left those living and working on remote properties without easy access. Enhancing and expanding links with existing remote service providers is required e.g. Royal Flying Doctor Services. Furthermore, for many individuals involved in the agriculture sector they do not meet the inclusion criteria for the publicly funded assessment and rehabilitation services offered by Australian Hearing.

Overall, the public systems are heavily focused on assessment and support (mainly for children), with a less well-defined role in prevention. The staffing complements of the publicly funded systems and their distribution vary considerably between jurisdictions. However, while there have been some assessment programs for the agricultural sector utilizing audiometric screening in New South Wales, South Australia, Tasmania and Queensland over the years, only NSW through the Rural Noise Injury Prevention

Program is currently functional. Enhancing and extending similar programs to all jurisdictions would play a crucial role in developing preventive and support activities in the agricultural sector. A core feature of this must be the provision of screening and preventive advice in localities that are farmer-friendly, such as agricultural shows and other relevant forums. Clearly this will have resource implications, but it is an area that the various jurisdictions need to investigate. If a Commonwealth model of health management does arise, this is one area that would benefit significantly from streamlining the various approaches adopted by the state / territory health services.

For privately run providers, there is an economic imperative to ensure profitability and the perception is that unbiased advice is often difficult to obtain. In some circumstances, there is more unscrupulous professional behaviour where clients are corralled into the purchase of highly sophisticated and expensive hearing aids (sometimes through loan repayment schemes), when perhaps lower entry-level models may have been more appropriate. It is important to note that this is the minority of private providers.

Irrespective of whether the service is publicly or privately managed, there remain issues of access due to geographic distance, costs in time and a monetary sense. This impacts on initial provision of services plus follow-up assistance to service and repair aids appropriately. In general terms, primary producers have historically been hesitant to access services, in part because of “image” issues – “she’ll be right mate”. However, this is made more difficult due to the often un-farmer friendly environments in many services. To assist in this regard, some services such as the pre-screening Telscreen II tool, could be more broadly publicised with an emphasis on rural populations.

From a national perspective, rural populations lack knowledge of the problem, how to prevent hearing impairment and where to go for support services. Attention to addressing these issues is required.

The cost of aids and devices is a significant disincentive for individuals in the agriculture sector. Coupled with the suitability of aids in an often hot and dusty work environment, plus the need for periodic repair (often a considerable distance and time from the property), a frequent finding is that many primary producers simply choose not to use their aid. In rural Australia, hearing devices other than hearing aids can largely only be ordered by mail. However, if they arrive and are not what the person requires or does not help, then this creates additional problems. Finally, where hearing loops are available they are often not in working order, even in sites where they should know better such as health facilities.

Recommendations

Access to hearing services and related hearing technologies require considerable expansion, this should entail:

- inclusion of adult hearing assessments and a greater preventive focus in state/territory health functions, potentially with the capacity for mobile-audiometry at farmer-friendly locations;
- introduction of preventive, assessment and support services for remote agricultural settings;
- modification to the inclusion criteria for access to Australian Hearing services, removing the value of the property as an asset;
- introduction of a national program of audiometric assessment, preventive advice and referral based on the Rural Noise Injury Prevention Program;
- ensuring all subsidised private providers can meet a set of minimum standards established by the Office of Hearing Service to fit hearing aids;
- developing a national agriculture specific promotion for Telscreen II;
- increasing options for purchase of aids / devices by examining potential for consignment to services within rural areas; and,
- improving existing hearing loops and extending them in rural communities

4. Current hearing health and research programs, including education and awareness programs; and

The overarching thrust of the Noise Injury Prevention Strategy for the Australian farming community is to enable consolidation of efforts, reduce any duplication and to work collaboratively across as many fronts as is feasible to reduce noise injury.

Currently, the Rural Noise Injury Program is the only agricultural specific program in operation, with the results of this long-term program largely informing national approaches. In recent years this has provided detailed information relating to noise injury based on:

- commodity area (grains, wool, cattle, etc);
- age group (specific focus on younger farmers 15-24 years);
- exposure to a range of noise sources; and,
- preventive approaches adopted

In addition to the findings already presented previously in this paper,[3] the comparative analysis of data from 1994-2008 also indicated that:

- in right ears, the percentage of those classified as having 'normal' hearing improved from 24.8% in 1994-2001 to 38.5 % in 2002-2008 ($X2=446.2$, $df=5$, $p<.01$). In left ears, improvement was from 21.5% in 1994-2001 to 34.9% in 2002-2008 ($X2=439.3$, $df=5$, $p<.01$). This represents an improvement in those with 'normal hearing' in the order of 14% for both right and left ears;

- the likelihood an individual will have normal hearing each year was assessed with binary logistic regression. The results indicate that for each year, the odds ratio of a 'normal' to 'not normal' hearing result in left ears of participants are 1.092:1 and 1:1.084 in right ears. This represents a 9.2% (95%CI = 7.9%-10.6%) increased chance of a normal hearing result in left ears and 8.4% (95%CI = 7.1%-9.7%) in right ears, for each year of screening;

- mean hearing thresholds were better in all age groups in the 2002-2008 period compared to 1994-2001, with all age groups from 15 to 54 years having statistically better results. In particular, the MHT (6K left ears) was almost 5dB better for the 15-24 yrs ($Z = -5.6$, $p<.01$) and 35-44 yrs ($Z = -5.3$, $p<.01$) age groups in the 2002-2008 period; and,

- the audiometric results are also strongly supported by changes in self-reported behaviours. Hearing protection use has improved, particularly for high-risk activities. Those using 'PHP always' whilst using chainsaws increased by 17.5% between periods, followed by a 10.7% increase for firearms. For younger farmers, those using 'PHP always' when using firearms increased by 9.4%, with a drop in those who 'never' used PHP with firearms of 12.8%. Almost half used PHP more often or for more activities than 5 years ago, since this has been recorded.

In summary, the results from these assessments indicate a measurable improvement in the hearing status of farmers and their use of hearing protection over the past decade. These findings provide context-specific evidence to support current recommendations given to farmers regarding farm noise exposure, an increased acceptance and adoption of hearing protection by farmers themselves and the need for continuing noise injury prevention strategies. Promotional efforts to encourage the essential use of hearing protection with firearms, continues to be a hearing health promotion priority, especially for young farmers.

A limitation of the Rural Noise Injury Prevention Program is that the majority of data have been derived from the state of New South Wales. Consequently, some caution needs to be taken in inferring that these results are applicable nationally. While these data have provided invaluable to inform action, an extension of the program principles to more states / territories to ensure they suit local circumstances, is required.

Typically noise injury prevention activities in the agriculture sector have been incorporated within the broader context of OHS promotion. However, in 2007 a 12-month pilot project specifically focusing on hearing health was undertaken in three New South Wales communities. The Better Hearing for Farming Families Project aimed to (1) Improve awareness of priority noise injury prevention and hearing health practices, including specific issues that place farm families at greater risk of hearing loss; (2) Improve access to services providing hearing health advice, screening, assessment and management / devices for those in the farming community with a hearing loss. (3) Improve networking of services in local communities, to sustain the ongoing hearing health needs of farming families are being met beyond the Project period.[15]

A component of this approach was an assessment of local hearing health networks to determine the existing information links and referral pathways for faming families. Information from the social network analyses was then used to target information conduits that best serviced local farming families for both preventive and hearing assessment services. The project was able to demonstrate a wide ranging yet targeted approach to raising awareness regarding preventive approaches and in one community, a nett increase in utilization of local hearing services. Other important recommendations of this project were:

- increasing emphasis on the integration of hearing health information to improve public awareness by linking with projects that are already working with farmers to "package" and distribute relevant information. These include: Rural Divisions of General Practice Mental Health Drought Support program; Older Farmers program being rolled-out through local community-based organisations; General Practice Farm Health and Safety Tool Kits; State farmer conferences; and, men's and rural health gatherings;

- examining the potential of introducing incentives to farming families for noise reduction initiatives and screening through insurance companies;

- the Rural Industrial Relations group convened by Workcover NSW should meet with NSW Farmers and the National Acoustic Laboratories to investigate the feasibility of a new colour coded system to facilitate the use of hearing protection and noise exposure control. The findings would then be referred to the Heads of Workplace Safety Authorities meeting for national consideration;

- increasing access to and availability of hearing screening e.g. introduce Medicare rebates for private providers and ensure mobile screening at convenient and accessible venues;

- examining potential sponsorship of mobile audiometry booths for regional areas by service groups such as Lions, Rotary and Zonta;

- addressing the apparent unmet need for adult hearing health information and screening in remote areas with existing health service providers e.g. RFDS nationally;

- including promotion of assistive devices (TV/telephone) and how to purchase these in relevant information resources e.g. Older Farmers Project resource package;

- in addition to screening and personal hearing protection (short-term), increase the emphasis on higher-order noise reduction strategies within the hierarchy of control in local promotions e.g. re-designing workshop layout, safer working practices; and,

- conducting hearing health information sessions with local agricultural retailers and stakeholders.

With the conclusion of this project in 2008 there is currently no specific hearing health community interventions in operation for the agricultural sector. As such, this is a largely untapped opportunity that could be taken to improve hearing health. While the Noise Injury Prevention Strategy for the Australian farming community continues to provide a framework on which hearing health could be enhanced, suitable levels of resourcing are required to enable wider dissemination of community interventions building on this model.

Recommendations

There are few current initiatives that are specifically targeting hearing health in the agricultural sector. Renewed efforts in accordance with the Noise Injury Prevention Strategy for the Australian farming community are required to:

- extend the Rural Noise Injury Prevention Program approaches to all states / territories;
- introduce a nationally based communications strategy to increase the profile of hearing health and specific approaches to prevent noise injury in the agricultural sector;
- utilize social network analysis or other forms of assessment to clearly define local contexts and to maximize returns on communication approaches;
- emphasize higher order solutions in addition to the appropriate selection and use of hearing protection to reduce noise injury;
- incorporate financial incentives to stimulate the uptake of higher order noise injury prevention approaches;
- maintain / extend links with state / territory work health authorities to target the agricultural sector in their hearing related occupational health promotions;
- extend the availability of mobile audiometric services for screening in rural areas;
- link and build upon inputs to existing rural health initiatives such as those addressing mental health and men's health.

5. Issues affecting Indigenous communities

Aboriginal and Torres Strait Islanders (ATSI) have had extensive involvement in shaping Australia's agricultural industries. Indigenous workers continue to make up a significant proportion of the seasonal agricultural workforce in some areas of the country and on remote cattle stations. Data on Indigenous status has been collected through the Rural Noise Injury Program since its inception, although the small sample size precludes any systematic analysis of the data. However, given the challenges in hearing health for Indigenous populations more broadly, it is likely that occupational noise exposure would further compound the issues.

However Farmsafe Australia has commenced work in partnership with ATSI agencies in the Kimberley and Moree, to address the health and safety needs of Indigenous agricultural workers.[16] The most recent data available on Indigenous status and occupation (2006) indicate that 3,620 Indigenous people work in Australia's agriculture, fisheries and forestry industries, representing around 3% of the total Indigenous workforce.[7] Though detailed 2006 data are not yet available, in 2001 the largest proportion of Indigenous Australians were working in the grain, sheep and beef cattle farming sectors (35%). A significant proportion were also involved in horticulture and fruit growing (25%), with this area also employing the largest proportion of Indigenous women.[17] Indigenous workers were likely to be younger, have lower education, lower occupational status and lower incomes, than non-Indigenous people of the same gender working in the same sector. Reflective of this was the finding that 75% of Indigenous workers in agriculture, fisheries and forestry are younger than 45 years of age, with most being labourers - 56% of the men and 50% of the women. The implications of these issues in respect to the development of preventative, support and treatment services are largely unknown.

The findings from a literature review and discussions with key Indigenous stakeholders, has identified the following points as critical to the success of any injury prevention program for Indigenous people. It is likely that these issues apply equally to the area of hearing health from an occupational perspective.

- Local Aboriginal communities must be involved throughout the process and have ultimate control of initiatives building upon strong Indigenous community leadership and existing decision-making processes;
- Partnerships must be genuine and built on openness, trust, commitment and sustainability;
- Programs must be delivered in an appropriate context and manner. They must be holistic including the cultural, physical, social and spiritual environments;
- Safety issues are intertwined with feelings of cultural and spiritual injury;
- Activities need to be structured in ways that encourage positive self-esteem and confidence in individuals, families and communities;

- A ‘hands on’ practical approach is required with lots of demonstration and pictures as the lack of literacy and numeracy skills can be a major issue;
- Specific OHS training is needed for each area of work;
- Indicators of success must be measurable and accompanied by ongoing evaluation; and,
- Programs need to have Aboriginal people delivering the messages.

Based on these principles, it is logical that Aboriginal Medical Services will feature strongly in the provision of such services and will need to be assisted with developing capacity to address occupational hearing loss in the agricultural sector.

Recommendations

The level of detailed knowledge regarding the contribution that occupational noise exposure in the agricultural sector has on poor hearing health in Indigenous Australians is uncertain. Further action is required to:

- examine the contribution of noise exposure in the agricultural commodity groups that Indigenous Australians work in;
- develop relevant preventive, support and treatment services to assist employees in collaboration with local Aboriginal Medical Services; and,
- implement preventative programs with major Aboriginal owned and operated agricultural enterprises, on hearing health and occupational health and safety more generally. This must be undertaken by locally recognised and approved Aboriginal agencies.

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