MASSIVE PREVALENCE OF HEARING LOSS AMONG ABORIGINAL INMATES IN THE NORTHERN TERRITORY

by Troy Vanderpoll and Damien Howard

INTRODUCTION

One little considered factor in the substantial over representation of Aboriginal people in the criminal justice system is the widespread hearing loss amongst Aboriginal adults that is a result of endemic childhood ear disease. Over the last 30 years there has been a growing concern about endemic ear disease and subsequent hearing loss among Aboriginal children in the health and education sectors[1], however, little attention has been paid to the impact of widespread hearing loss on Aboriginal adults.

While there has been some speculation about the role that widespread hearing loss in Aboriginal communities may play in the over representation of Aboriginal people in the criminal justice system there has been minimal investigation.[2] The research described here is the first to investigate hearing loss among adult inmates in the Northern Territory ('NT') and one of the first to explore this issue in Australia. This examination was instigated by the acting superintendent of Darwin prison, Mr Bob Miller, who was prompted by concerns raised in the 2010 Senate Hearing Health Report.[3]

During the colonial period there were considerable changes to traditional Aboriginal lifestyles. Rampant childhood ear disease was one outcome from the move to a less mobile lifestyle; where people often inhabit poor quality, overcrowded housing. Crowded housing acts to spread ear infections and compromise hygiene leading to more children experiencing persistent ear infections[4] Other factors such as limited access to health care, bottle feeding, exposure to cigarette smoke and poor nutrition also contribute to many Aboriginal children experiencing persistent and chronic ear disease.[5]

Aboriginal people experience ear disease that starts earlier, lasts longer and reoccurs more often than among other Australians.[6] The worst ear disease occurs in communities where there is greatest general disadvantage; such as in remote Aboriginal communities in the Northern Territory.[7] Aboriginal people from these communities are also greatly over represented in the prison population. In the NT there were 1100 inmates in 2010 with 82 per cent being Aboriginal people[8] although Aboriginal people comprise only 30 per cent of the NT population.

Frequently persistent ear disease during childhood damages middle ear structures, resulting in permanent mild to moderate conductive hearing loss amongst many Aboriginal adults.[9] There is minimal awareness that hearing loss is common among Aboriginal adults. Usually any difficulties in communication during criminal justice processes is ascribed solely to cultural or linguistic differences as opposed to hearing loss.[10] In fact, early onset hearing loss frequently contributes to people's limited language acquisition, exacerbates the effects of cultural differences, as well as acting directly to obstruct and distort communication.[11]

METHOD

This investigation initially tested the hearing status of 44 Aboriginal inmates within the Darwin Correctional Centre ('DCC'). Further testing was then conducted with 90 inmates within the Alice Springs Correctional Centre ('ASCC'). In both locations inmates also completed a verbally administered questionnaire, which elicited comments on experiences of any hearing problems. Inmates involved in hearing testing included remand and sentenced prisoners, both male and female inmates who were between 20 to 60 years old. In total 13 per cent of the total Aboriginal population of NT Correctional Services at that time, had their hearing tested. Inmates tested within the Darwin facility were some of those who had volunteered to have their hearing tested. Because of concerns that the high prevalence of hearing loss found among these inmates may be due to some type of selection bias, at the Alice Springs correctional facility there was a focus on testing whole groups of inmates within various sections of the prison. This resulted in a larger and more representative sample of inmates being tested, with similar results to those gained at the Darwin prison.

The testing was conducted in a quiet room in six locations in both prisons; a portable sound level meter was used to determine there was an acceptable level of ambient noise. The corrections officer (Troy Vanderpoll) who conducted

Normal hearing 0-25 dB	Mild Loss 26-45 dB	Moderate Loss 46-64 dB	Severe Loss 65-90 dB	Profound Loss 65-90 dB
5.2%	56.7%	28.3%	9.7%	0%

the hearing testing was trained to conduct audiological testing within the Australian Army when working as an Advanced Medical Assistant over a 12 year period and was thus qualified to conduct the testing.

Hearing thresholds (the quietest sound able to be heard) were measured in both ears using six frequencies; 250Hz, 500Hz, 1000Hz, 2000Hz, 4000Hz and 8000Hz.

HEARING TEST RESULTS

The results of the Pure Tone audiometric testing – Inmates best ear hearing test results are described in the above table.

Overall 94 per cent of Aboriginal inmates were found to have significant hearing loss.

Further testing was carried out with 15 non-Aboriginal inmates at Darwin Prison who volunteered to have their hearing tested. None of the non-Aboriginal inmates tested had a significant hearing loss although past studies have generally found a higher prevalence of hearing loss among non-Aboriginal inmates than in the general community.[12] Given the small number of non-Aboriginal inmates tested during the study and the possibility of a selection bias, this result of no hearing loss among non-Aboriginal inmates should be considered with caution. Clearly though, hearing loss among non-Aboriginal inmates is on a vastly different scale than is the case for Aboriginal inmates in the NT.

INMATES' SELF-REPORT OF IMPACT OF HEARING LOSS

A verbally administered survey was given to all inmates tested. The majority of inmates found to have a hearing loss did not inform authorities that they had a hearing loss and indicated they were not aware that they have a hearing loss, as is common with early onset Aboriginal hearing loss.[13] The scarcity of audiological services in remote communities, where most inmates came from, also means that most inmates are likely to have never had their hearing tested. A total of 66 per cent of Aboriginal inmates also reported they suffer from ringing in their ears ('Tinnitus'). Tinnitus is common among people with hearing loss. Tinnitus in itself often contributes to significant distress, especially for individuals who also experience anxiety and depression.[14]

DIFFICULTIES HEARING OUTSIDE THE CORRECTIONAL ENVIRONMENT

Many inmates reported that their hearing loss had resulted in violent altercations with others due to misunderstandings. 10.2 per cent of inmates volunteered these types of comments, for example "*My old man flogs me because I can't hear him*".

Other comments referred to communication and interpersonal problems related to hearing loss:

- I can't hear what my family says.
- My family know to speak loud to me.
- Family always tells me stuff I can't hear
- If him family sing out I can't hear.
- I stop talking to friends, too much trouble.
- School was hard for me to listen.
- Community get angry with me for no hearing.

DIFFICULTIES HEARING IN THE CORRECTIONAL OR CRIMINAL JUSTICE ENVIRONMENT

Aboriginal inmates with hearing loss reported difficulties following officers' instructions. 76 per cent of all prisoners tested reported difficulties in communication within the criminal justice system. Comments relating to involvement in the criminal justice system included:

- I can't hear them officers and I get in trouble.
- I can't hear on the phone most of the time.
- I don't understand that court fella and I can't hear what him said.
- Get in trouble from police can't hear what they're talking.
- Can't hear them police or them court man.
- Can't hear TV at all (this inmate demonstrated how if he blows his nose air escapes his ears, indicating that he has perforations of both ear drums)
- Hard for me in prison.

DISCUSSION

These hearing test results indicate an alarming prevalence of hearing loss amongst Aboriginal inmates in the NT. A prevalence that is much higher than that in the general Aboriginal population. The much higher prevalence of significant hearing loss amongst Aboriginal inmates in the NT compared with other adults from remote communities suggests that hearing loss has played an important role in many Aboriginal people becoming incarcerated.

There have been few studies to identify the proportion of the adult Aboriginal population that have a hearing loss in remote and regional NT communities. Hearing tests that have been carried out with Aboriginal adults in the NT remote communities have found between 34 and 45 per cent of Aboriginal adults in the general population had a significant hearing loss (greater than 25 dB >25dB).[15]

Research with Aboriginal students also highlight that hearing loss is associated with antisocial behaviour and poor educational outcomes amongst Aboriginal students[16] and poor employment outcomes.[17] It is known that limited engagement in education and employment are associated with higher rates of involvement in the criminal justice system[18] and it is likely that hearing loss indirectly contributes to people's involvement in the criminal justice system by impacting on education and employment outcomes.

It is also probable that hearing loss interacts synergistically with other factors that contribute to Aboriginal people's involvement in the criminal justice system. For example, alcohol fuelled interpersonal violence is an all too common antecedent to Aboriginal people's involvement in the criminal justice system.[19] Excessive use of alcohol can be a way some people manage frustrations related to hearing loss, or to cope with hearing loss related anxiety, stress and excessive suspicion in social situations.[20] The disinhibiting effects of alcohol can also release pent up frustrations and anger arising from hearing loss related social difficulties.[21] For most NT Aboriginal inmates it would seem the pathway to prison is muffled and hushed, although filled with alcohol and conflict that is more apparent to observers than is hearing loss.

It would seem more Aboriginal inmates experience hearing loss in the NT than in other jurisdiction where hearing tests have been carried out. There have only been two recent studies of hearing loss among Indigenous inmates in other jurisdictions. Quinn and Rance[22] found six per cent of 109 Victorian Indigenous inmates had a significant hearing loss (>25dB) and O'Leary[23] found 46 per cent of female Indigenous inmates in Western Australia were found to have a significant hearing loss (>25dB). In the West Australian study the prevalence of hearing loss was greater among Aboriginal inmates from remote areas than from urban areas.[24] The higher proportion of NT Indigenous inmates who have a hearing loss is most likely to be related to their often being both more hearing loss and greater general disadvantage among Aboriginal people from remote and regional communities in Australia.

Addressing the social difficulties related to hearing loss is potentially an important crime prevention strategy in disadvantaged Aboriginal communities. This is not an approach that has yet been considered anywhere in Australia.

Addressing the social problems and educational disadvantage associated with hearing loss would need to start early in Aboriginal children's lives. The communication, interpersonal and educational difficulties associated with hearing loss[25] among Aboriginal children

Wiradjuri Women Strong
Nyree Reynolds

Acrylic & natural ochres on canvas
650mm x 890mm

The three young Wiradjuri women dance within the light of a central western NSW sunset. They are proud, strong Wiradjuri women. This is part of a Women's dance.

start very early. They start before children attend school, when children are acquiring language and social skills. They continue during school years contributing to learning and behavioural problems. Then, after children leave school, they adversely impact on participation in training and employment. Ideally interventions are needed at all of these levels to help prevent Aboriginal adults with hearing loss becoming repetitively involved in the criminal justice system.

Hearing loss also directly contributes to poor communication outcomes when Aboriginal people come into contact with the criminal justice system as described by the recent House of Representatives report on the over involvement of Aboriginal youth in the criminal justice system.[26]

> Once Aboriginal hearing impaired people come into conflict with the criminal justice system, there are a number of issues that then place them at increased risk of continued adverse contact with the system, including:
>
> - difficulties in explaining themselves to the police, with the result that they are more likely to be arrested and charged;
> - problems giving instructions to solicitors;
> - being credible witnesses in court;
> - management difficulties for corrections staff;
> - problems coping, both socially and emotionally, in correctional settings.[27]

The majority of inmates in this investigation, 76 per cent of all inmates tested, reported they had difficulty hearing corrections officers' directions and instructions. Hearing loss is likely to influence communication processes during police interviews, defendants giving instructions to legal representatives, court room proceedings as well as general communication with corrections staff. Communication during internal disciplinary hearings, as well as the acoustics in video linkups and inmates' use of telephones will also be affected.

Rehabilitation outcomes can also be improved by considering hearing loss among participants. Aboriginal inmates tend to participate less in mainstream programs, including education programs as well as being more likely to drop out of programs than other participants.[27] It is very likely that hearing loss among Aboriginal inmates contributes to these outcomes.

Frustration, failure and shame are common school experiences for Aboriginal people with hearing loss. Aboriginal workers with hearing loss have been found to avoid participation in employer provided literacy programs more often than Aboriginal workers with normal hearing.[28] Educational programs for inmates with hearing loss are likely to be more successful if they consider both the sensitivities about failure and being shamed, as well as the specific communication needs of participants. Improved educational outcomes for Aboriginal adults with hearing loss can be achieved through greater use of one-to-one tutoring, peer support, selective use of amplification devices and relevant training for educators.[29]

RECOMMENDATIONS

There is much that criminal justice agencies could do to minimise the impact of hearing loss on criminal justice communication processes. Some possible responses are:

- Hearing testing and medical follow-up (when needed) could be a component of the medical screening of new inmates.
- Inmates with hearing loss could be assisted to access personal hearing aids when appropriate.
- Training on communication tactics with people with hearing loss could be provided to police, legal staff, judiciary and correctional staff.
- Hand-held amplification devices could be made readily available and routinely used in criminal justice processes.
- A tinnitus management program could be developed for and provided to inmates.
- Adapting rehabilitation programs to cater for participants who have hearing loss.

Research also needs be undertaken to achieve a better understanding of the adverse impact of hearing loss on Aboriginal people in the criminal justice system and how to minimise it. This investigation has been among the first to examine this important issue. A common response of government and corrections agencies over the last 30 years is that Aboriginal hearing loss is a 'health problem' and not an issue that police and corrections staff need to be concerned about.[30] Despite considerable efforts in health research there has been no 'medical magic bullet' found to prevent the ear disease that causes hearing loss. Even if one were suddenly found it would take 50 years for those who already have developed a hearing loss to 'flow through' the corrections system.

It is notable that this project was instigated and carried out by pioneering operational staff of a corrections service, after a ground breaking parliamentary report highlighted this neglected issue. Support for the examination of this issue from criminology research agencies or government in general, has been notably absent.[31] Instead there has been institutional evasion of this issue in the past by criminal

justice agencies, if they have considered this issue at all. However, there are significant crime prevention prospects through engaging with this issue as well as opportunities to provide Aboriginal people with hearing loss who come into contact with the criminal justice system to:

- Be questioned more effectively and fairly;
- Better understand what is happening in criminal justice processes they are involved in;
- Access more effective legal representation;
- Experience less hardship and social isolation as inmates, and;
- Participate in more effective rehabilitation processes.

CONCLUSION

The scale, impact and implications of hearing loss among Aboriginal inmates in the NT points to Aboriginal hearing loss being an important issue for criminal justice systems. Hopefully in the near future innovative staff that seek to address this issue will be supported by progressive corrections agencies, research bodies and governments, so as to grasp the opportunities outlined above. What would be better is for criminal justice organisations and state and territory governments to take a proactive role in addressing this important and long neglected issue.

Troy Vanderpoll currently works in the Crimes Victim Support Unit of the Northern Territory Justice Department. Damien Howard is the Principal Psychologist with Phoenix Consulting and Adjunct Senior Principal Research Fellow at James Cook University. *Thanks to the inmates who participated in this investigation and the staff who supported it, as well as to Sheri Lochner and April Long for their editorial assistance.*

1 Senate Community Affairs Committee Secretariat. Hear us: Inquiry into hearing health in Australia (2010). <http://www.aph.gov.au/senate/committee/clac_ctte/hearing_health/report/report.pdf>.

2 Ibid. See also Damien Howard et al, 'Aboriginal hearing loss and the criminal justice system' (1993) 3(65) *Aboriginal Law Bulletin* <http://njca.anu.edu.au/Indigenous%20Justice%20Committee/Papers/Links/Criminal%20Justice%20article.pdf>.

3 Ibid.

4 Sophia Couzos and Sue Metcalf and Richard Murray, *Systematic review of existing evidence and primary care guidelines on the management of otitis media in Aboriginal and Torres Strait Islander populations* (2001) <http://www.health.gov.au/internet/main/publishing.nsf/Content/B8016E8B0E94B870CA25743C00081FC8/$File/osrc.pdf>.

5 Ibid.

6 Ibid.

7 Ibid.

8 Tracy Jones et al, 'Indigenous specific programs' (2010) 5(2) *Australasian Journal of Correctional Staff Development* <http://www.bfcsa.nsw.gov.au/__data/assets/pdf_file/0020/223760/Indigenous-Specific-Programs.pdf>.

9 Above n 4.

10 Above n 1.

11 Damien Howard, *Listening, learning and work: Improving outcomes in Indigenous training and employment* (Phoenix Consulting, 2011).

12 McRandle, C C and Goldstein, R, 'Hearing loss in two prison populations' (1986) 37 (4) *Journal of Correctional Education,* 147-155. See also Theresa Belenchia and Thomas Crowe, 'Prevalence of speech and hearing disorders in a state penitentiary population' (1983) 16 (4) *Journal of Communication Disorders,* 279-285.

13 Damien Howard, *Mild hearing loss and occupational functioning of remote Aboriginal workers* (Phoenix Consulting, 2007).

14 Jane Henry and Peter Wilson, 'Coping with tinnitus: Two studies of psychological and audiological characteristics of patients with high and low tinnitus-related distress' (1995) 1 (2) *International Tinnitus Journal,* 85-92 <PMID: 10753328>.

15 Above n 13.

16 Damien Howard, *Conductive hearing loss and behaviour problems amongst urban Indigenous students* (D Phil Thesis, Charles Darwin University, 2006).

17 Above n 11.

18 Senate Select Committee on Regional and Remote Aboriginal Communities, *Aboriginal Australians, Incarceration and the Criminal Justice System*, Discussion Paper, (2010) <http://www.aph.gov.au/senate/committee/indig_ctte/Final_RRIC.pdf>.

19 Judy Putt and Jason Payne and Lee Milner, 'Indigenous male offending and substance abuse' (2005) No 293 AIC Trends & Issues in Crime and Criminal Justice <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=209451>.

20 Above n 11.

21 Ibid.

22 Sue Quinn and Gary Rance, 'Investigation into hearing impairment amongst Indigenous prisoners in the Victorian Correctional System' (2006) <http://www.justice.vic.gov.au/wps/wcm/connect/justlib/DOJ+Internet/resources/1/9/198b4a00404a9eeb943efff5f2791d4a/Investigation_hearing_impairment_Indigenous_prisoners.pdf>.

23 Interview with Anne O'Leary (Telephone interview, 12 November 2011).

24 Ibid.

25 Above n 1.

26 House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs. *Doing time – time for doing: Indigenous youth in the criminal justice system* (2011) <http://www.aph.gov.au/house/committee/atsia/sentencing/report/fullreport.pdf>.

27 Robin Jones et al, 'Culturally relevant assessment of Indigenous offenders: a literature review'(2002) 37(3) *Australian Psychologist*: 187-197. DOI: 10.1080/00050060210001706866> See also Andrew Day, 'Reducing the risk of re-offending in Australian Indigenous offenders: what works for whom?' (2003) 37 (2) *Journal of Offender Rehabilitation*.< http://dro.deakin.edu.au/view/DU:30020606>.

28 Above n 11.

29 Ibid.

30 Above n 1.

31 Ibid.