How does age of first hearing aid fitting for Aboriginal and Torres Strait Islander children compare with non-Indigenous Australian children?

Samantha Harkus, Alison King, Wendy Pearce, Mark Seeto (NAL)





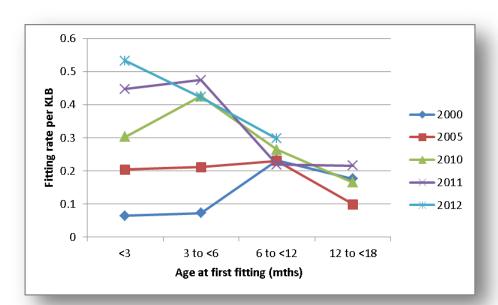


#### **Australian Hearing**

Australian Hearing is the sole provider of rehabilitative hearing services to children requiring hearing aids. These services are funded by the Australian Government through the Department of Health.

#### **During 2013:**

- **2,520** child and young adult clients were fitted with hearing aids for the first time.
- **295** of these were children born in 2013.



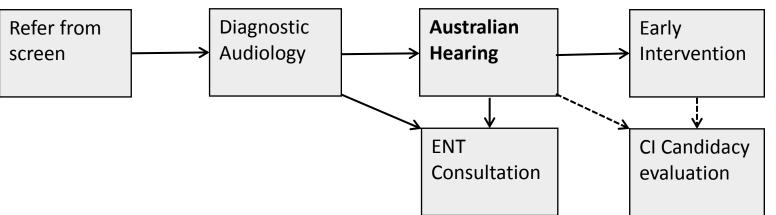
The relationship between implementation of UNHS across Australia and proportion of children aged under 3, 6 and 12 months fitted with hearing aids for the first time.





## **Australian Hearing**

#### **Referral pathway**







### Annual Demographic Details report

Published annually <u>www.hearing.com.au</u>

Reports against all current, active aided and implanted clients younger than 26 years.

Reports at national and state/territory level.

Reports against Aboriginal and Torres Strait Islander children and non-Indigenous Australian children.

#### Includes:

- Number of hearing impaired children
- Fitting rates of children and young adults
- Hearing loss distribution of aided/implanted children and young adults

Includes data on children who were first fitted with hearing aids in that year: a useful indicator of how well referral pathways and processes are working.

#### **Demographic Details**

Of young Australians aged less than 26 years with a hearing impairment, who have been fitted with a hearing aid or cochlear implant at 31 December 2013







## From the 2013 Demographic Details report

At 31 December 2013

**20 819** Aided Young Australians <26 years.

Of these, **1757** were Aboriginal or Torres Strait Islander children (**8.5**% of all aided children)

2508 children were first fitted in 2013

Of these, **269** were Aboriginal or Torres Strait Islander children (**10.7%** of newly fitted children)

#### Note

Approximately 4%\* of the Australian child population are Aboriginal or Torres Strait Islander. Closer to 9% of our aided child clients are Aboriginal or Torres Strait Islander.

Over-representation is likely due to higher incidence of chronic middle ear disease and associated hearing loss.

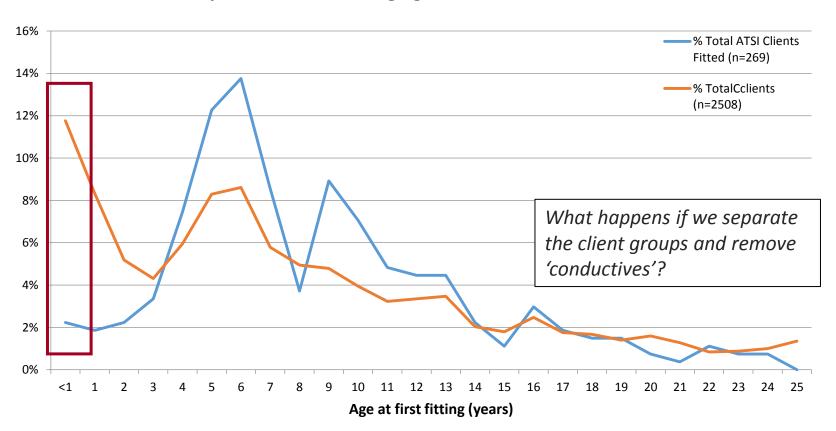
\*ABS Census 2006





#### The data of concern

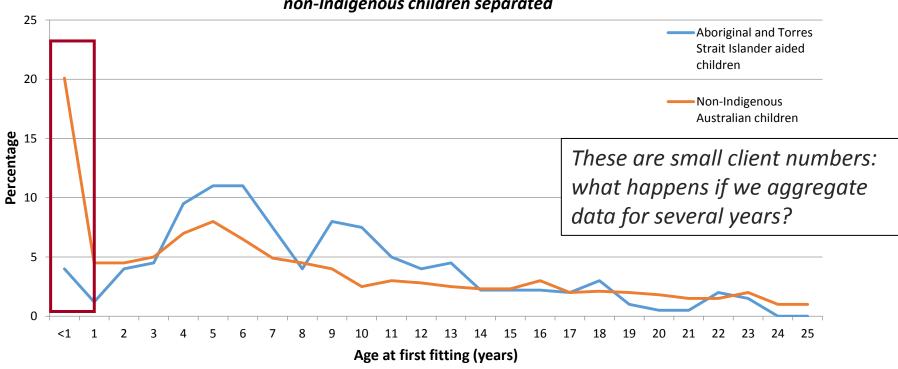
#### Comparison of first fitting age - Clients first fitted in 2013





## With as many 'conductives' removed as possible

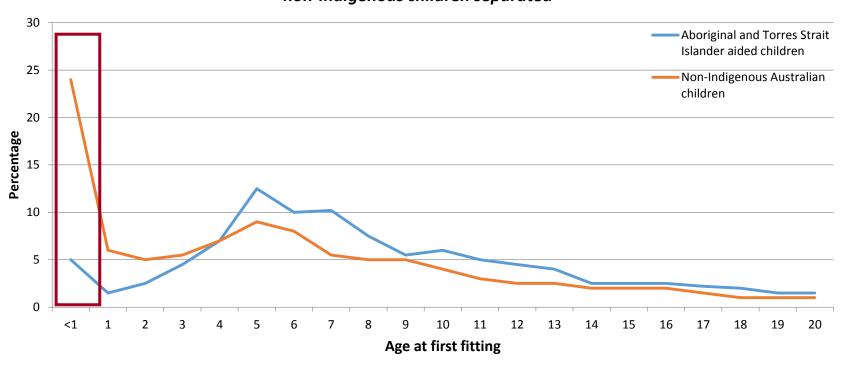
## Comparison of first fitting age - Clients first fitted in 2013 'Conductives' removed, Aboriginal and Torres Strait Islander and non-Indigenous children separated





### Aggregating 5 years of data to offset small client numbers

## Comparison of first fitting age - Clients first fitted 2008-2013 'Conductives' removed, Aboriginal and Torres Strait Islander and non-Indigenous children separated



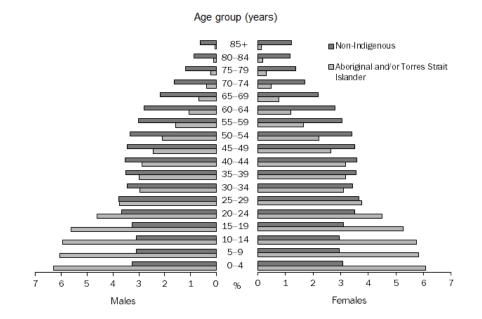


# Can we control for differences in size and profiles of the populations?

ABORIGINAL AND TORRES STRAIT ISLANDER AND NON-INDIGENOUS POPULATION - 30 JUNE 2011

Aboriginal and Torres Strait Islander population = 669,000

Non-Indigenous Australian population = 22,340,000

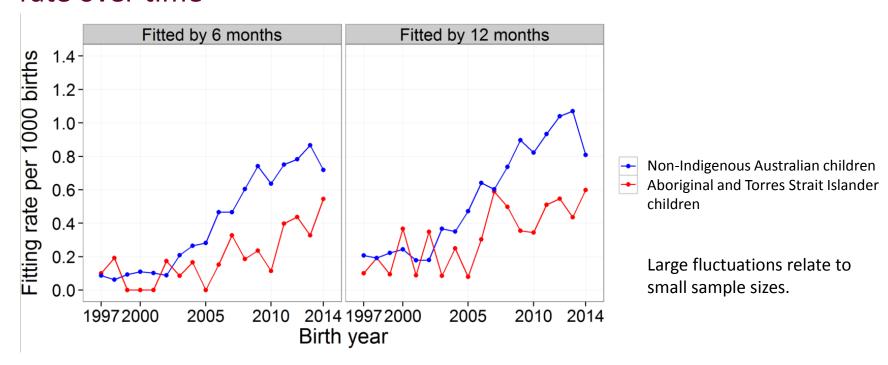


What happens if we relate first fitting data to the birth rate (the 'fitting rate') of each population? This allows comparisons to be made across populations.





## Change in fittings under 6 months and under 12 months by birth rate over time



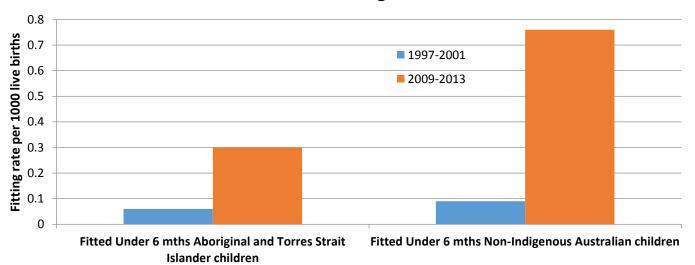
#### What can we see?

- 1. A steady increase in Under 6 month and Under 12 month fitting rates for both cohorts over the time period 1997 to 2014.
- 2. A persisting gap between proportion of Aboriginal and non-Indigenous Australian children fitted under the age of 12 mths.



### Change in fittings pre- and post-introduction of NHS

## Impact of UNHS on early fitting rates: Aboriginal & Torres Strait Islander children vs non-Indigenous Australian children



#### Notes

UNHS coverage approximately 84% in December 2009, close to 100% by mid- 2010

ABS advise likely Aboriginal and Torres Strait Islander birth data likely to be an under-estimate in earlier years.

#### What can we see?

- A statistically significant improvement in fittings under the age of 6 months for both cohorts
- A statistically significant difference between Under 6 mth early fitting rates between Aboriginal and non-Indigenous Australian children.



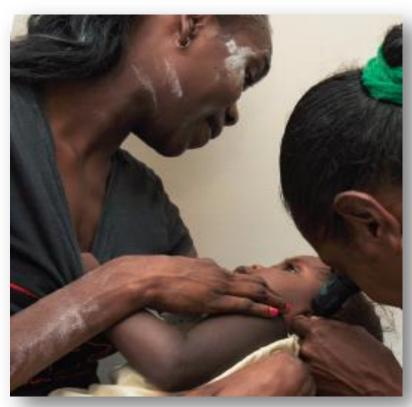
#### What can we conclude?

That, after we adjust for:

- Prevalence of conductive hearing loss
- 2. Small Aboriginal and Torres Strait Islander client numbers
- Differences in size and profile of populations

there remains a significant difference between the age of first fitting of Aboriginal and Torres Strait Islander children and non-Indigenous Australian children.

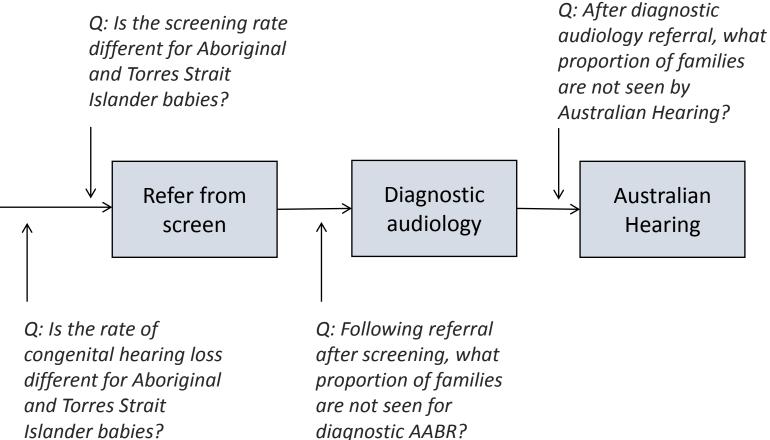
Why might this be? Where might the gaps be in referral pathways? What can we act on, and how?







## The referral pathway







## Thoughts

- 1. How is successful navigation of the UNHS pathway measured? Is first appointment with Australian Hearing one possible indicator?
- 2. Is **review of program data** required in each state/territory to analyse where loss is happening?
- 3. Is there a need for state/territory UNHS programs to work in **partnership** with peak Aboriginal and Torres Strait Community Controlled Health Organisations on appropriate strategies for promoting the importance of follow up.
- 4. Is to possible to track progress along the full referral pathway without a state/territory or **national NHS database?**





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