SEARCH: Study of Environment on Aboriginal Resilience and Child Health

HEALS: Hearing Ear health and Language Services

a model of successful translation

Hasantha Gunasekera on behalf of team

RACP Rue Wright, Melbourne (May 2017)
Acknowledgements

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AWABAKAL

Newcastle Aboriginal Co-op Ltd.

Australian Government
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Why?
Aboriginal & Torres Strait Islander gaps

2015 AIHW
Aust Institute Health Welfare 2015

Health gap

Publications 1958-2005
Eades S et al. MJA 2010; 193(9): 521-524
Community determined priorities

Ear health
Speech and language development
Resilience
Mental health and emotional wellbeing
Obesity, exercise and green space
Housing, neighborhood and environment

Why?
SEARCH: Study Environment Aboriginal Resilience and Child Health
**Why?**

**A modifiable causal pathway**
- communities were right, carers know, and care

Before preschool and Preschool interventions in ear health/language/development

Service enhancement: building capacity in Aboriginal Community Controlled sector
How? Cohort (n = 1700)

**Step 1** (approx 15 mins)
- Sign a consent form
- Provide contact details

**Step 2** (approx 60 mins)
- Complete age appropriate interview directed survey
- Complete clinical measurements

**Step 3** (approx 30 mins)
- Attend audiologist clinic (all children)

**Step 4** (approx 60 mins)
- Attend speech pathology clinic (1 to 7 year olds)
# Speech & Language Assessment

<table>
<thead>
<tr>
<th>Age</th>
<th>Receptive &amp; Expressive Language Preschool Language Scale</th>
<th>Receptive &amp; Expressive Language CELF</th>
<th>Speech DEAP Screening Test</th>
<th>Phonological Awareness SPAT</th>
<th>Narrative ∞</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 2 yrs</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>2 to 3 years</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>3 to 5 years</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>&gt; 5 years</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
What?

Summary of findings

- Audiologist assessments (n=1,491 children):
  - 31% had otitis media (including 2% perforation)
  - 10% had hearing impairment
    - 90% due to otitis media

- Speech and language
  - 27% receptive delays
  - 39% expressive delays
  - ? appropriateness of these tools
    - await narrative & functional

- Parent Evaluation Developmental Status
  - 55% moderate to high developmental risk
What?
Agreement (Audiologist vs. ENT)

- **Learning effect:**
  - 1st 100 ears vs. later:
    - kappa 0.66 vs. 0.81 (p=0.016)

- **Sensitivity:** 90%
- **Specificity:** 94%
- **Positive predictive value:** 85%
- **Negative predictive value:** 96%
What?
HEALS Partnership

The SEARCH Study

SEARCH Partners

NSW Government

SCHN

5 ACCHS

Speech Therapists

ENT Surgeons

Hospitals

Nurses

Anaesthetists

Schools

Audiologists

Funding

Reporting

Funding

Reporting
What?
HEALS achievements: outputs since 2013

- **Speech therapy:**
  - ~8000 sessions for 800 children

- **ENT surgery:**
  - ~350 children

- **Other benefits:**
  - Aboriginal employment
  - Audiology/Speech therapy sound proof room
  - Aboriginal Community Controlled Services have:
    - sustained their own Speech therapy clinics
    - developed relationship with local ENTs
“J is speaking a lot better and clearer”

“Other kids are talking to her more. Teachers and extended family members are starting to understand her now”

“A lot of therapists in the past had trouble keeping H’s attention – I was really happy with the amount of work he got done at AMS. I feel that his speech is coming along really well”
Where to from here?

- **Research:**
  - Interactions
    - Ear health
    - Speech and Language (formal and narrative)
    - Developmental risk (PEDS)
    - Environment (housing, geocoding)

- **Service:**
  - HEALS
    - Expansion across State / Health priority domain

- **Future:**
  - Workforce: Tele-otology (given our agreement findings)
  - Partnership with Aboriginal Community Controlled
  - NSW Health Committee: HEALS Implementation Review
Where to from here?