



The Pilbara Data Project

A Preliminary Analysis of 10 Years of Ear and Hearing Care in the East Pilbara



Acknowledgement of Country



*Artwork "Kunawarritji"
by Debra Thomas,
Martumili Artists*

Ear Science acknowledge and pays respect to the Traditional Owners of the land we are all meeting on today.

We acknowledge the Nyiyaparli and Martu People as the Traditional Owners and Custodians of the lands we serve in Newman and the Western Desert.

We recognise the significant contributions of Aboriginal and Torres Strait Islander people to ear and hearing health, through sharing their knowledge, expertise and lived experiences.

Ear Science pays respect to Elders past, present and emerging.

Project Team

- **Adj Prof Rob Eikelboom** Co Chief Investigator
Ear Science Research Manager
- **Emma Ireland** Project Manager
Ear Science Community/Education
- **Lucy Mitchell** Ear Health Coordinator
Audiologist
- **Christina Hunn** Clinical Advisor
Director of Clinical Services - PAMS
- **Dr Anton Hinton-Bayre** Co Chief Investigator
Head of Department: RPH ENT
- **Jessica Yiannos** Project Officer
Audiologist
- **Renee Speedy** Outreach Liaison Officer
- **Community Advisors**



Government of **Western Australia**
WA Country Health Service



The Agenda

01

The Pilbara Data Project

02

Initial Key Learnings

03

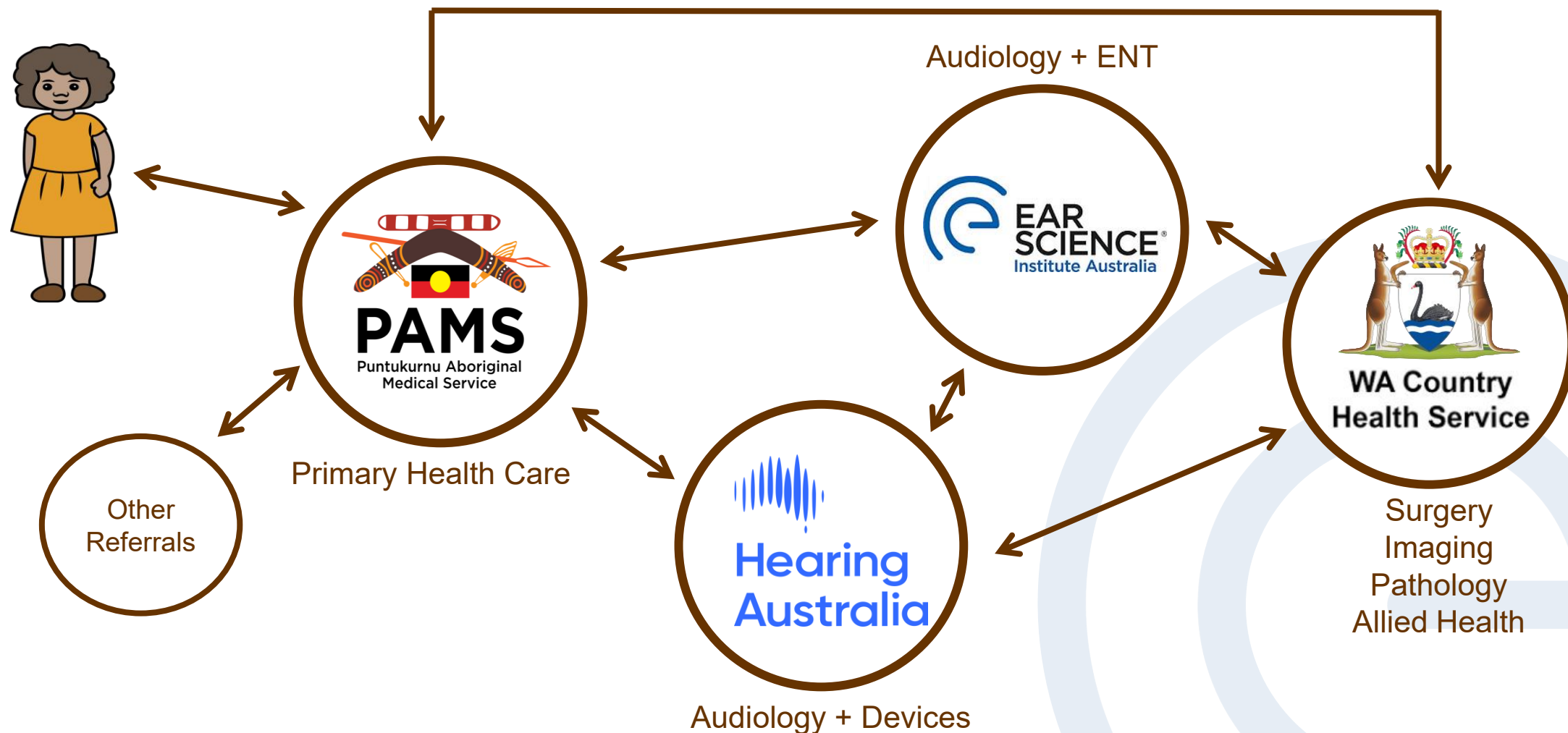
Empowering Clinical Practice: *Puntukurnu
Aboriginal Medical Service*

04

Data Insights: *Empowering Clinical Care*

The Pilbara Data Project

Ear and Hearing Care in the East Pilbara: A preliminary analysis of 10 Years of Clinical Data



The Pilbara Data Project

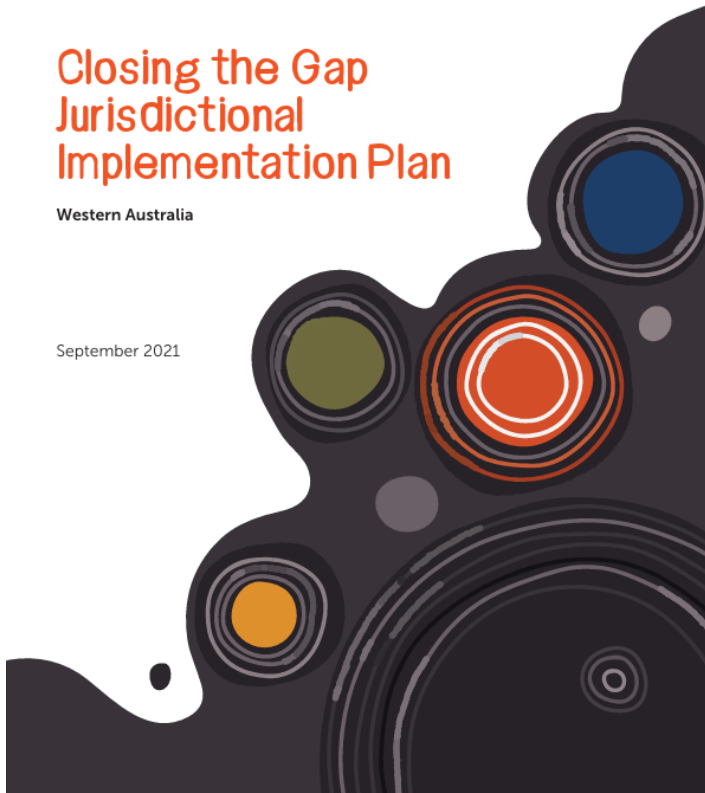
Ear and Hearing Care in the East Pilbara: A preliminary analysis of 10 Years of Data



Closing the Gap
Jurisdictional
Implementation Plan

Western Australia

September 2021

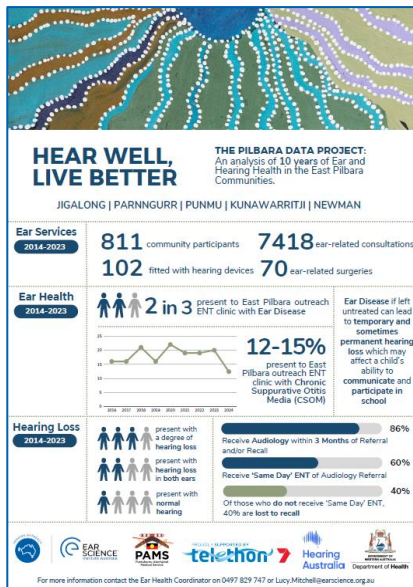


Aim: To generate information vital to improve ear and hearing health outcomes of Indigenous Children in the East Pilbara

Project Objectives

Collate ear and hearing health data from individuals seen at remote clinics in the East Pilbara communities over the past 10 years.

To **build a comprehensive picture** of the burden of ear and hearing health in the five East Pilbara communities



1 in 2 Kids LIVING IN COMMUNITY HAVE SICK EARS

LET'S YARN ABOUT HOW WE CAN MAKE EARS BETTER

Join us for morning tea.
Let's talk about ways to make ear services better in community.

TUESDAY 3RD DECEMBER
10:00am - BOOMERANG OVAL

GIFT VOUCHERS AVAILABLE

KUNYJUNYO KURLKA

PAMS

Hearing Australia

EAR SCIENCE

Key Learning 1

Accurate data linkage is essential for coordinated management of ear and hearing health



Government of Western Australia
WA Country Health Service



Data Linkage



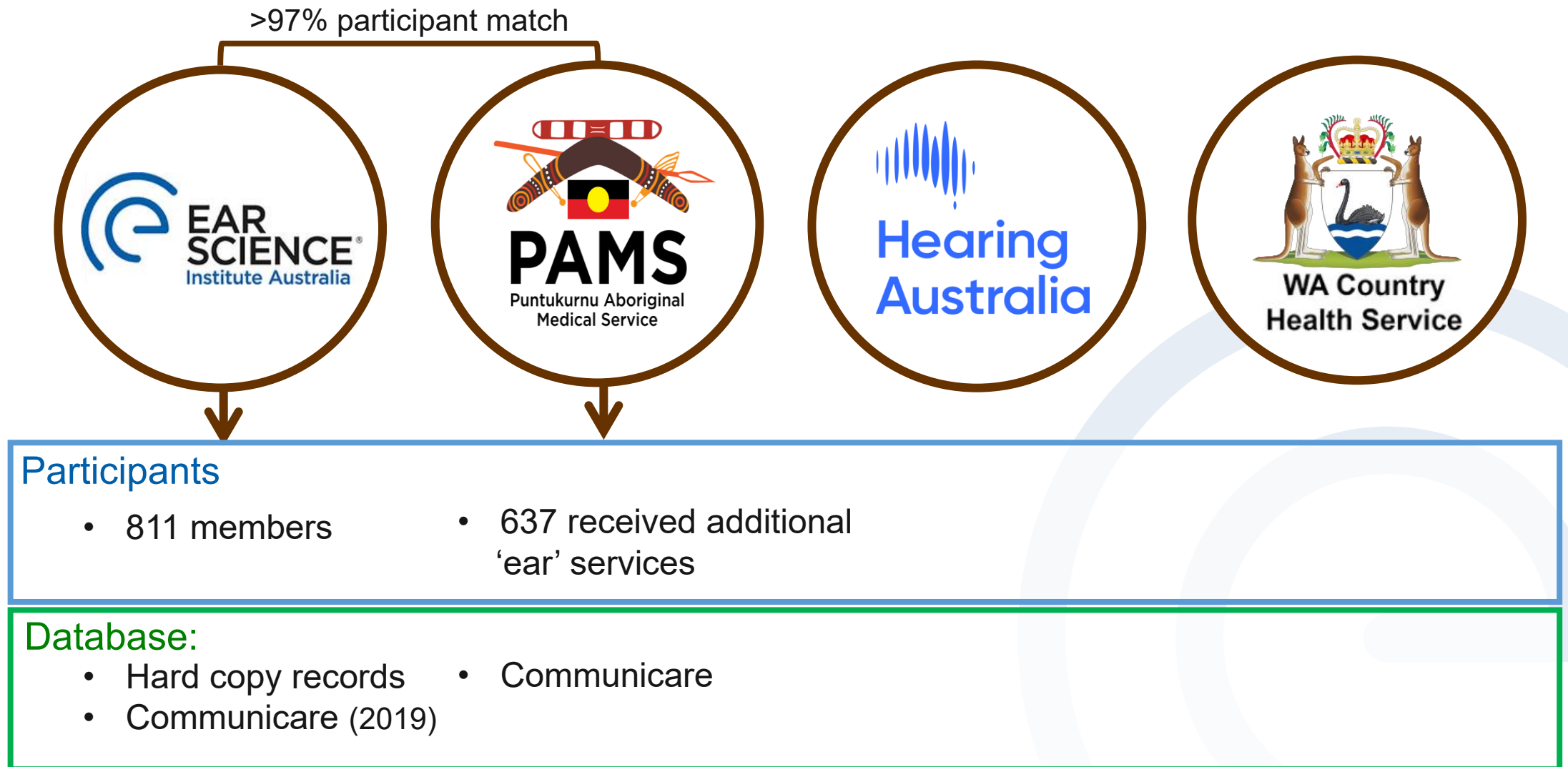
Participants

- 811 members

Database:

- Hard copy records
- Communicare (2019)

Data Linkage



Data Linkage

*Data Insight:
Importance of
accurate identifiers*

*Data Insight:
Value of centralised
data storage*

*Data Insight:
Importance of 'ear'
marked consultations*

>98% participant match



Participants

- 811 members
- 637 received additional 'ear' services

Database:

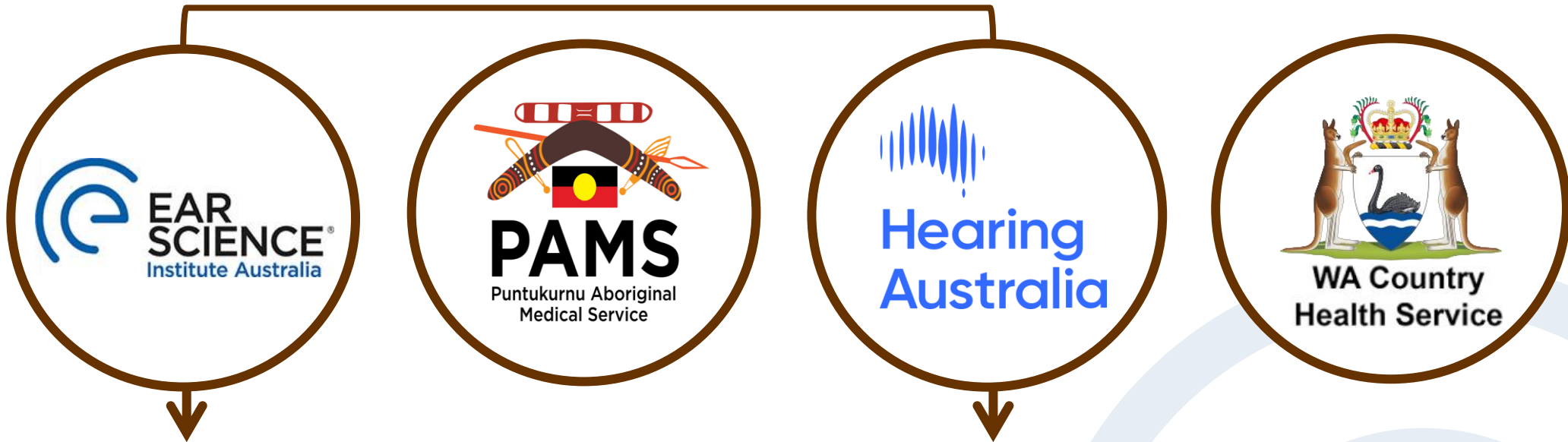
- Hard copy records
- Communicare (2019)
- Communicare

Data Linkage

'Probabilistic' linkage



38% participant match



Participants

- 811 members
- 305 received additional 'ear' services

Database:

- Hard copy records
- Talinga
- Communicare (2019)

Data Linkage

'Deterministic' linkage



>98% participant match



Participants

- 811 members

- 104 received additional 'ear' services

Database:

- Hard copy records
- Communicare (2019)

- BOSSnet
- WebPAS

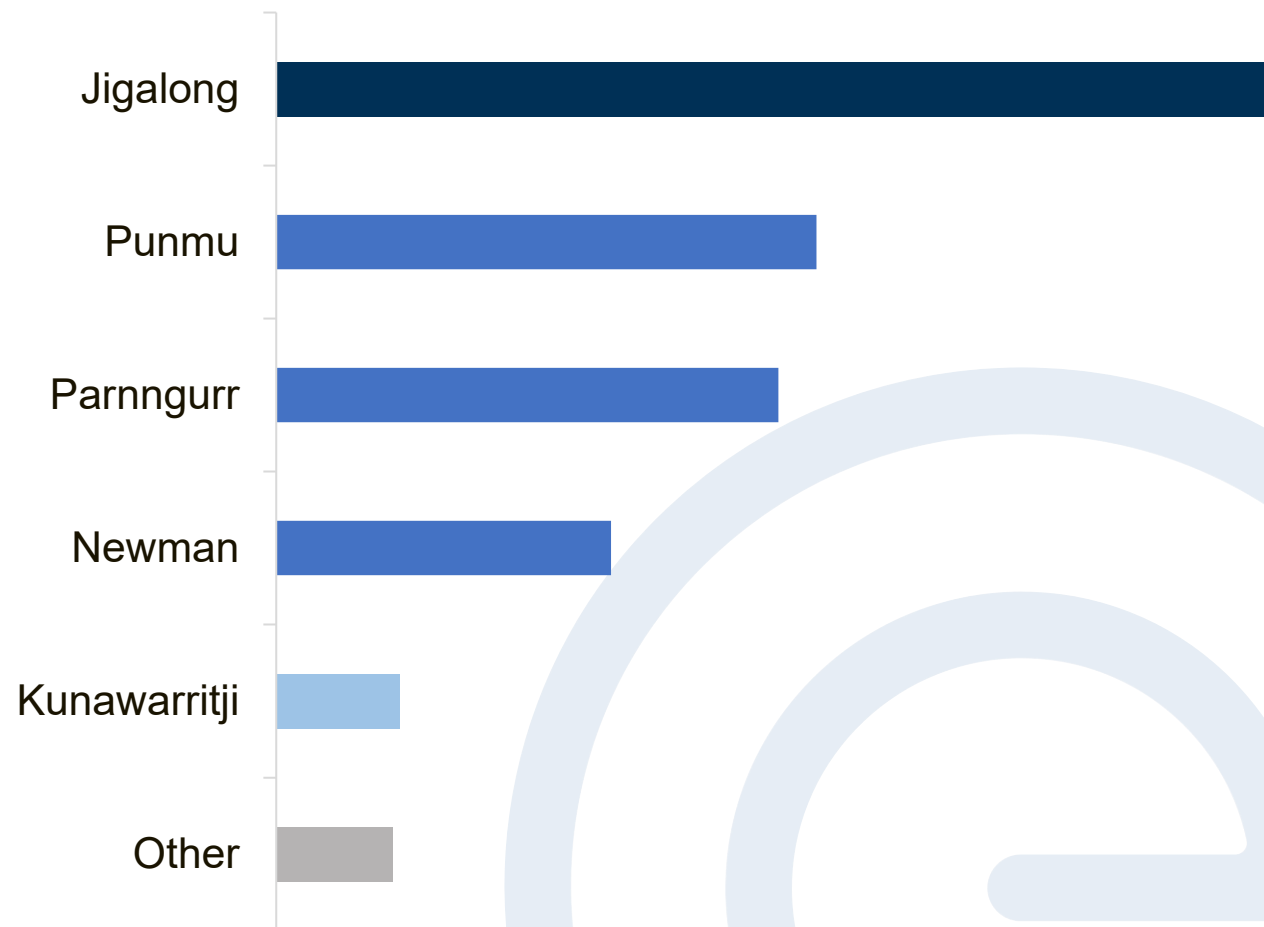
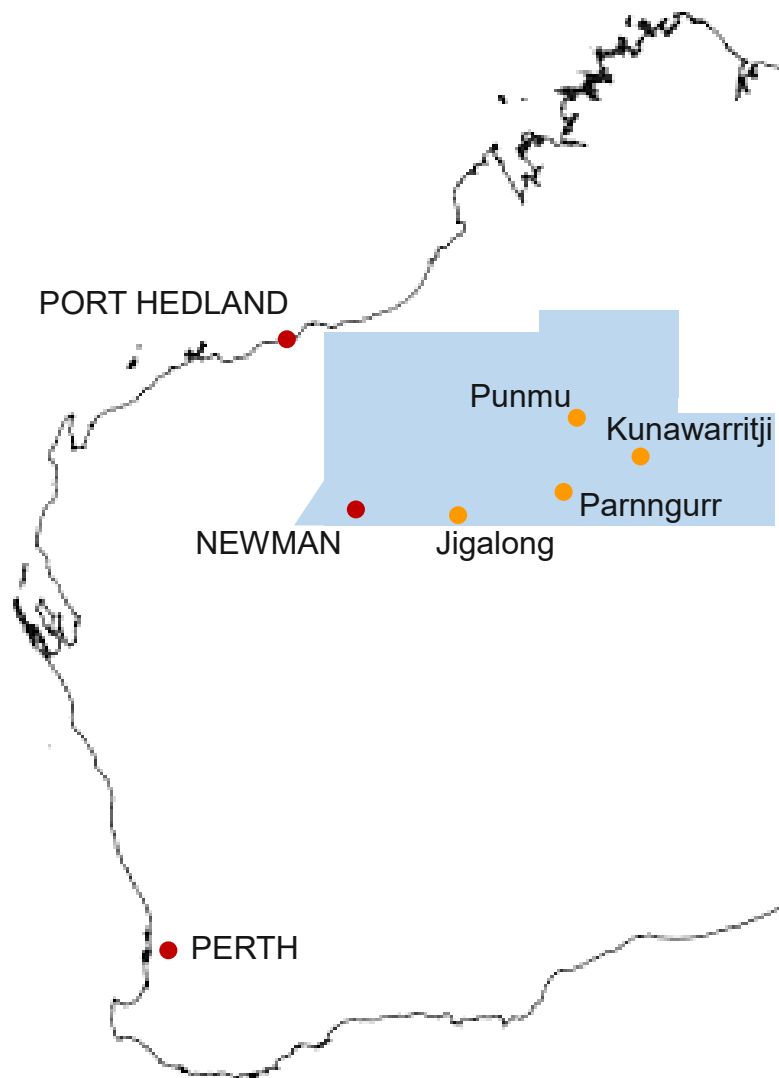
Demographics of patients in the East Pilbara



Government of Western Australia
WA Country Health Service

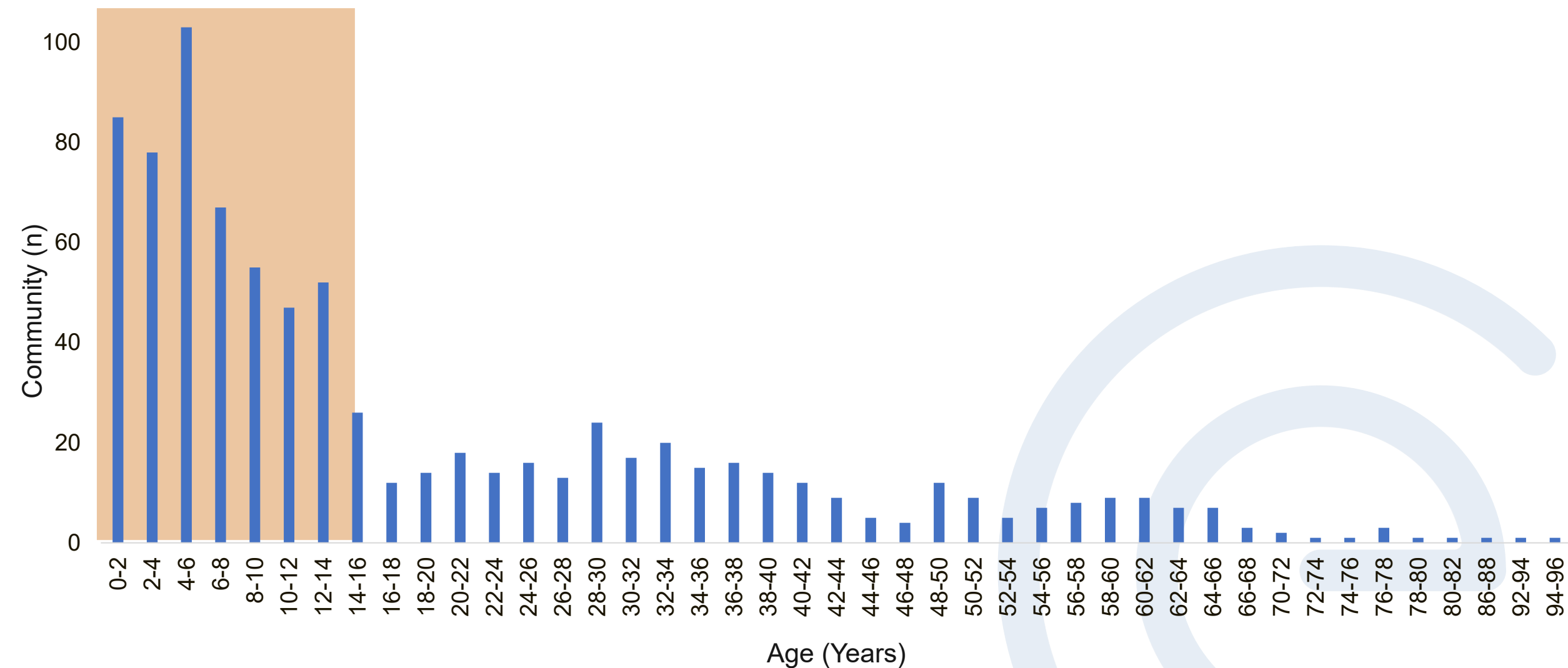


Demographics: Participant Location



n = 811 participants

Demographics: Age at First Ear Check



Key Learning 2

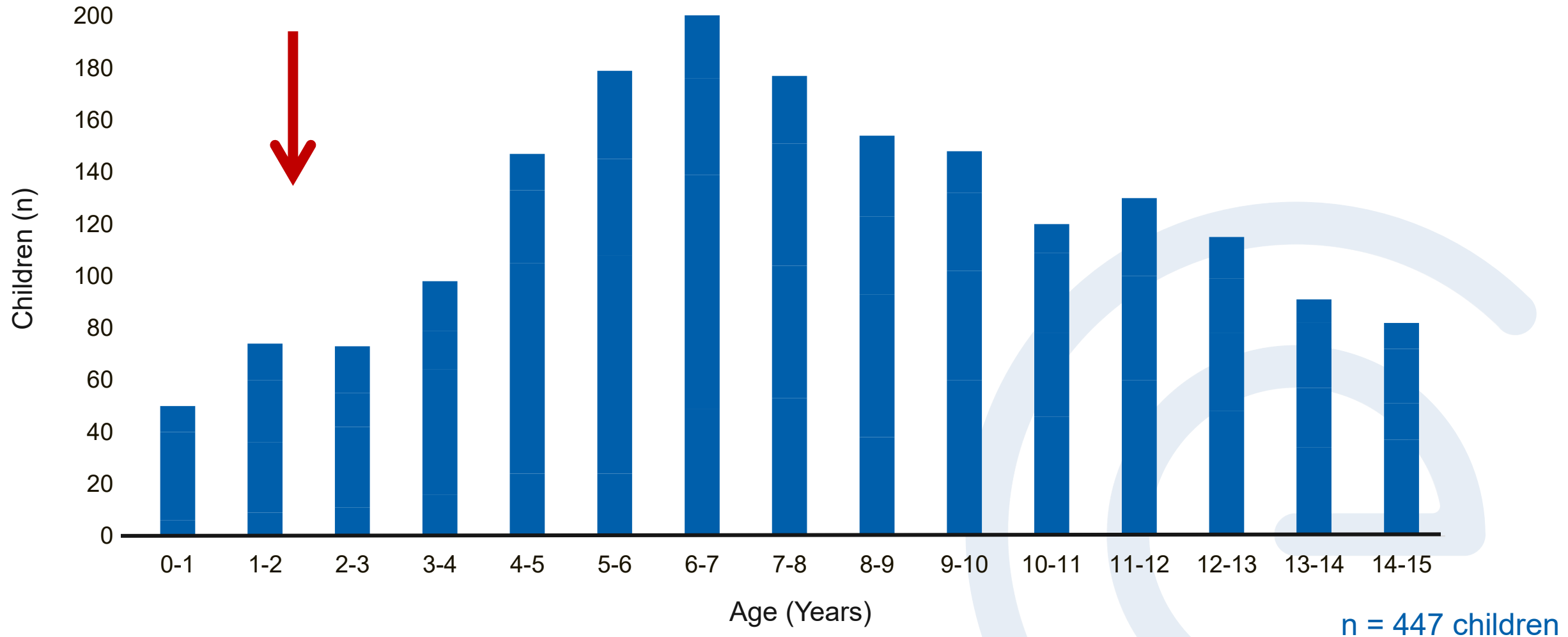
Ear checks are not happening early enough



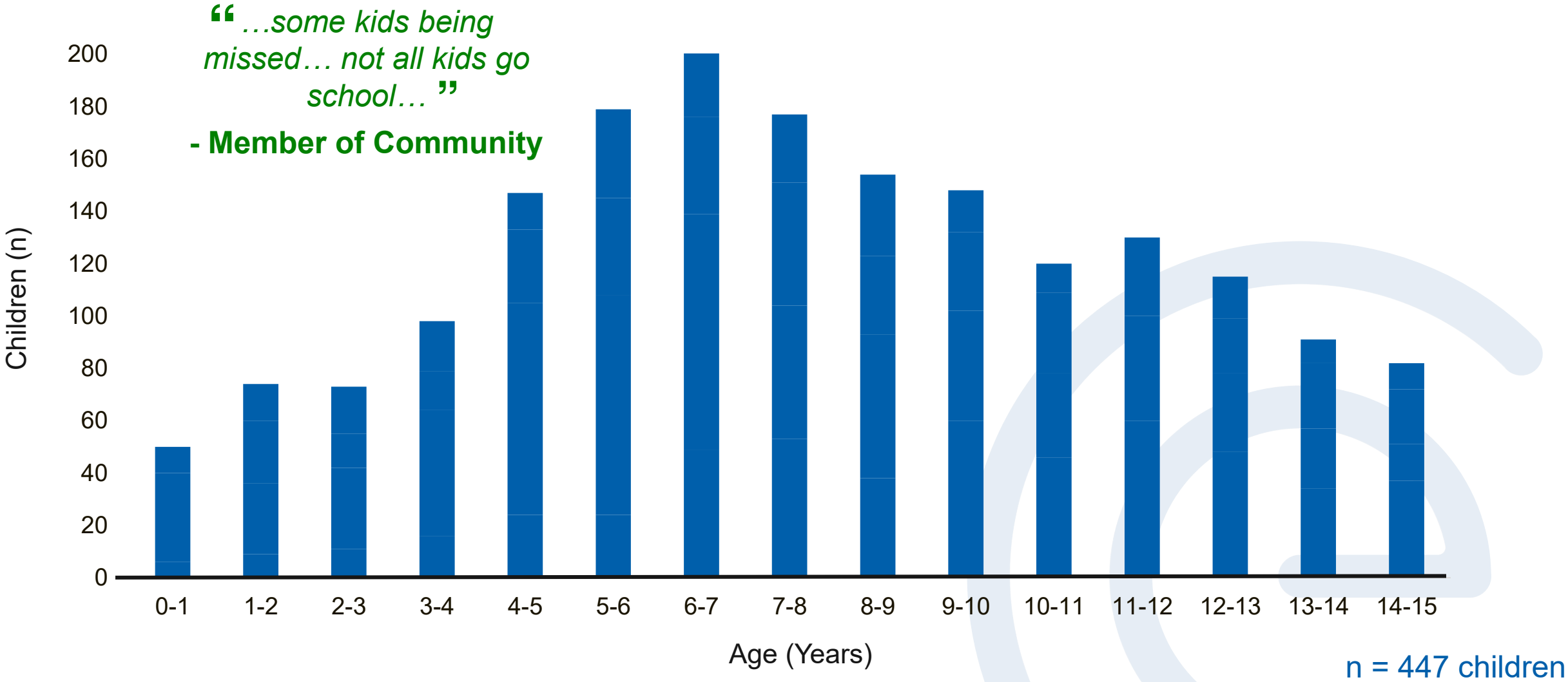
Government of Western Australia
WA Country Health Service



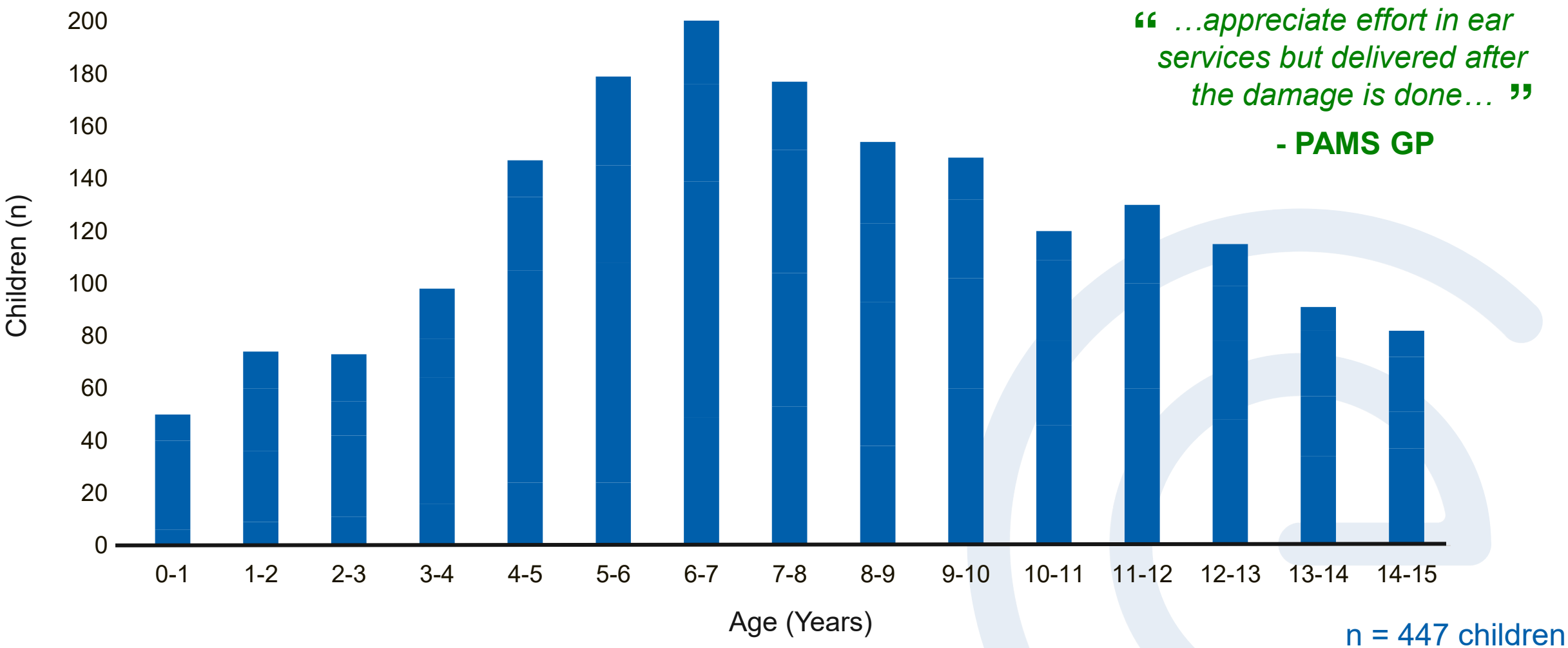
Most children receive their **first middle-ear check** at 6 years old



Most children receive their first middle-ear check at 6 years old



Most children receive their **first middle-ear check** at 6 years old



Key Learning 3

1 in 4 children in the East Pilbara present with **healthy ears**

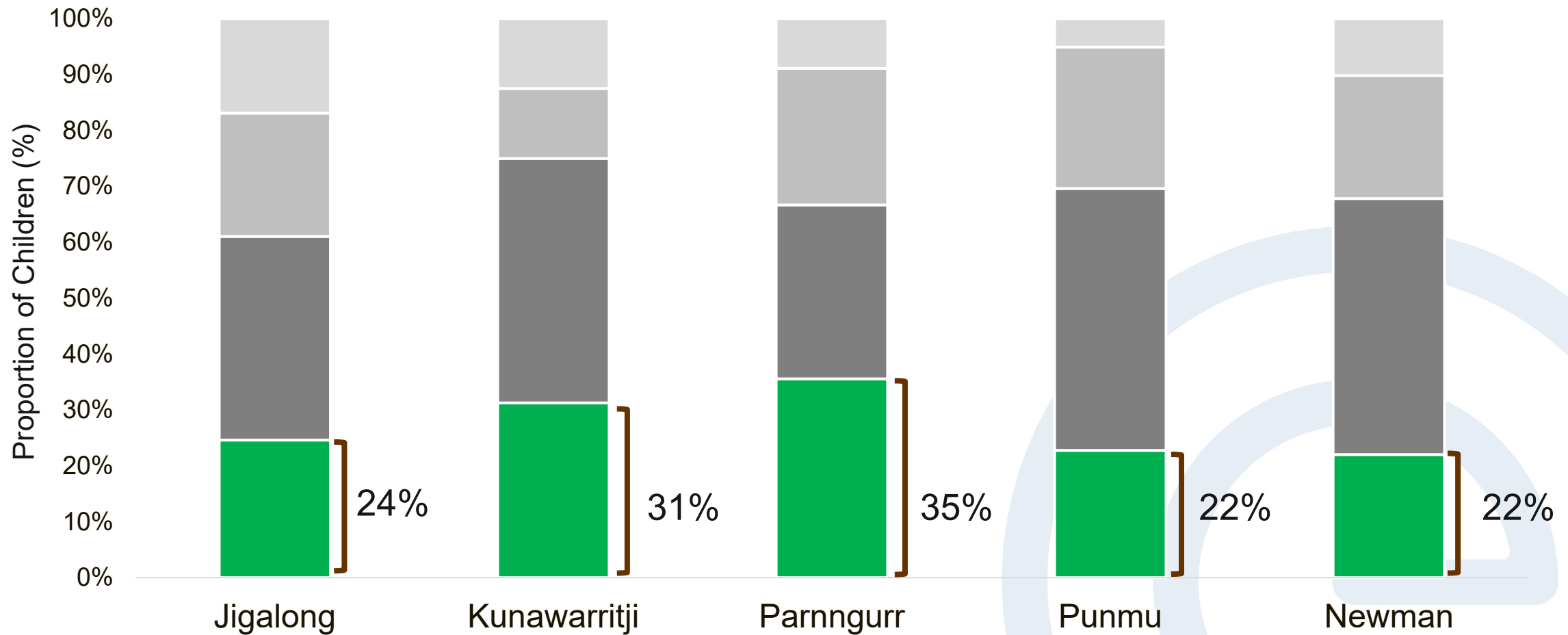


Government of Western Australia
WA Country Health Service

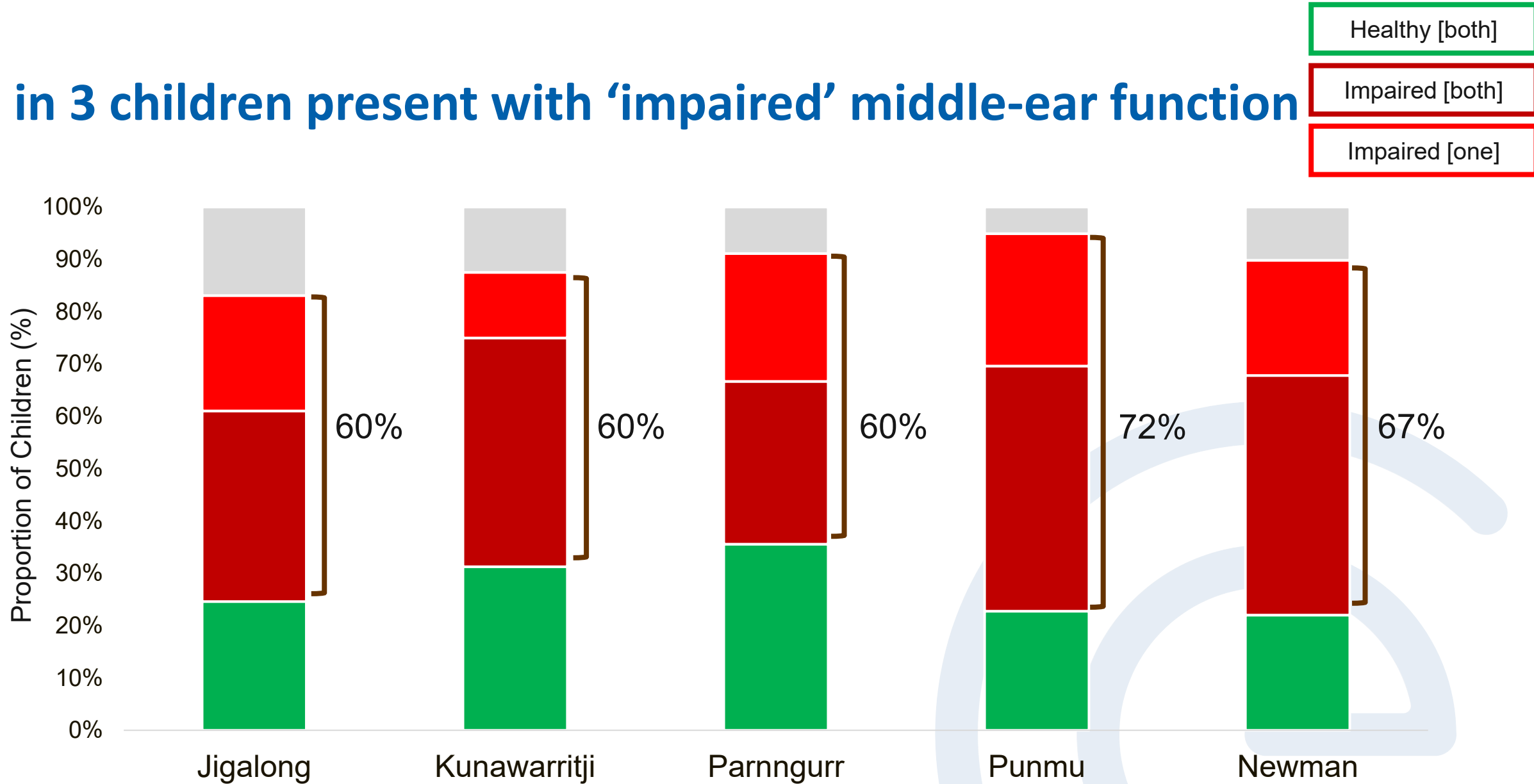


Healthy [both]

1 in 4 children present with 'healthy' middle ear function



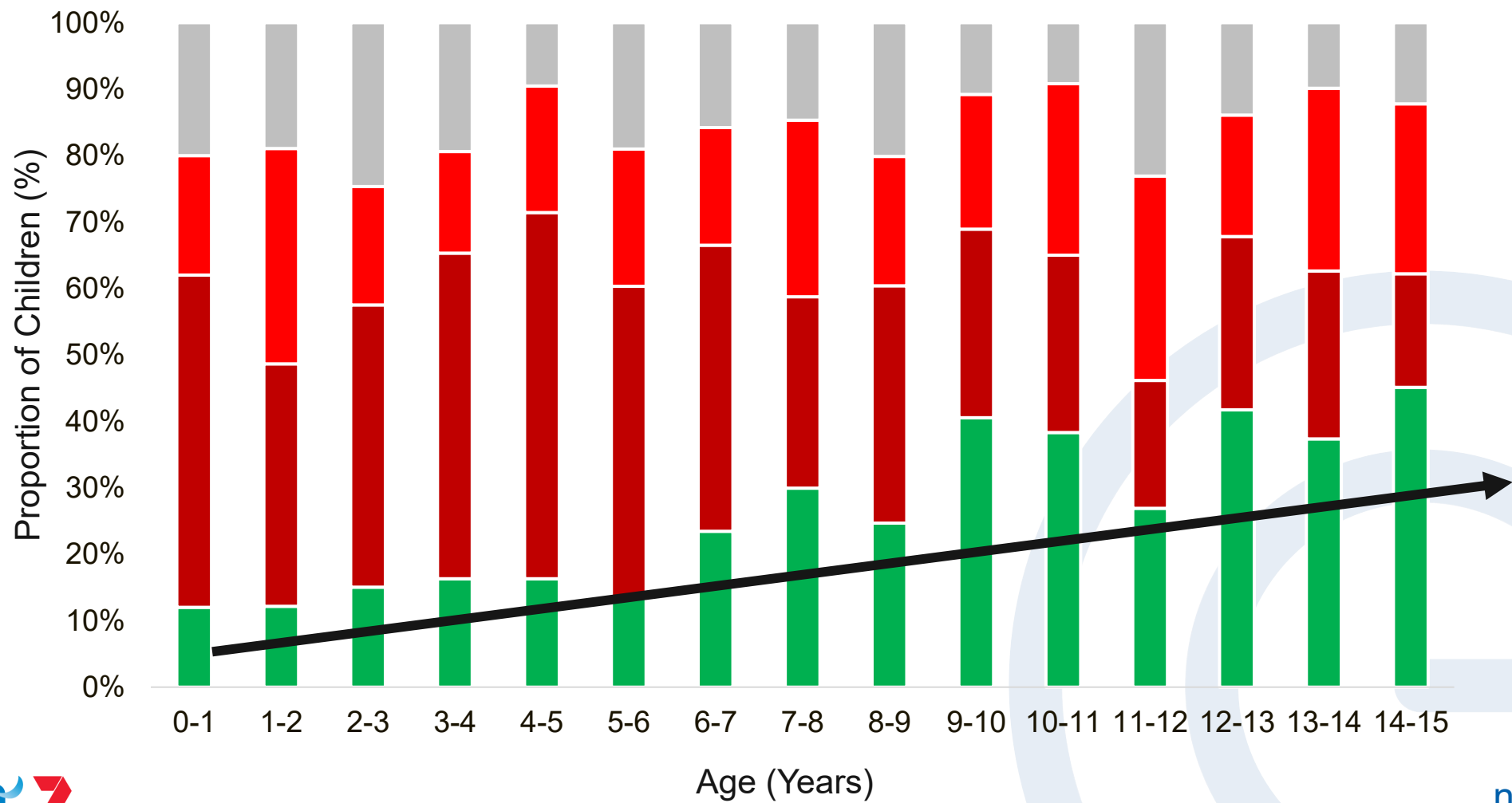
2 in 3 children present with 'impaired' middle-ear function



n = 447 children

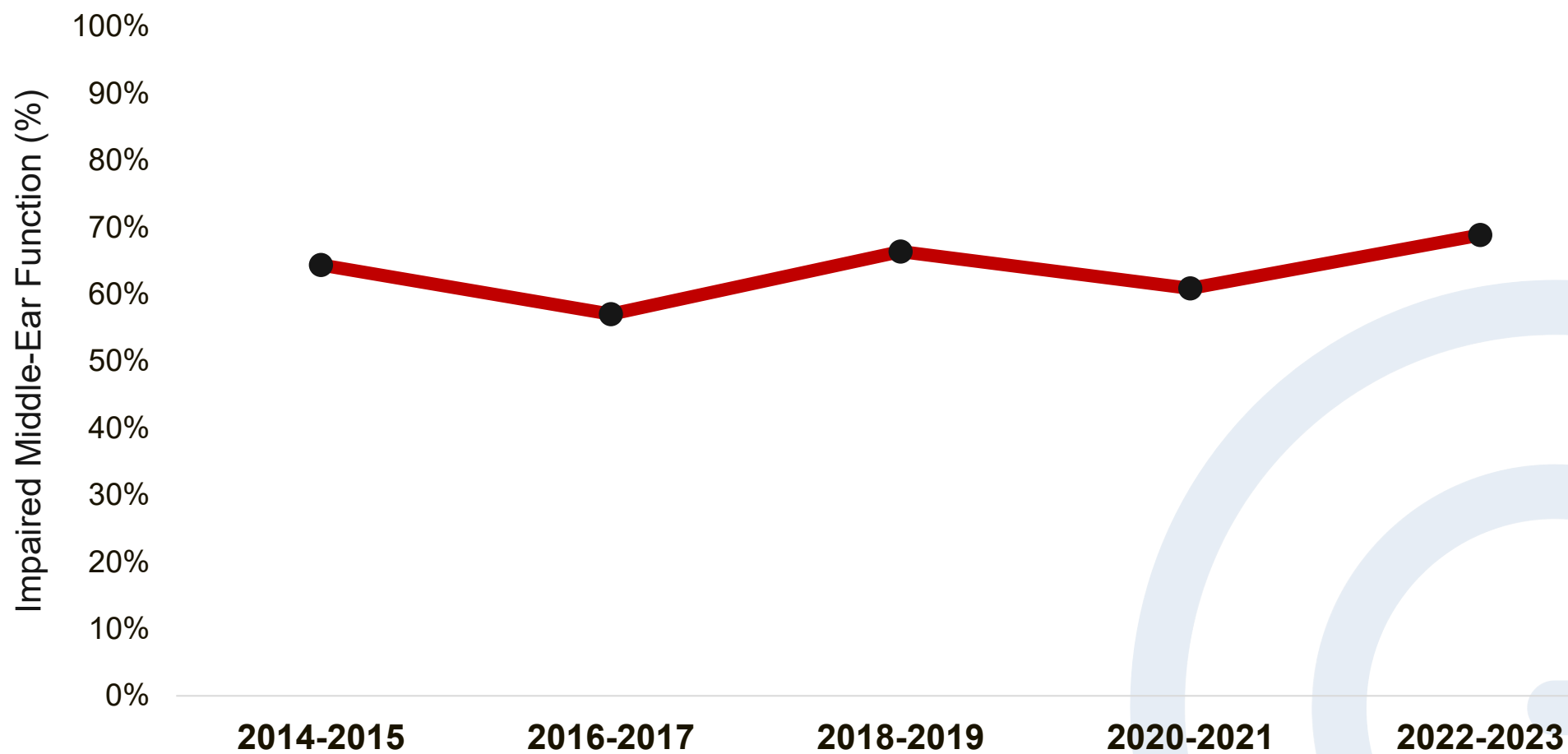
Ear Status in the East Pilbara: by Age

- Healthy [both]
- Impaired [both]
- Impaired [one]



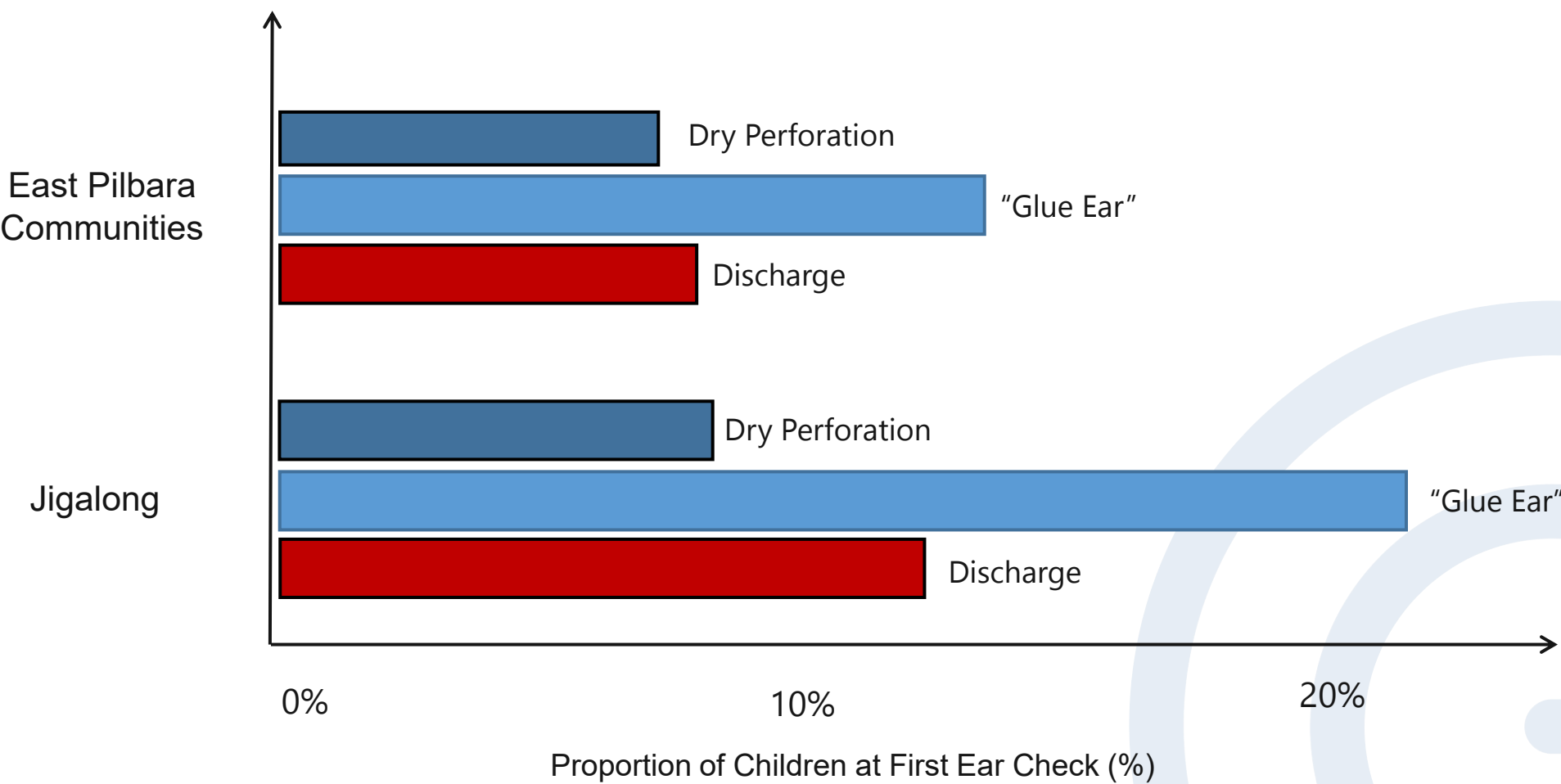
n = 447 children

Sustained rate of 'impaired' middle-ear presentation



n = 447 children

Ear Status in the East Pilbara: By Remote Location



Key Learning 4

1 in 3 children in the East Pilbara present with **normal hearing**



Government of **Western Australia**
WA Country Health Service



1 in 3 children present with normal hearing

Proportion of Children (%)

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

3-5 Years

6-8 Years

9-11 Years

12-14 Years

Age

- Normal Hearing [both ears]
- Normal Hearing [one ear]
- Hearing Loss [both ears]

66.7%

19%

31%

39%

33%

n = 186 children

Key Learning 5

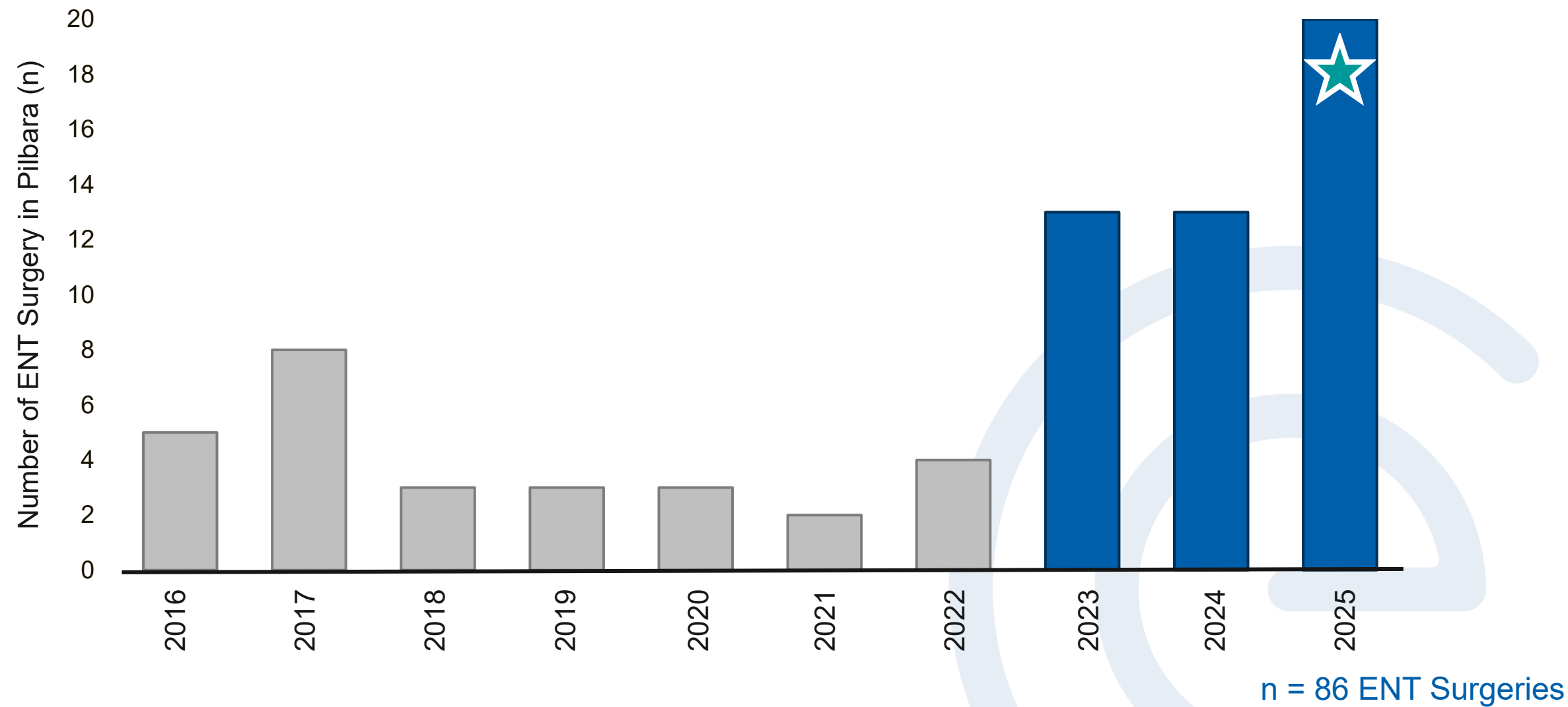
Ear health coordination improves service delivery



Government of **Western Australia**
WA Country Health Service



Ear Health Coordination Supports Community to Surgery



Empowering Clinical Practice: Puntukurnu Aboriginal Medical Service

Christina Hunn

PAMS Director of Clinical Services



Empowering Clinical Practice: Reflecting on learnings

Accurate patient data is essential for coordinated management of ear and hearing health

- ✓ Visiting services have access to Communicare
- ✓ Visiting team enters clinical notes directly
- ✓ Established pathway for WACHS ENT Surgeon to send operation reports to Ear Health Coordinator

- ⚠ Some visiting services do not enter data directly
- ⚠ Delayed data sharing
- ⚠ Burden on local team to upload reports
- ⚠ Data not always captured in a way that is easy to report and evaluate

Empowering Clinical Practice: Reflecting on learnings

Ear checks are not happening early enough

Resource Limitations

- Shortage of child health staff
- Heavy workload for RANs

Multiple Health Priorities

- Ear health competes with other urgent needs

Empowering Clinical Practice: Reflecting on learnings

Ear Health Coordination improves service delivery



Improving
communication
between
services



Improving
coordination
between
services



**Dedicated
focus** on ear
health needs



Supporting
community
needs

Shaping Future Direction

Lucy Mitchell

Ear Health Coordinator



Improving data sharing

Shared clinical item for visiting teams to make data entry consistent and easy to report later

Agreed roles and data agreements with key stakeholders

Improving data sharing

Shared clinical item for visiting teams to make data entry consistent and easy to report later

Agreed roles and data agreements with key stakeholders

Stronger focus on 0 – 3 age group

Child health nurse role is critical

Collaboration with Australian Family Partnership Program, playgroups, HAPEE

Improving data sharing

Shared clinical item for visiting teams to make data entry consistent and easy to report later

Agreed roles and data agreements with key stakeholders

Stronger focus on 0 – 3 age group

Child health nurse role is critical

Collaboration with Australian Family Partnership Program, playgroups, HAPEE

Targeted Ear Treatment Program

School treatments and home visits

Primary Health Team, Visiting Specialists and Community working together to improve outcomes

Questions?



Government of Western Australia
WA Country Health Service



Stronger Together, Thank You.

- **Sandra Bellekom** Ear Science CEO
- **Robby Chibawe** PAMS CEO
- **Christina Hunn** PAMS Director of Clinical Services
- **Michele Clapin** Hearing Australia First Nations Program
- **Emily Furness** Hearing Australia First Nations State Manager
- **Liz Peglar** WACHS Regional Manager Health Information
- **Helen Cribb** WACHS Research Governance Coordinator
- PAMS Board of Directors
- PAMS Clinical Team
- Health Hearing Outback Team
- Hearing Australia Audiology Team
- WACHS Health Information Team
- Community Consultation Members
- Channel 7 Telethon Trust

BHP

**RURAL
HEALTH
WEST**

**MINERAL
RESOURCES**



Government of Western Australia
WA Country Health Service


**Hearing
Australia**


**EAR
SCIENCE**
Institute Australia


PAMS
Puntukurnu Aboriginal
Medical Service

PROUDLY SUPPORTED BY
telethon 