

# Deadly Ears

## Otitis Media in Aboriginal & Torres Strait Islander Children in Remote Queensland: Analysis of screening data 2006-11

Kyle TURNER, Cecil BROWN

Deadly Ears Program, Queensland Health

## Deadly Ears

# Schedule:

- The OM picture at national level
- Key issues in reporting child otitis media
- The OM picture in remote QLD

# Indigenous OM on the whole:

- Otitis Media (OM) is endemic in many Indigenous communities, particularly in rural/ remote areas
- A prevalence of chronic OM >4 per cent is an enormous public health issue (WHO)
- Intermittent hearing loss in children impacts language, behaviour and education development

## Deadly Ears

# Keys issues with reporting:

- National reports highlight self-reported data
- Greater attention needs to be given to data that draw on otoscopy, tympanometry & audiology
- Do we need a national surveillance system for Indigenous child OM?

## *Quick plug:* Deadly Ears Program

- Working with rural/ remote Indigenous communities since 2005
- The Program has established partnerships with 12 discrete communities & regions

## Deadly Ears

# Community A:

- Population is predominantly Aboriginal and Torres Strait Islander peoples (97%); approx. **1,500 pop.**
- Data were collected from schools & health clinics, between **1 July 2006 and 30 June 2011**
- Screening used **otoscopy, tympanometry and pure tone audiometry** at 1,000 and 4,000 Hz and 50, 35, 25 decibels as per Clinical Care Guidelines

## Deadly Ears

# Definitions:

| Label    | Description   | Screening results   |
|----------|---|---|
| Normal   | Within normal limits  | Type A tympanogram, 25 dB or less   |
| Abnormal | Eustachian tube dysfunction, OME or DisPerf in left and/ or right ear | Fluid, retraction, perforation, and/ or Type B [low or high], C tympanogram |
| AF       | Audiometry fail   | Audiometry 26 dB or greater   |

# Limitations

- Screening data are non-diagnostic and should be used with caution
- All findings must be accompanied by definitions
- Audiometry screening experienced significant changes over the five-year period under investigation



## Deadly Ears

# By Age Group:

| Age Group    | Abnormal     |                         | Type B Tymp             | Audiometry Fail |                         |
|--------------|--------------|-------------------------|-------------------------|-----------------|-------------------------|
|              | No.          | Per cent [95%CI]        | Per cent [95%CI]        | No.             | Per cent [95%CI]        |
| 0 – 4        | 108          | 86.1 [79.5–92.7]        | 76.8 [68.8–84.9]        | 40              | 27.5 [13.0–42.0]        |
| 5 – 9        | 1,135        | 63.0 [60.2–65.8]        | 49.2 [46.3–52.1]        | 907             | 19.8 [17.2–22.4]        |
| 10 – 14      | 542          | 57.2 [53.0–61.4]        | 38.7 [34.6–42.9]        | 533             | 17.1 [13.9–20.3]        |
| <b>Total</b> | <b>1,785</b> | <b>62.6 [60.3–64.8]</b> | <b>47.7 [45.4–50.0]</b> | <b>1,480</b>    | <b>19.1 [17.1–21.1]</b> |

## Deadly Ears

# By Sex:

| Sex          | Abnormal     |                         | Type B Tymp             | Audiometry Fail |                         |
|--------------|--------------|-------------------------|-------------------------|-----------------|-------------------------|
|              | No.          | Per cent [95%CI]        | Per cent [95%CI]        | No.             | Per cent [95%CI]        |
| Male         | 924          | 62.6 [59.4–65.7]        | 46.8 [43.5–50.0]        | 754             | 18.6 [15.8–21.3]        |
| Female       | 861          | 62.7 [59.5–66.0]        | 48.7 [45.3–52.0]        | 726             | 19.6 [16.7–22.5]        |
| <b>Total</b> | <b>1,785</b> | <b>62.6 [60.3–64.8]</b> | <b>47.7 [45.4–50.0]</b> | <b>1,480</b>    | <b>19.1 [17.1–21.1]</b> |

## Deadly Ears

# By Season:

| Sex           | Abnormal |                  | Type B Tympanometry | Audiometry Fail |                  |
|---------------|----------|------------------|---------------------|-----------------|------------------|
|               | No.      | Per cent [95%CI] | Per cent [95%CI]    | No.             | Per cent [95%CI] |
| <i>Winter</i> | 281      | 67.9 [62.5–73.5] | 53.4 [47.5–59.2]    | 239             | 19.7 [14.6–24.7] |
| <i>Spring</i> | 409      | 59.7 [54.9–64.4] | 37.2 [32.5–41.9]    | 359             | 23.4 [19.0–27.8] |
| <i>Summer</i> | 360      | 74.4 [69.9–78.9] | 64.4 [59.5–69.4]    | 305             | 18.7 [14.3–23.1] |
| <i>Autumn</i> | 735      | 56.5 [52.9–60.1] | 43.1 [39.5–46.7]    | 577             | 16.3 [13.3–19.3] |
| <b>Total</b>  | 1,785    | 62.6 [60.3–64.8] | 47.7 [45.4–50.0]    | 1,480           | 19.1 [17.1–21.1] |

# Conclusions:

- 729 individual Indigenous children were included in this study, with 1,785 screening results analysed
- Overall, ear health abnormalities were detected in 63% of Indigenous children aged 0-14 years
- Almost 9 out of 10 Indigenous children aged 0-4 years did not pass screening

Deadly Ears

**Questions ?**