Improving Quality of Newborn Care in Primary Health Care Centres in Nigeria Through an Integrated Approach

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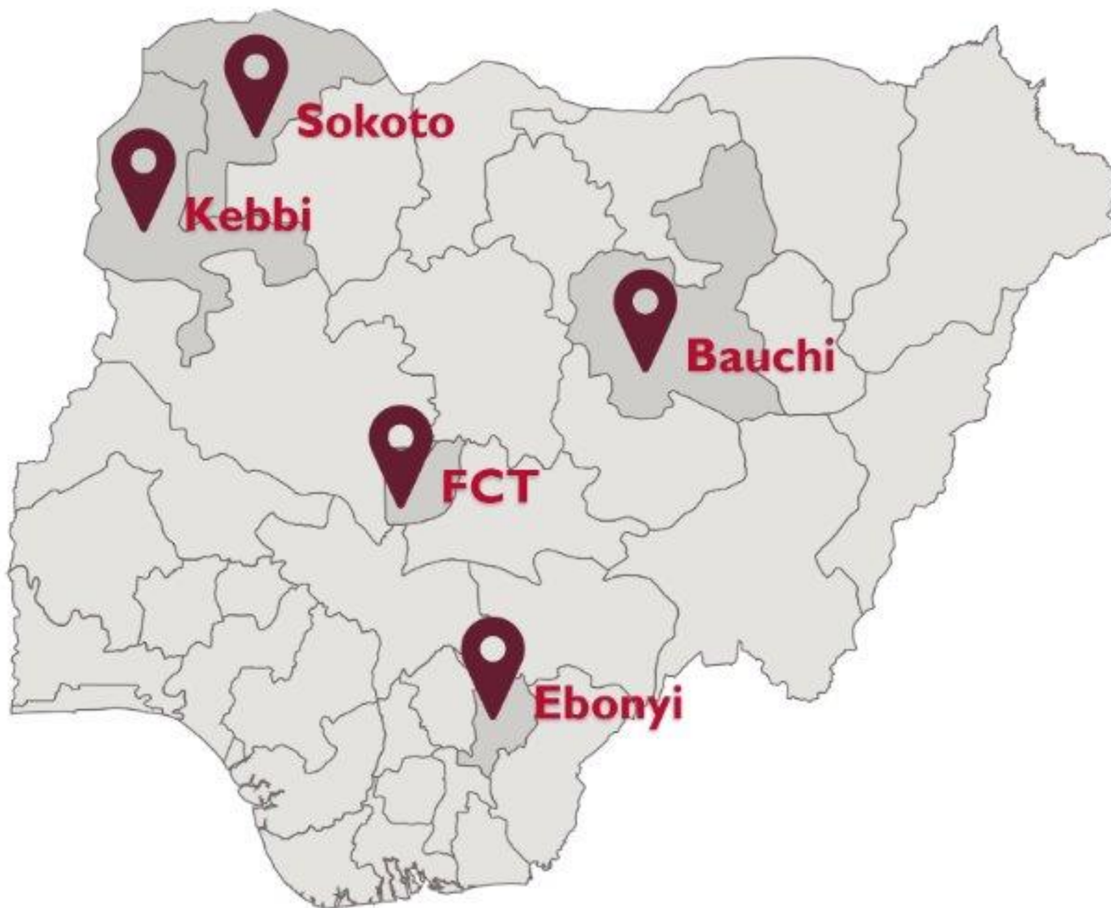
Nigeria

USAID Integrated Health Program in Nigeria aims to improve maternal and child health outcomes

The goal of the Integrated Health Program (IHP) is to contribute to state-level **reductions in maternal and child morbidity and mortality** and to **increase the capacity of health systems** (public and private) to **sustainably** support **quality primary health care (PHC) services.**

IHP supports five states and 1300+ healthcare facilities in Nigeria



1,054
PRIMARY HEALTHCARE CENTERS AUGMENTED

1,113
PPMV AND COMMUNITY PHARMACISTS BOLSTERED

102
SECONDARY HEALTHCARE CENTERS SUPPORTED

166
PRIVATE HEALTHCARE CENTERS REINFORCED

5
STATES

83
HEALTH AUTHORITIES STRENGTHENED

1,025
WARDS COVERED

TO REACH
5.64M+
WOMEN OF REPRODUCTIVE AGE AND CHILDREN UNDER FIVE

IN
5
YEARS

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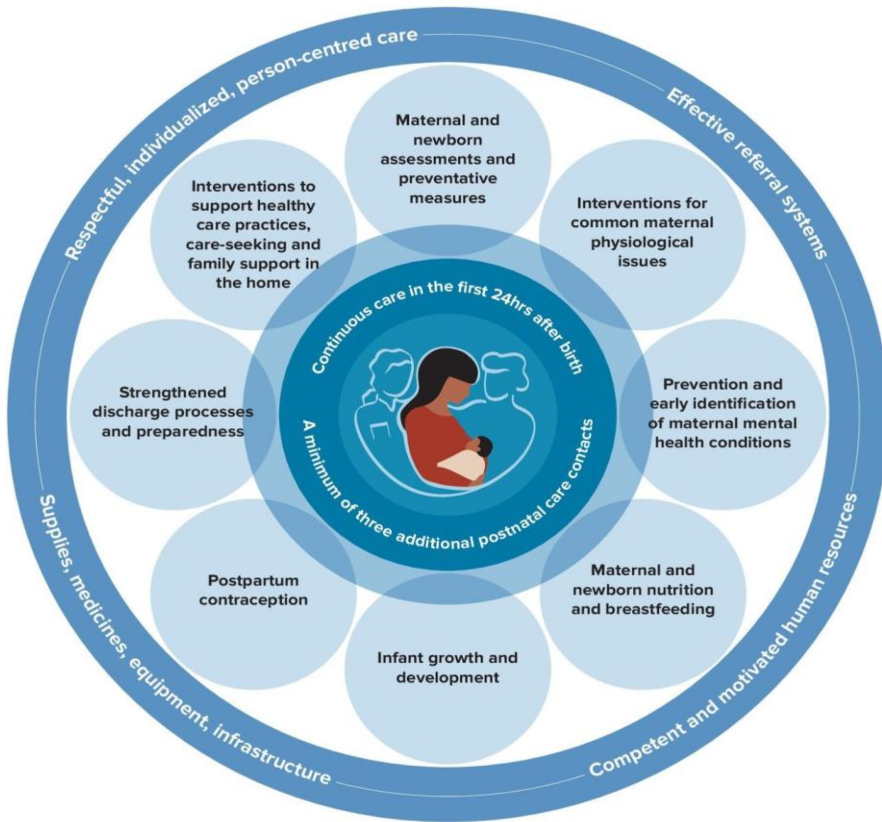
WHO Postnatal Care Model

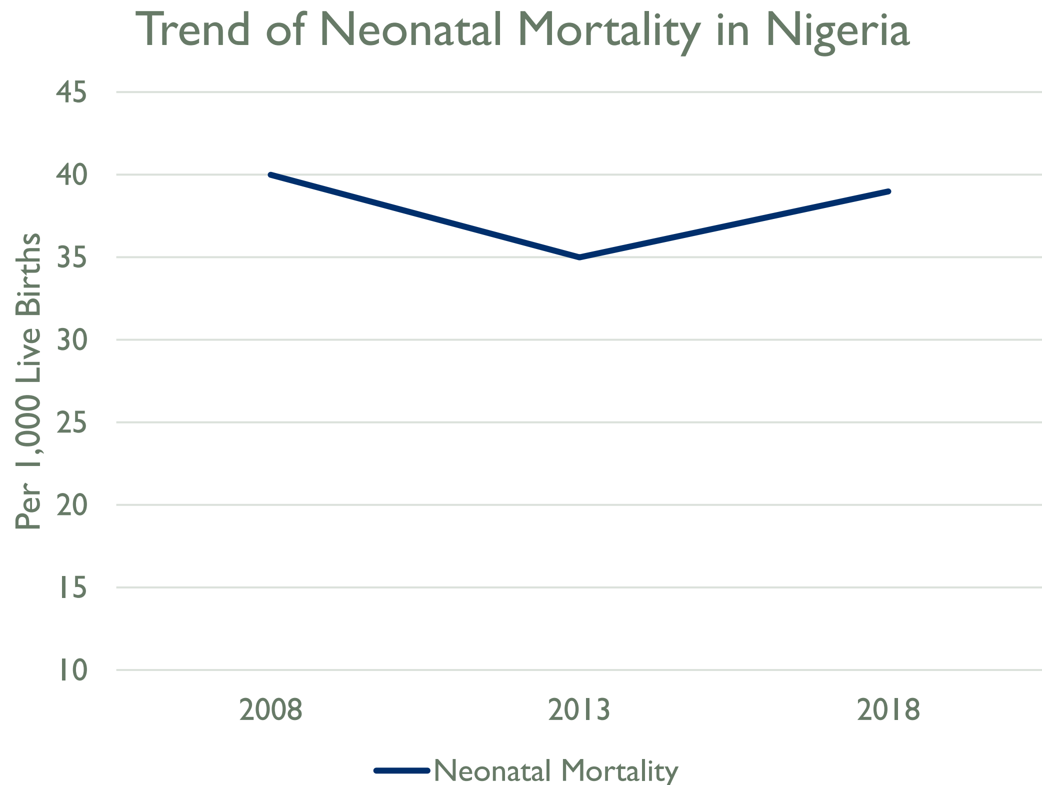


WHO recommends a minimum of 4 postnatal care contacts

- Assess clinical signs (such as feeding, convulsions, fast breathing, fever, jaundice)
- Ensure the use of chlorhexidine for umbilical cord care
- Promote early and exclusive breastfeeding
- Reinforce key newborn care messages for healthy care practices

Aleena M Wojcieszek et al. BMJ Glob Health 2023;8:e010992

Health outcomes in Nigeria highlight challenges



According to Nigeria NDHS 2018:

- **Prenatal Care** - 57% of women had 4 prenatal contacts while pregnant.
- **Skilled Delivery** - 43% of deliveries were assisted by a skilled provider.
- **Post-natal Care** - 38% of newborns received postnatal check within 48 hours after birth.
- **Newborn** - Only 11% of live births had chlorohexidine applied within 24 hours of birth.

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Situational analysis prior to launch

INPUTS

- Many facilities lacked structural integrity and basic medical equipment.
- Severe shortage of specialized skilled workers
- The capacity of the HCWs for clinical and non-clinical functions were sub-optimal

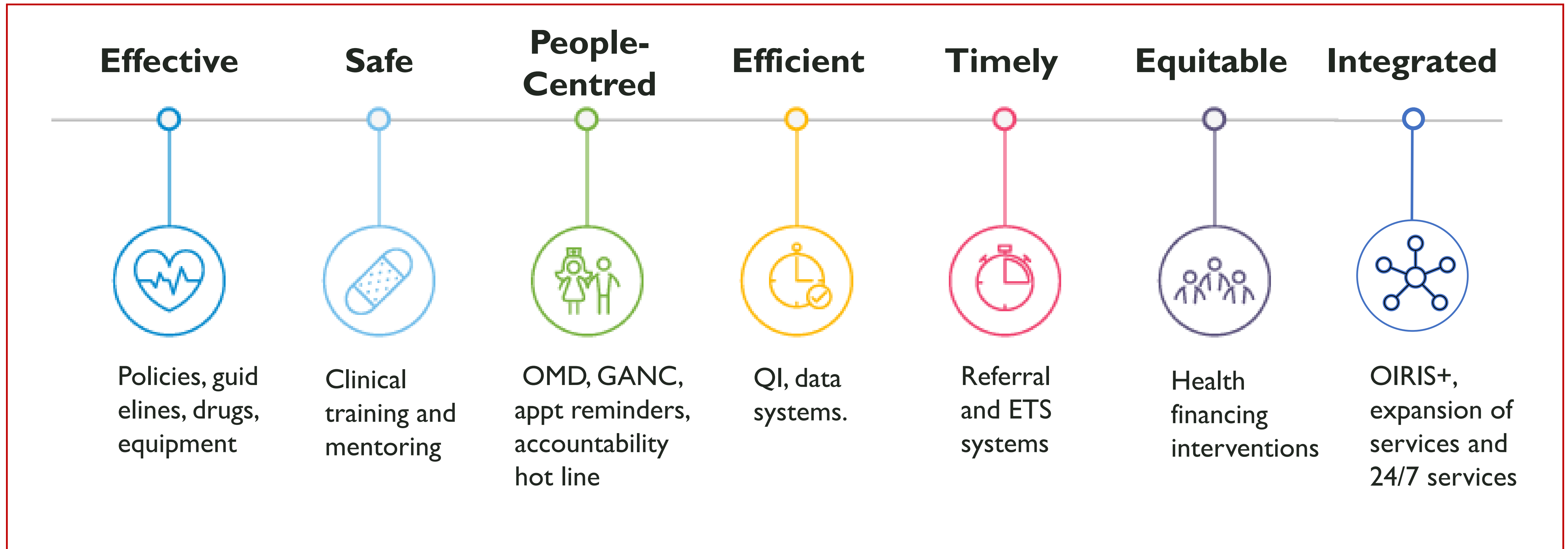
PROCESSES

- Nascent approaches for performance review
- Data analysis irregular and weak management practices to follow up on performance gaps.
- Several facilities lack the means for adequate documentation of referrals.

GOVERNANCE

- Weak capacity of the State level Technical Working Groups to oversee and guide activities at the LGA and Health Facility levels.
- State-wide policies and guidelines for MNCH were outdated, or non-existant

The WHO Quality of Care framework



QI Activities in five States

I

Development of QI Plans

Supported the **development and domestication of QoC** Operational Plans for the States.

II

Capacity Building

Led the **composition** and **capacity building on QI** of the State, LGHA and facility QoC Committees and teams to provide effective leadership & management of state-wide QoC activities.

III

Performance Management

Provided performance management support to the States to **identify relevant QoC indicators** and build capability to review performance to guide areas for improvement.

IV

Peer-Peer Learning Sessions

Supported the State and LGHA to **conduct** monthly & quarterly QI **peer-peer learning and sharing sessions** to facilitate spread of best practices and review progress across State.

V

Mentoring and Coaching

Supported facility **mentoring and coaching of QITs** across all QI sites, to design QI projects and test change ideas based on performance of indicators of interest.

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Integrated Quality of Care Interventions

SERVICE DELIVERY

- PHC Makeovers
- Supply of essential equipment
- Clinical training and mentoring
- Facility management training and mentoring
- Mortality Reviews
- OIRIS+ and Open Maternity Days

PROCESSES

- Data quality, validation, use
- BHCPF and State Health Insurance Scheme roll-out
- Referral systems and ETS
- Digital health tools
- Integrated supportive supervision

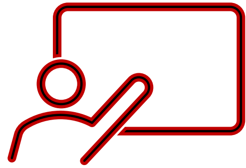
GOVERNANCE

- Strengthen TWGs, committees, SERICC, SEMCHIC
- Policy domestication and implementation
- Costed Annual Operational Plan development
- Evidence-based advocacy

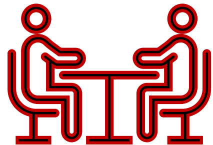
Quality Improvement Approach

Quality Improvement

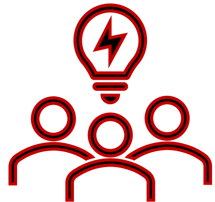
Across 5 states (February 2020 to December 2023)



2000+ PHC staff were trained



60 QI TWG meetings conducted



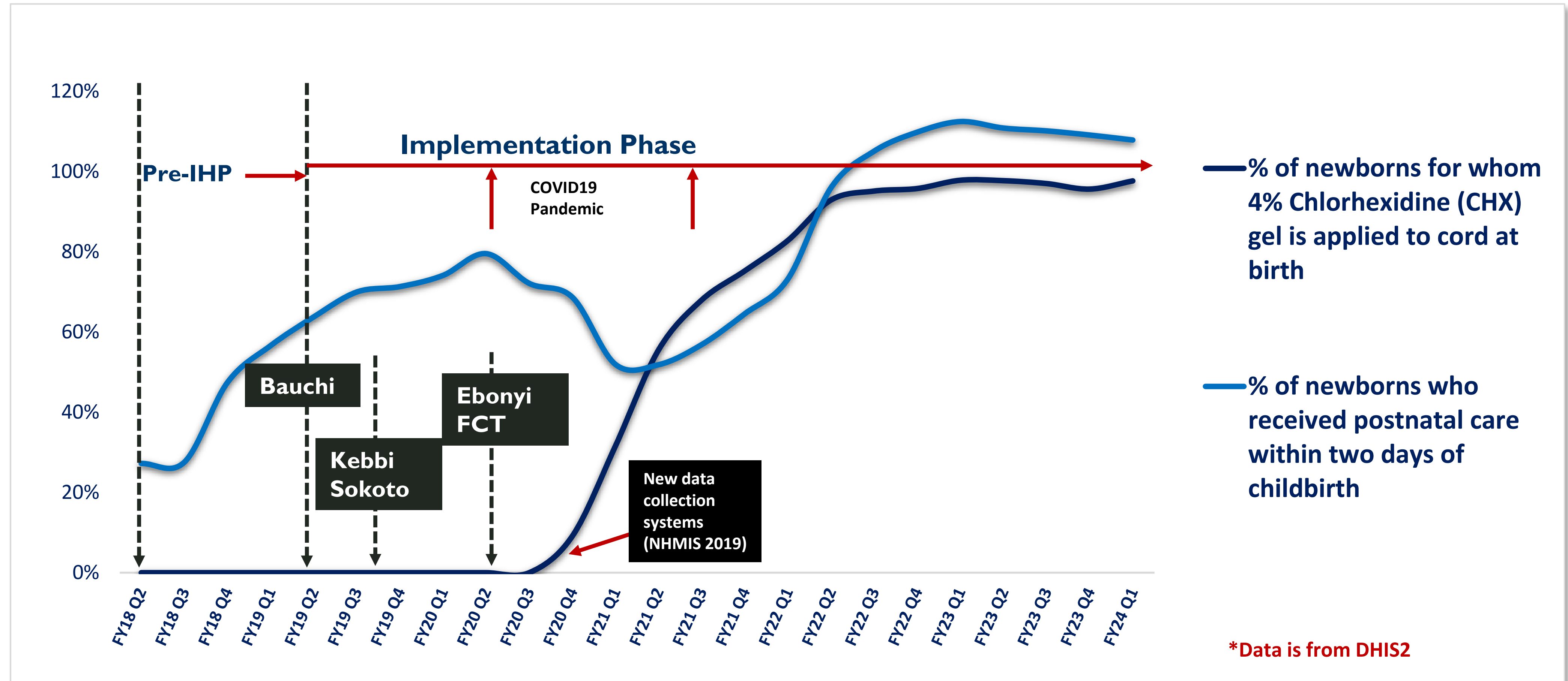
200+ peer learning sessions held

Some of the change ideas tested…

1. Expanding prenatal counselling topics to include the benefits of early initiation of skin-to-skin contact and early breastfeeding.
2. Creation of newborn corners in the labour wards (with resuscitation equipment).
3. Including CHX and vit K in the drug revolving fund list for timely procurement to prevent stock-out.
4. Chlorohexidine gel for cord care and vitamin K were included in the delivery packs given to every woman in the labour ward.

Newborn Health Data

1,389 Health Facilities 2018 - 2024



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Thank You!

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The Bibi Study

Prof Dan McAullay

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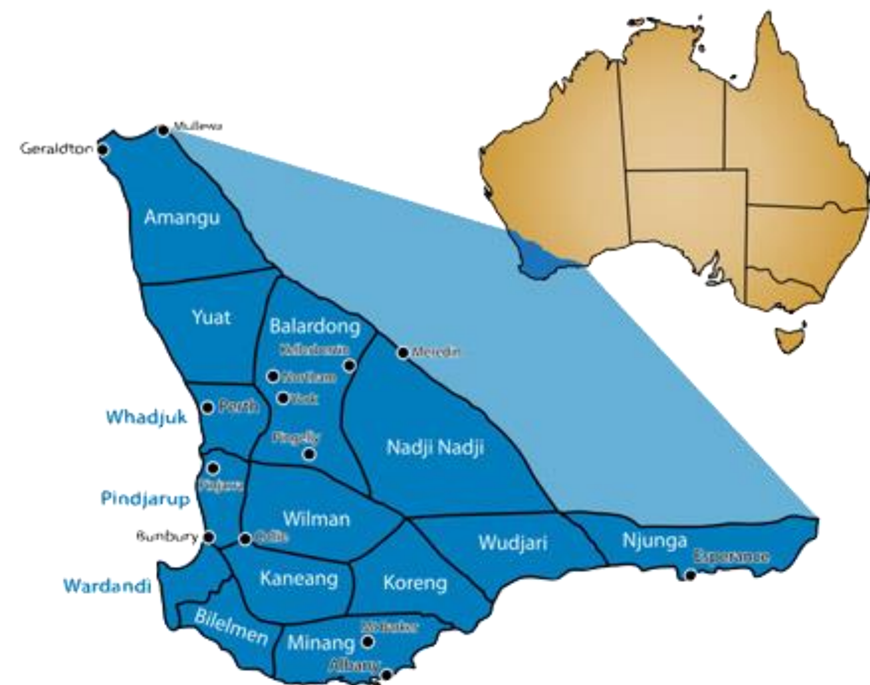
Kurongkurl Katitjin Edith Cowan University

AUSTRALIA ECU EDITH COWAN UNIVERSITY



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Aboriginal people are known to have occupied mainland Australia for **at least** 65,000 years. It is widely accepted that this **predates** the modern human settlement of Europe and the Americas.

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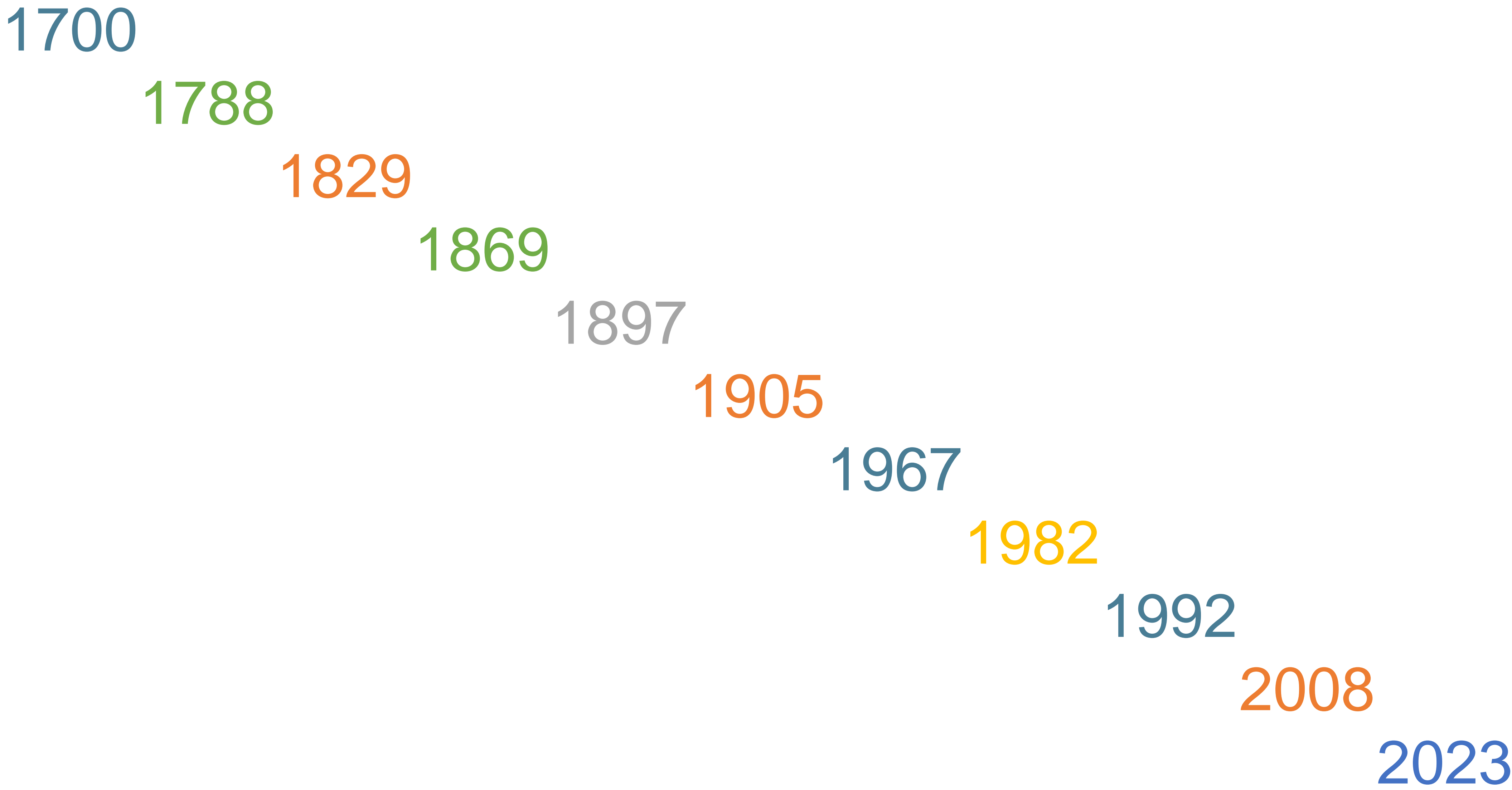

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2022

24 388 Indigenous births in Australia

2779 Indigenous births in Western Australia

2021

8.2% of Indigenous births were pre-term

2020

9.6% of Indigenous births were low birthweight

Public

Australia has a universal public health insurance program (Medicare) that is financed through general tax revenue and a government levy.

- Hospitals
- Primary Health care
- ACCHS
- MBS / PBS

Private

- Hospitals
- Allied Health
- Dental

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In 2018, the burden of disease among Aboriginal and Torres Strait Islander people was 2.3 times that of non-Indigenous Australians. Among First Nations people, mental and substance use disorders were the leading contributor to disease burden (24%).

National Health Performance Framework

The Aboriginal and Torres Strait Islander Health Performance Framework

Linked to Closing the Gap

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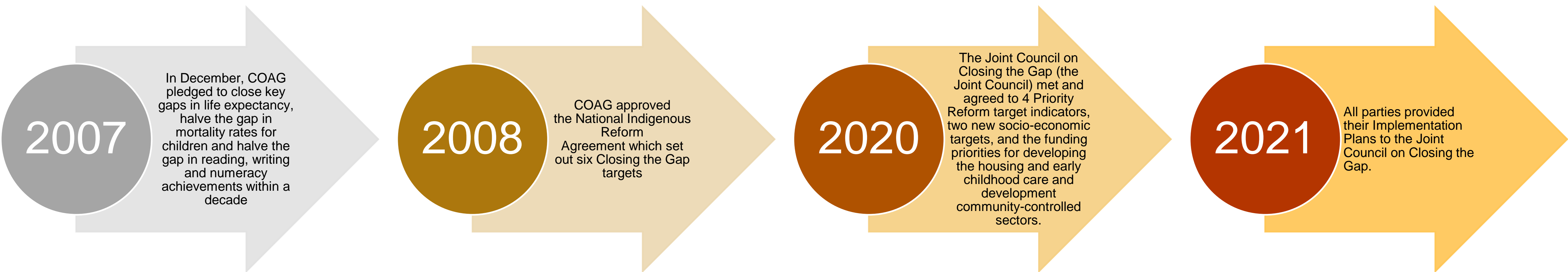

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Outcome	Target
1 Aboriginal and Torres Strait Islander people enjoy long and healthy lives.	Close the Gap in life expectancy within a generation, by 2031.
2 Aboriginal and Torres Strait Islander children are born healthy and strong.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander babies with a healthy birthweight to 91 per cent.
3 Aboriginal and Torres Strait Islander children are engaged in high quality, culturally appropriate early childhood education in their early years.	By 2025, increase the proportion of Aboriginal and Torres Strait Islander children enrolled in Year Before Fulltime Schooling (YBFS) early childhood education to 95 per cent.
4 Aboriginal and Torres Strait Islander children thrive in their early years.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander children assessed as developmentally on track in all five domains of the Australian Early Development Census (AEDC) to 55 per cent.
5 Aboriginal and Torres Strait Islander students achieve their full learning potential.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander people (age 20–24) attaining Year 12 or equivalent qualification to 96 per cent.
6 Aboriginal and Torres Strait Islander students reach their full potential through further education pathways.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25–34 years who have completed a tertiary qualification (Certificate III and above) to 70 per cent.
7 Aboriginal and Torres Strait Islander youth are engaged in employment or education.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander youth (15–24 years) who are in employment, education, or training to 67 per cent.
8 Strong economic participation and development of Aboriginal and Torres Strait Islander people and communities.	By 2031, increase the proportion of Aboriginal and Torres Strait Islander people aged 25–64 who are employed to 62 per cent.
9 Aboriginal and Torres Strait Islander people secure appropriate, affordable housing that is aligned with their priorities and need.	A: By 2031, increase the proportion of Aboriginal and Torres Strait Islander people living in appropriately sized (not overcrowded) housing to 88 per cent. B: By 2031, all Aboriginal and Torres Strait Islander households: i. within discrete Aboriginal and Torres Strait Islander communities receive essential services that meet or exceed the relevant jurisdictional standard; ii. in or near to a town receive essential services that meet or exceed the same standard as applies generally within the town (including if the household might be classified for other purposes as a part of a discrete settlement such as a 'town camp' or 'town-based reserve').

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Outcome	Target
10 Aboriginal and Torres Strait Islander adults are not overrepresented in the criminal justice system.	By 2031, reduce the rate of Aboriginal and Torres Strait Islander adults held in incarceration by at least 15 per cent.
11 Aboriginal and Torres Strait Islander young people are not overrepresented in the criminal justice system.	By 2031, reduce the rate of Aboriginal and Torres Strait Islander young people (10–17 years) in detention by at least 30 per cent.
12 Aboriginal and Torres Strait Islander children are not overrepresented in the child protection system.	By 2031, reduce the rate of over-representation of Aboriginal and Torres Strait Islander children in out-of-home care by 45 per cent.
13 Aboriginal and Torres Strait Islander families and households are safe.	By 2031, the rate of all forms of family violence and abuse against Aboriginal and Torres Strait Islander women and children is reduced by at least 50%, as progress towards zero.
14 Aboriginal and Torres Strait Islander people enjoy high levels of social and emotional wellbeing.	Significant and sustained reduction in suicide of Aboriginal and Torres Strait Islander people towards zero.
15 Aboriginal and Torres Strait Islander people maintain a distinctive cultural, spiritual, physical, and economic relationship with their land and waters.	A. By 2030, a 15 per cent increase in Australia's landmass subject to Aboriginal and Torres Strait Islander people's legal rights or interests.
	B. By 2030, a 15 per cent increase in areas covered by Aboriginal and Torres Strait Islander people's legal rights or interests in the sea.
16 Aboriginal and Torres Strait Islander cultures and languages are strong, supported and flourishing.	By 2031, there is a sustained increase in number and strength of Aboriginal and Torres Strait Islander languages being spoken.
17 Aboriginal and Torres Strait Islander people have access to information and services enabling participation in informed decision-making regarding their own lives.	By 2026, Aboriginal and Torres Strait Islander people have equal levels of digital inclusion

Maladjiny Research Centre

Our purpose

- To conduct research and evaluation that improves the delivery of health services to Indigenous children and their families.

Our vision

- To ensure there are high quality health services that respond to needs of Indigenous children and their families.

Our mission

- To support Indigenous families having active participation in a responsive health care system.

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Research activity

Research and evaluation of service delivery / models of care systems and existing health and wellbeing programs both existing and new.

Implementation

Data

Evidence synthesis

Building capacity within health services, researchers, policy makers, and students

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The Bibi Study

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Investigators

Professor Daniel McAullay, Professor Sandra Eades, Professor Karen Edmond, Professor Rhonda Marriot, Associate Professor Natalie Strobel, Dr Jocelyn Jones, Professor Joanne McKenzie, Dr Clair Scrine, Ms Anne-Marie McHugh, Ms Francine Eades, Ms Janinne Gliddon, Dr Kimberley McAuley

The project is based at the Kurongkurl Katitjin, Centre for Indigenous Australian Education and Research at Edith Cowan University.

NHMRC Targeted Call for Research into Nutrition in Aboriginal and Torres Strait Islander Peoples 2018

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Aims and Objectives

The overall **aim** of this project is to improve breastfeeding rates of Aboriginal infants in the Perth Metropolitan area.

The **primary objectives** are to:

- Determine the exclusive and predominant breastfeeding rates of Aboriginal infants at discharge and eight weeks and four months of age.

- Test whether a continuous quality improvement (CQI) program provided to staff at Community Health can achieve substantive and sustained improvements in breastfeeding rates among Aboriginal infants.

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Study Design

Interrupted time series (ITS) design to determine the effectiveness of the CQI program delivered to selected community health staff at two community health regions on predominant breastfeeding rates at two and four months

Study setting

This study will be conducted in the Perth metropolitan area, which covers 5,384 km2. In 2018, there were 40,951 (2.1% of the Perth population) Aboriginal and Torres Strait Islander people resident in Perth. During 2018, 2,122 babies of Aboriginal and Torres Strait Islander descent were born in Western Australia. Of these, approximately 848 (39.5%) babies reside in the Perth area.

Study population

Administrative data will be collected for all Aboriginal and Torres Strait Islander babies who have attended Community health facilities for the 4.5 years prior to the intervention study period and 24 months after the intervention.

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Intervention and control regions

The CQI intervention will be delivered at two community health regions where there are a high proportion of Aboriginal infants attending the service.

Location-based control regions will be represented by seventeen community health centres.

These centres will not receive the CQI training or complete PDSA cycles.

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<table>
<tr><td colspan="51">Administrative data collection</td><td colspan="12"></td></tr>
<tr><td></td><td></td><td></td><td colspan="6">Ethics and governance approvals</td><td colspan="12">Pre-intervention</td><td colspan="6">Intervention</td><td colspan="24">Post-intervention</td><td colspan="12">Adminsitrative data collection, analysis report writing</td></tr>
<tr><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr>
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<tr><td colspan="3">Pre-Study</td><td colspan="60">Study period</td></tr>
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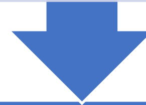
Study Guidance Group

All aspects of the study will be governed by a Study Guidance Group. This group is majority Aboriginal people and Aboriginal chaired. They provide their expertise on survey and interview questions, interpretation of the data and guide translation.

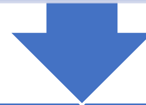
Pre-intervention phase

Survey & interviews with mothers



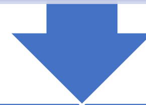
Intervention phase 1

Survey and interviews with health service staff



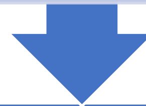
Intervention phase 2

Select staff to undertake continuous quality improvement training



Intervention phase 3

Nominated/selected staff/teams to develop and implement 2 x two-month cycles



Post-intervention phase

Survey and interviews mothers from sites involved in intervention	Interview staff involved in the intervention	Evaluate the intervention using administrative data on breastfeeding

Pre-intervention period (12 months)

- Survey and interview data from mothers of Aboriginal infants about their perceptions, barriers and facilitators on breastfeeding.

- Survey and interview data from health service providers including Aboriginal Health Workers, midwives, community health nurses and any staff member who may have contact with mothers and discuss breastfeeding.

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Intervention period (6 months)

Tailored CQI training to staff (2 months)

Training will be conducted and delivered by a highly experienced team working in clinical practice, management, evaluation, quality improvement, and policy, community and workforce development.

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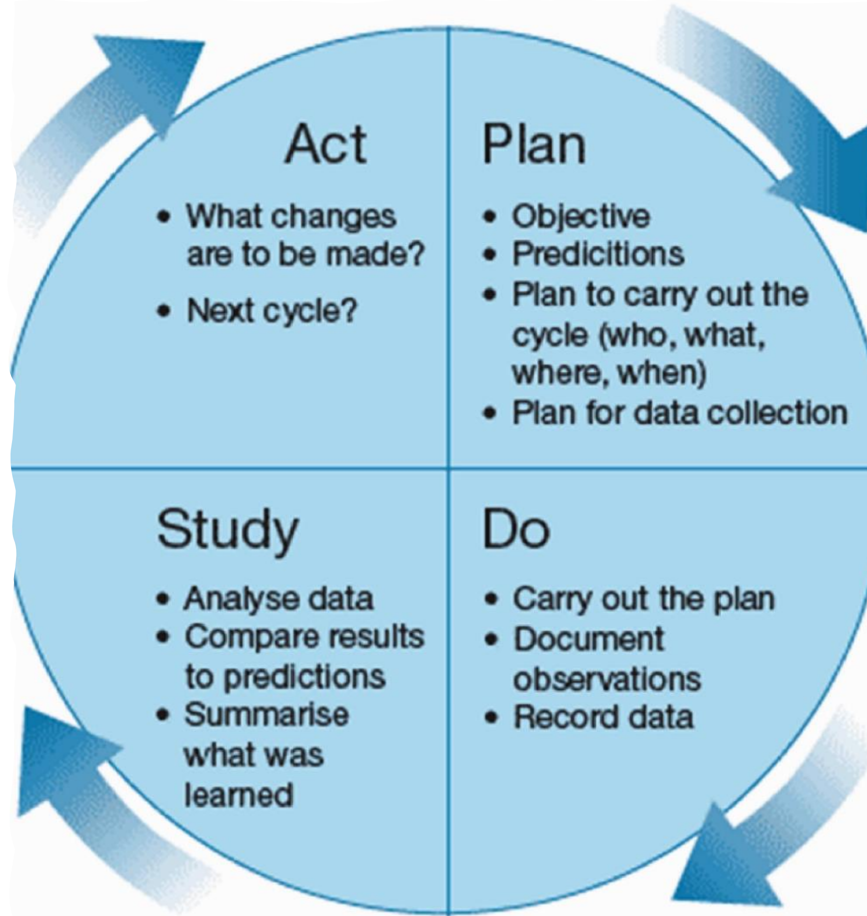
Intervention period (6 months)

Implement Breastfeeding CQI cycles (4 months)

- Teams and individuals will conduct two CQI cycles over four months.
- CQI cycles will be developed on topics chosen from the data from interviews or what health service providers deem important within their workplace.
- A staff member will be available to support teams to complete their CQI cycles and generate data to inform the team of their goals.
- This staff member will also be mentored by the CQI trainers.

PDSA



•There will be 2 cycles, one every 2 months.

•Our estimate of the PDSA work is approximately 5.5 hours as set out below over the 8 week cycle:

- Meeting 1: setting goals and tasks with the team (1 hour)
- Meeting 2, 3, 4, 5, 6 @ 30 minutes each to check in on how things are working
- Meeting 7: Review PDSA data (1 hour)
- Meeting 8: Set another goal (1 hour)

•In total the two PDSA cycles will be ~11 hours/person over four months.

•There will be statistical support and mentorship provided throughout the 4 months

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CQI training

- Lecture 1 Intro to CQI
- Lecture 2 Data for CQI
- Lecture 3 PDSA
- Lecture 4 Teamwork
- Lecture 5 Partnerships

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CQI training

- Lecture 1 Intro to CQI
    - Define CQI
    - Describe the history of CQI and its move into healthcare
    - Identify current forces driving changes in health care quality
    - Identify the principles of CQI in Primary Health Care
    - Identify the key CQI models in health care
    - Compare and contrast the differences between accreditation and CQI
    - Identify the social determinants of health relevant to breastfeeding
    - Identify the emerging CQI strategies used in PHC relevant to addressing current issues in breastfeeding
- Lecture 2 Data for CQI
- Lecture 3 PDSA
- Lecture 4 Teamwork
- Lecture 5 Partnerships

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CQI training

- Lecture 1 Intro to CQI
- Lecture 2 Data for CQI
- Lecture 3 PDSA
    - Describe the steps in a PDSA cycle and how to apply them in healthcare
    - Design a PDSA cycle with a team
    - Lead a PDSA cycle
    - Understand the importance of completing a PDSA cycle
    - Demonstrate problem solving and innovation within a PDSA cycle
- Lecture 4 Teamwork
- Lecture 5 Partnerships

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Governance arrangements

Governance approval

- Staff employed on the project will check GEKO and see if the PDSA has not been completed.
- If not, then submit the project to GEKO for approval.
- If yes, then determine new process to complete.

Cultural approval

- Once the process has been determined for the PDSA cycle, staff employed on the project to contact Cultural advisors from the ECU breastfeeding grant to determine whether process is culturally appropriate and receive feedback (if needed).

Start the PDSA

- Once both process have been approved then the PDSA process is ready to be implemented.

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Post-intervention period (24 months)

Interviews

Data and information

Administrative data

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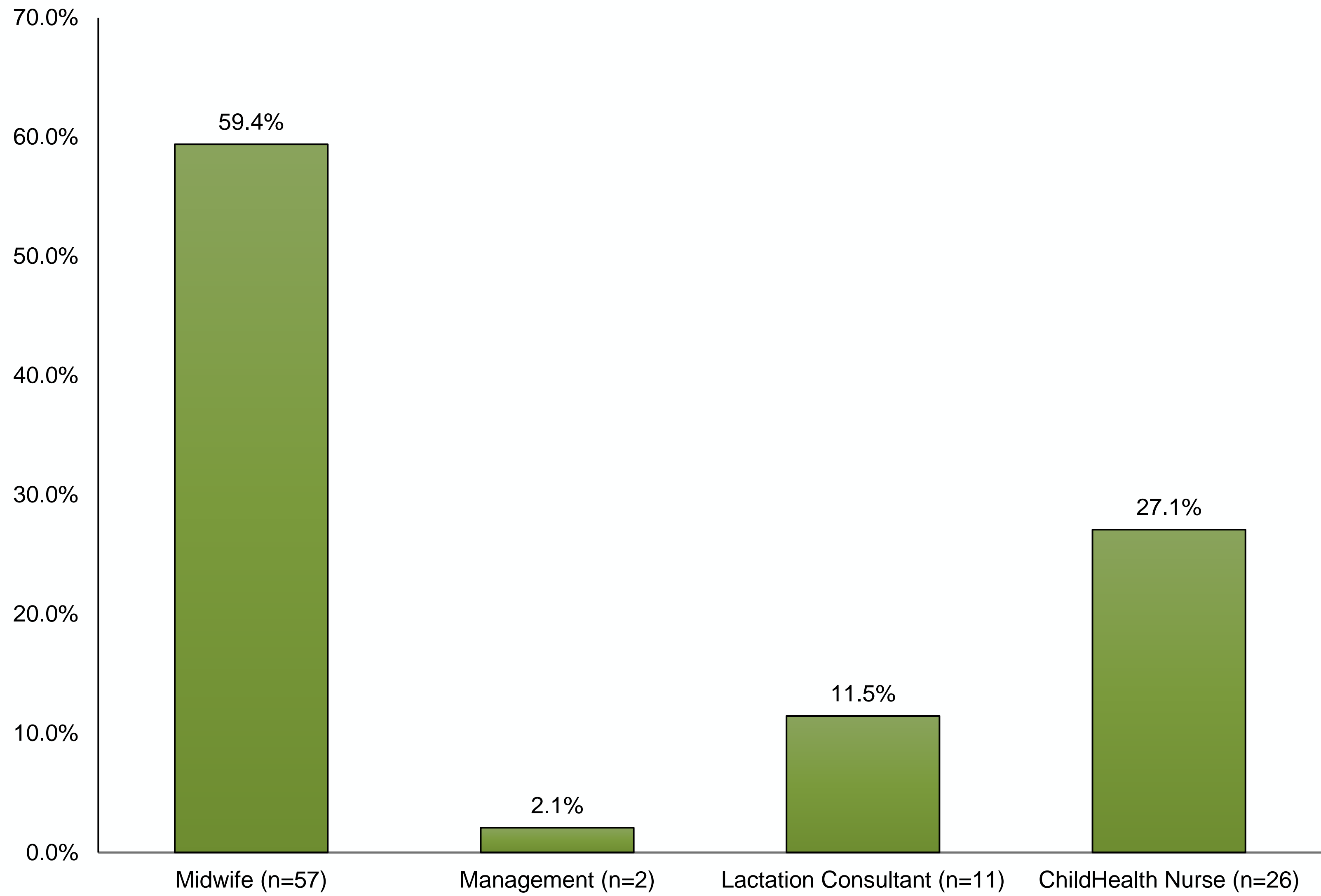

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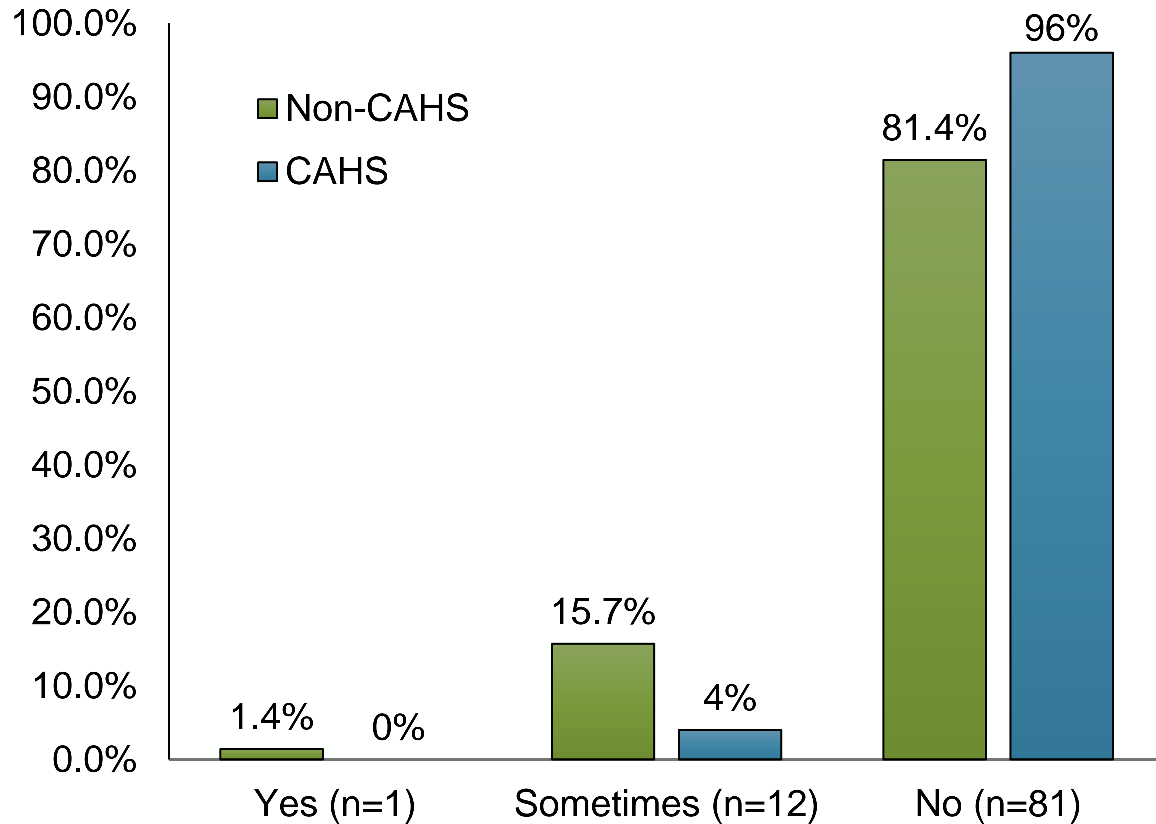
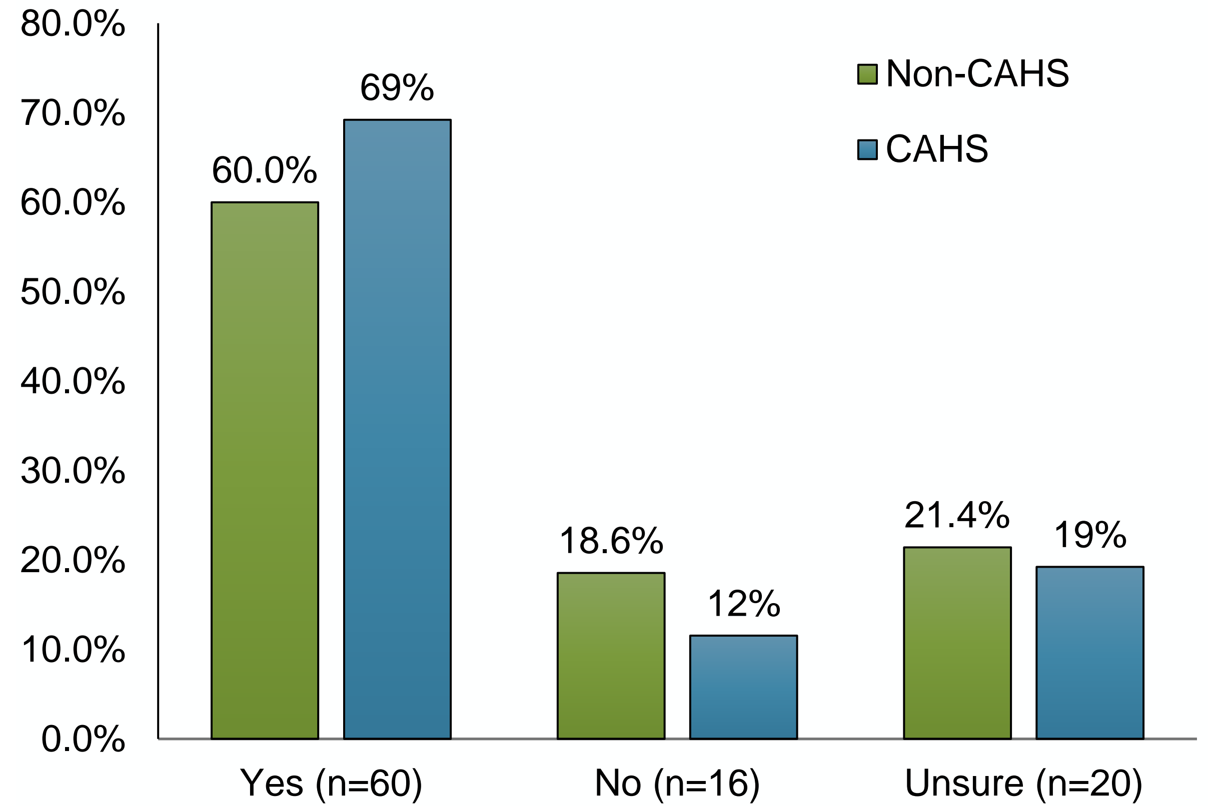
Do you have any concerns about talking with mothers of Aboriginal babies about breastfeeding their baby?



Do you think there are any specific considerations when assisting and/or discussing breastfeeding with mothers of Aboriginal babies?



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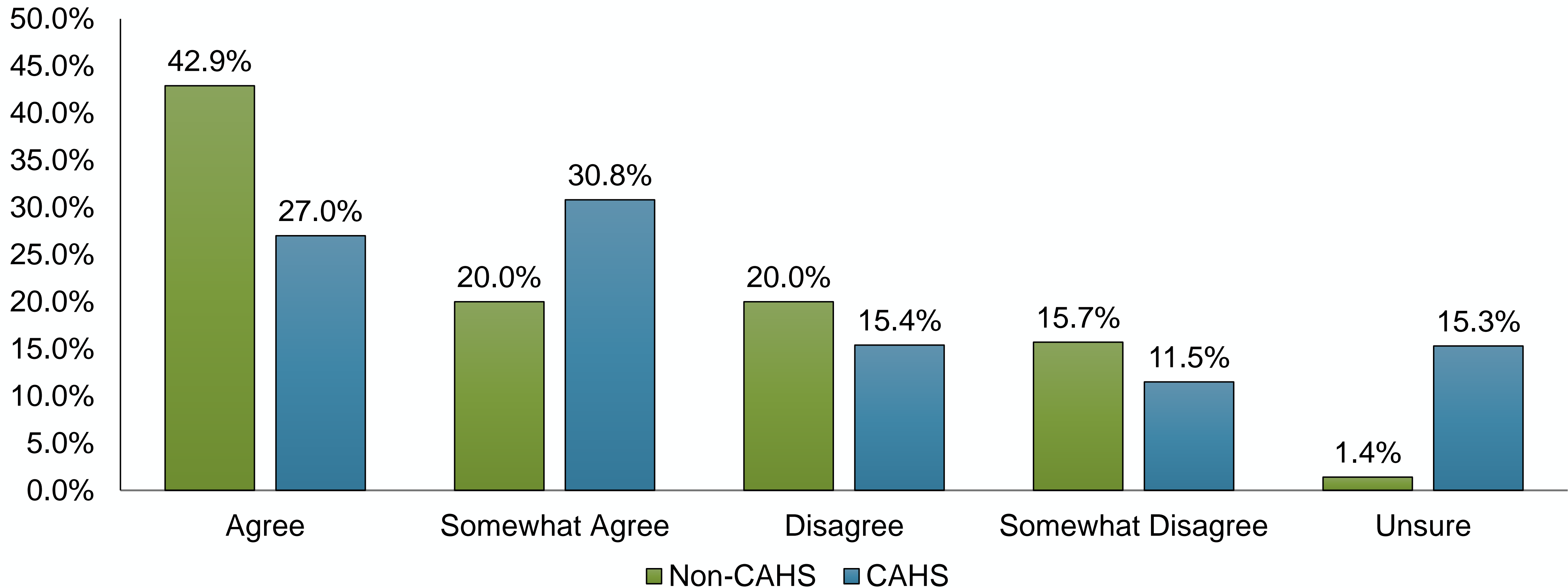
Mothers of Aboriginal babies require about the same amount of breastfeeding support as mothers of non-Aboriginal babies



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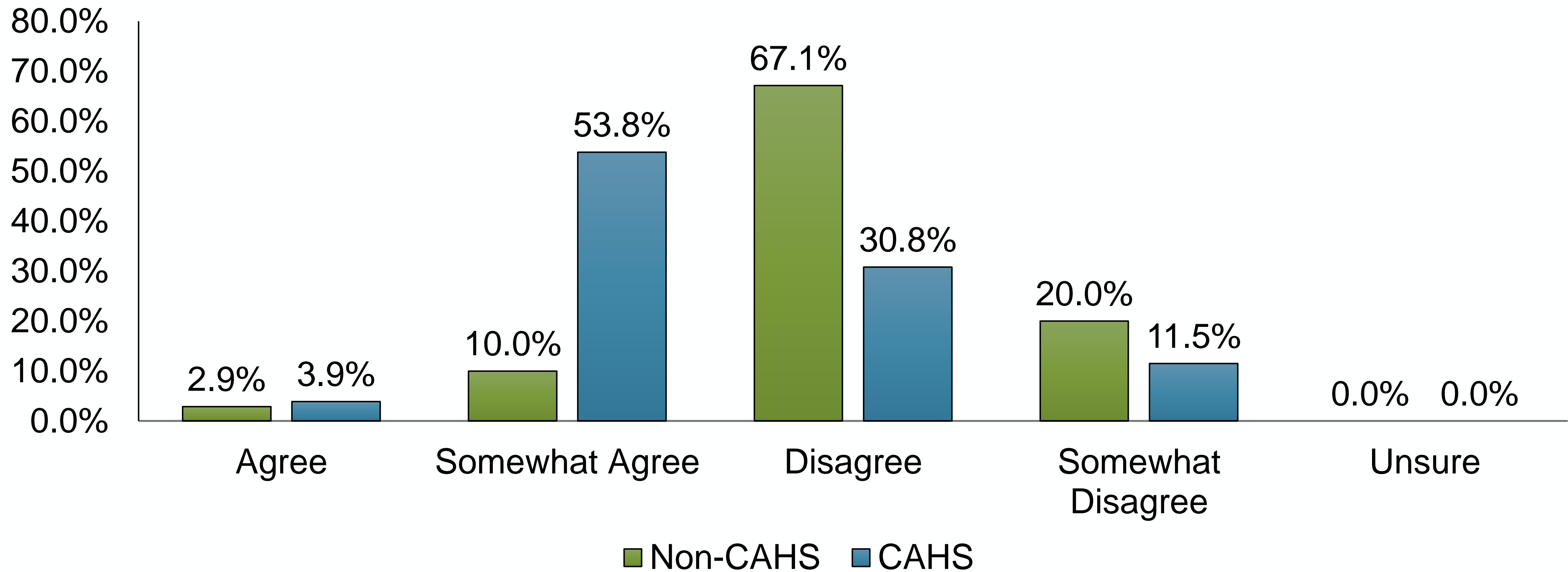
Mothers of Aboriginal babies ask for help with breastfeeding at about the same rate as mothers of non-Aboriginal babies



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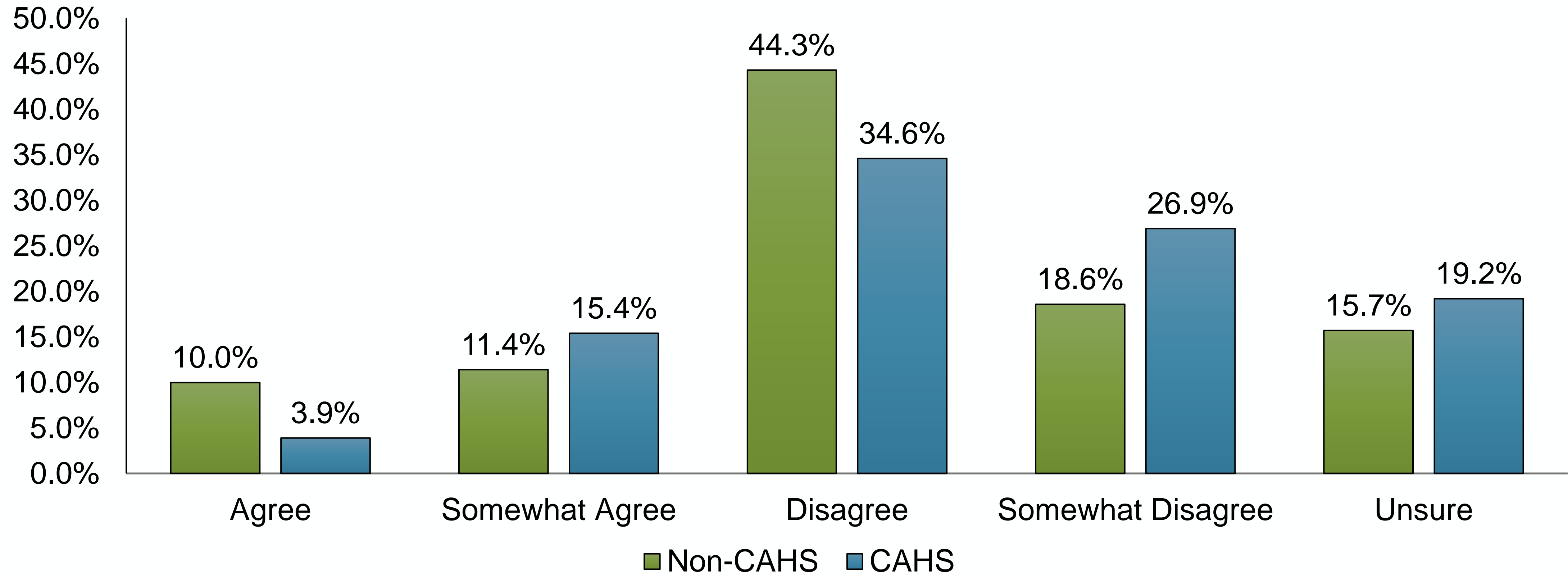
The number of mothers of Aboriginal babies who choose to not breastfeed is about the same as mothers of non-Aboriginal babies



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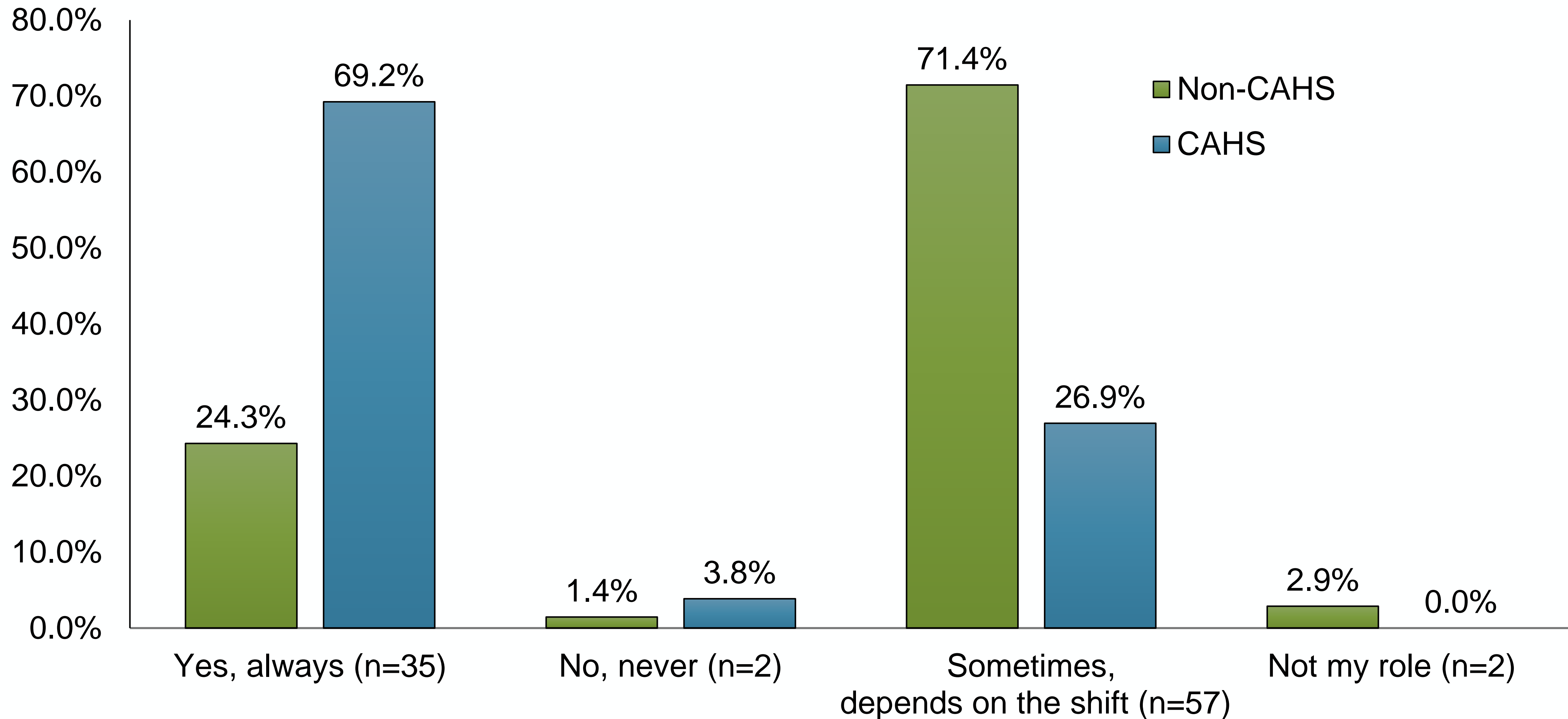
Do you have enough time to talk with mothers of Aboriginal babies about breastfeeding their baby?



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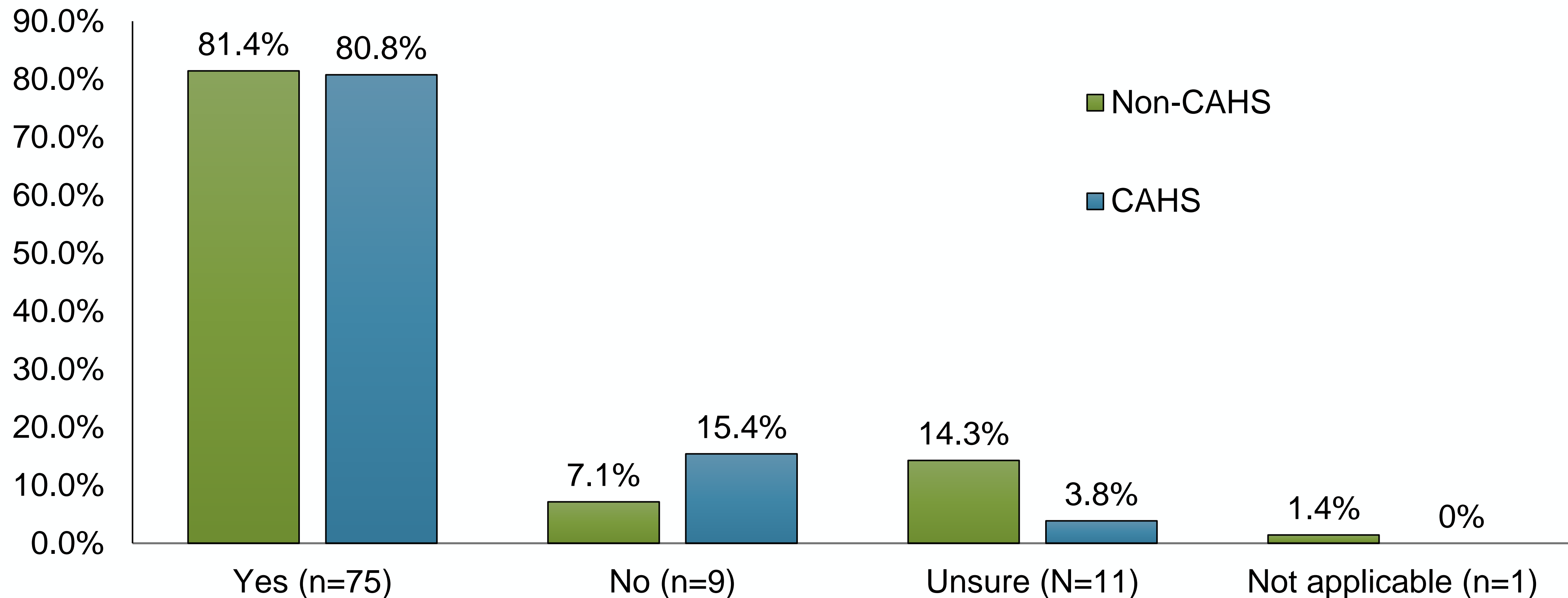
Do you think you would benefit from any training relevant to assisting and/or discussing breastfeeding with mothers of Aboriginal babies?



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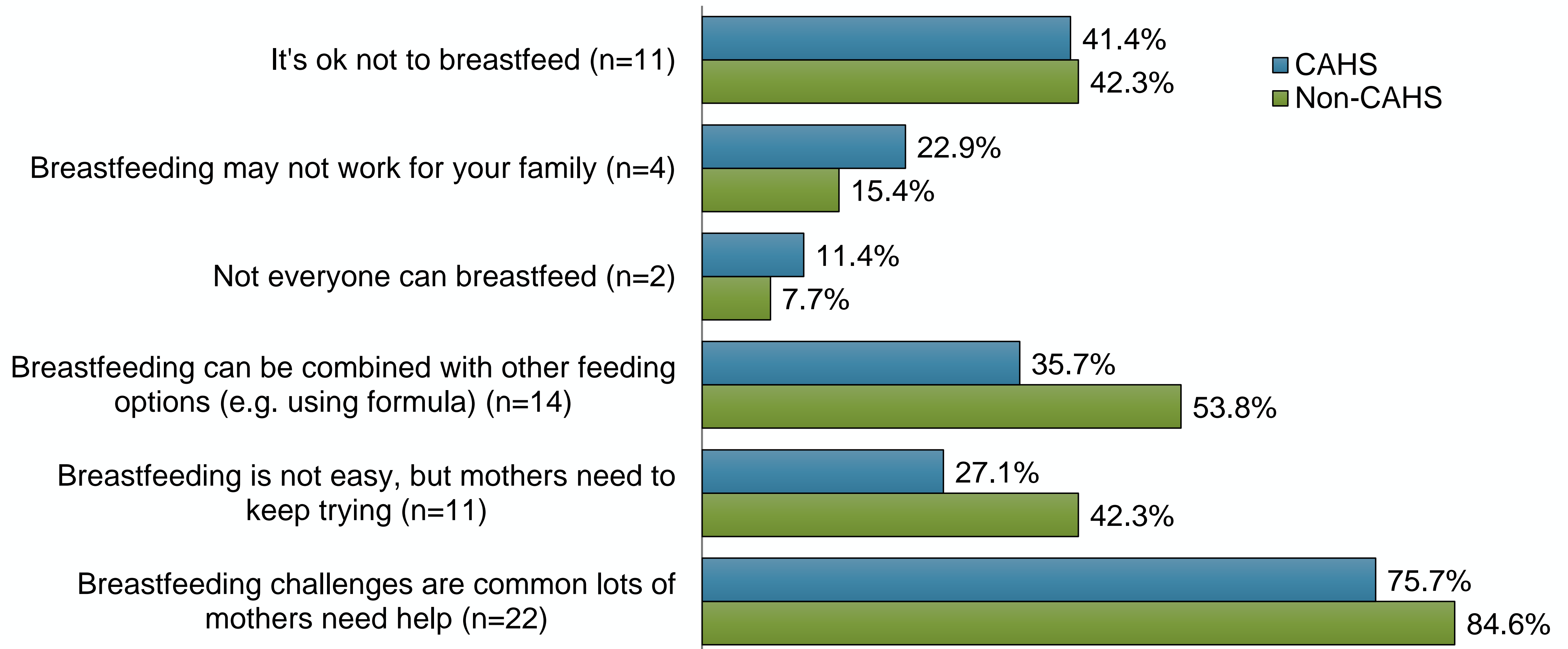
Which of the following best describes the messages you provide to mothers of Aboriginal babies about breastfeeding?

	CAHS	Non-CAHS
Breastfeeding is natural (n=13)	50.0%	58.6%
Breastfeeding is good for bonding with baby (n=23)	88.5%	82.9%
Breastfeeding is cheap/inexpensive (n=21)	80.8%	75.7%
Any breastfeeding is better than none (n=25)	96.2%	74.3%
Breastfeeding is the best thing for the baby's health (n=22)	84.6%	91.4%
Exclusive Breastfeeding for at least 3-6 months is the best choice (n=15)	57.7%	65.7%

Which of the following best describes the messages you provide to mothers of Aboriginal babies about breastfeeding?



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Q6 - Have you undertaken any cultural awareness training in your current position?	
Yes (n=95)	99.0%
No (n=1)	1.0%

Q7 - Do you think you would benefit from any training relevant to assisting and/or discussing breastfeeding with mothers of Aboriginal babies?	
Yes (n=75)	78.1%
No (n=9)	9.4%
Unsure (N=11)	11.5%
Not applicable (n=1)	1.0%

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Further details provided about any specific considerations when assisting and/or discussing breastfeeding with mothers of Aboriginal babies

- Language used and cultural framing of discussions
- Cultural sensitivity when exploring latch and observing a feed
- Most of the time Aboriginal mothers are very confident to breastfeed their baby.
- Appropriate language, being aware of the support people they have.
- Family may have had bad experience with support services/health services. May have preconceived negative ideas about support services. Health care worker would need to spend time exploring this as part of the health assessment and relationship building.
- Breast feeding is a natural norm and my clinical approach is the same for all mothers I see. I may suggest to dad that we'll be chatting about breast feeding to ensure comfort for both parents.
- Maybe cultural considerations that I am unaware of.
- Mother's preference
- History – DV/ abuse/ trauma / not being breastfed/substance use /medical history /family- partner support support
- Some mothers feel 'shame' about feeding in public/in front of family.

Further details provided about any specific considerations when assisting and/or discussing breastfeeding with mothers of Aboriginal babies

- When working in the Aboriginal Health Team, I found that very few Aboriginal Mothers would be prepared to express milk which demonstrates the importance of immediate and frequent breastfeeding from birth and early intervention.
- Try to respect the mother's choice and also any negative impacts that might result in the decision not to breastfeed.
- Lack of engagement with mainstream services including child health and lactation consultants. Mistrust of health services born from intergenerational trauma and the stolen generations.
- cultural barriers, access to services, willingness to accept referrals, mistrust of government employees
- Family expectations and beliefs about breastfeeding-wisdom about breastfeeding has been lost in the urban areas compared to more rural locations.
- To be culturally safe and appropriate in approach and care provided
- I believe that all mothers regardless of background need support with breastfeeding. Particularly those who deliver at St John`s as the paeds. there seem to be very pro formula top ups routinely.
- Allow a little more time for the woman to communicate, she will not connect with you till she is comfortable

Additional information provided by staff about their experience on the topic of breastfeeding Aboriginal babies, and/or supporting mothers of Aboriginal babies

- How can I approach Aboriginal mothers without upsetting them and encourage to breastfeed their babies?

- How can I support the young aboriginal mothers with breast feeding issues?

- In my work I have noticed that a lot of Aboriginal client's breast feed very well.

- As a child health nurse the majority of Aboriginal mother have ceased breast feeding by the time, they see us at 10 days of age. Query how much (appropriate) information is provided in the antenatal period.

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