



# New National Key Performance Indicator (nKPI) for primary health care – ear health

## Consultation paper

### Introduction

The Clinical and Technical Working Group for the Aboriginal and Torres Strait Islander Health Services Data Advisory Group (HS DAG) met on 28 May 2021 to consider the feasibility of 2 new nKPIs for ear health - a process of care indicator and an outcome indicator. The Working Group also considered the definition and specifications for any new nKPI.

The Working Group considered applicable clinical considerations as well as the technical feasibility of implementation.

A number of options were considered by the Working Group and these are outlined in the *New nKPI Briefing Paper – ear health* ([Attachment A](#)). The options relate to the following broad considerations:

1. Viability of the proposed indicators
2. Ear condition definitions in relation to coding in the clinical information systems
3. Ear check definition
4. Age range to include in any new ear health indicator.

### Working Group Recommendations

The Working Group advised that the nKPIs are not appropriate for measuring national prevalence and did not support the implementation of Indicator 2 - Proportion of Indigenous regular aged 0-14 years with an ear condition.

The Working Group supported the development of Indicator 1 - Proportion of Indigenous regular clients aged 0-14 years who received an ear health check.

The Working Group recommended that this new nKPI be piloted with selected health services for the first 2 reporting rounds.

The *New nKPI Briefing Paper – ear health* at [Attachment A](#) outlines recommendations which were considered by the Working Group regarding the specifics of the indicator. The Working Group made the following final recommendations:

1. Option 1a – implement only Indicator 1
2. Option 2a – include ear condition coding in the nKPI Condition Coding Framework
3. Option 3b – thoroughly define ear checks and outline this detail in the indicator specifications

4. Option 4 – include age ranges as proposed in the template at Attachment B (0-4, 5-9 and 10-14 years) but with narrower age ranges within the 0-4 years age group (3-5 months, 6-11 months, 12-35 months and 36-59 months)
5. Following implementation of Indicator 1, give further consideration to an approach for Indicator 2 as a related outcome nKPI measuring how many of the clients who have had an ear check had a diagnosed ear condition.

## Attachments

- A. New nKPI Briefing Paper – ear health
- B. New indicator template – ear health

## NEW nKPI – ear health

## (Attachment A)

Proposed nKPIs:

**Indicator 1.** Proportion of Indigenous regular clients aged 0–14 who received an ear health check

**Indicator 2.** Proportion of Indigenous regular clients aged 0–14 with an ear condition

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As per the AIHW's *draft template for an ear health nKPI*, this proposal is for two separate, but related indicators, rather than one indicator with two parts.

Indicator 1 is a process-of-care indicator. Indicator 2 is a health-outcome indicator.

### Indicator 1. Ear health checks

Numerator: Number of Indigenous regular clients aged 0–14 who received at least one ear health check in the previous 12 months

Denominator: Number of Indigenous regular clients aged 0–14.

Note. Tests to support ear health checks include otoscopy (videotoscopy, pneumatic otoscopy, otoscopy photo documentation), and tympanometry.

### Indicator 2. Ear health conditions

Numerator: Number of Indigenous regular clients aged 0–14 who had an ear health condition in the previous 12 months

Denominator: Number of Indigenous regular clients aged 0–14

Note. Ear health conditions include acute otitis media with or without perforation, otitis media with effusion (may be persistent or chronic), chronic suppurative otitis media or persistent dry perforation, and recurrent otitis media.

Note. The denominator for Indicator 2 is Indigenous regular clients rather than Indigenous regular clients who had an ear check. The intent of this is to provide a better measure of the prevalence of ear conditions. As a result, the denominator of the health outcome indicator is not the same as the numerator of the associated process-of-care indicator (Indicator 1).

Note. As currently proposed, it is not possible to determine those clients who received an ear check who also have a condition.

# 1. Rationale

Ear disease and associated hearing loss disproportionately impact Aboriginal and Torres Strait Islander children and is experienced earlier, more frequently and more severely compared with non-Indigenous children. Inflammation, usually caused by infection of the middle ear (known as otitis media), is the main cause of hearing loss in Indigenous children. It is particularly of concern in rural and remote communities, where up to 50% of Aboriginal and Torres Strait Islander children have chronic otitis media, which peaks at 2–24 months of age and then again at 4–5 years.

Poor health through life, and health conditions like vision and hearing impairment, especially in childhood, can disrupt a person's schooling and affect their ability to learn (Wise 2013; Department of Prime Minister and Cabinet 2020). Source: AIHW's Aboriginal and Torres Strait Islander Health Performance Framework ([here](#)).

The proposed indicator aligns specifically with the *Closing the Gap* ([here](#)) Target 4: Children thrive in their early years, and more broadly with 15 of the 17 targets, especially those that focus on education, employment, culture, social and emotional wellbeing, and contact with the justice system.

Frequent assessment of ear health is important to ensure early identification, management and treatment of ear disease and associated hearing loss. Measuring ear health screening and the prevalence of ear health conditions will improve understanding of coverage and service access in primary health care to target areas most in need. Source: *Draft Ear Health indicator template, AIHW*.

Both symptomatic and asymptomatic ear health checks are part of standard primary health care for children, particularly among younger children. Given the high rates of ear health conditions and hearing loss among Indigenous children, the checks and treatment of diagnosed conditions are particularly important in preventing future hearing loss (which has significant impacts on all aspects of children's lives, including social interactions, education, employment and contact with the justice system). Source: *Draft Ear Health indicator template, AIHW*.

Australian Bureau of Statistics (ABS) 2019 National Aboriginal and Torres Strait Islander Health Survey ([here](#)) reported the proportion of people who reported having ear disease or hearing problems remained about the same between 2012–13 (12%) and 2018–19 (14%).

The proportion of people with ear disease or hearing problems was:

- the same for males and females (both 14%)
- about the same for people living in non-remote areas (14%) and remote areas (13%).

The proportion of people with ear disease or the resulting hearing problems generally increased with age. It increased from more than one in 10 for people aged 25–34 years (12%) or 35–44 years (15%) to more than three in 10 (34%) for people aged 55 years and over.

One in 10 (10%) people reported having partial or complete deafness in one or both ears.

The proportion of children aged 0–14 years who were deaf in one or both ears (4%) was about the same as in 2012–13 (3%). The proportion of children aged 0–14 years with long-term otitis media also did not change between 2012–13 and 2018–19 (both 3%). Source: Australian Aboriginal and Torres Strait Islander Health Survey, 2012–13 ([here](#)).

The World Health Organisation's (WHO) *World report on Hearing* ([here](#)) notes that the economic costs of hearing loss can be significant. In Australia, the cost is about \$20 billion, mostly due to lost productivity and health system costs. This does not include the immediate and ongoing costs associated with incarceration.

The *World report on Hearing* outlines the predisposition of all Indigenous communities towards otitis media, referencing an AIHW publication *Ear disease in Aboriginal and Torres Strait Islander children* ([here](#)) that reports otitis media prevalence rates of over 90% in Indigenous Australian children aged 0–5 years; and that over half of all Indigenous children (51%) had some degree of hearing loss.

## Proposal for New Indicators

Participants in the Australian Institute of Health and Welfare's (AIHWs) review of the nKPIs and OSR ([here](#)) acknowledged there were a number of important health issues that do not have indicators including ear health. The review contained a recommendation that consideration be given to a new ear health indicator.

In 2020, the National Aboriginal and Torres Strait Islander Hearing Health Advisory Panel (NATSIHHAP) submitted a proposal to NATSIHSC for the inclusion of two ear health related indicators to the nKPI collection, which would capture the proportion of children (aged 0–15) who had an ear health examination and who had a diagnosed ear health condition, in order to support early intervention and treatment and to prevent hearing loss.

All jurisdictions represented on NATSIHSC, including the Commonwealth, gave in-principle support and agreement to proceed to the Health Service Principal Committee for consideration on April 2020, and the Department of Health agreed to support the implementation of an ear health indicator in the nKPIs.

## Current lack of data

Access to services is reportedly an issue and there appears to be desire for some real time prospective data collection to help raise awareness.

The current lack of national data and concerns surrounding the accuracy of the data from the Northern Territory (NT), means it's not possible to see whether there are regional variations in access to services, nor whether there is over servicing in areas that are affluent and under servicing in other areas?

National data on ear health screening and conditions is sourced from the National Aboriginal and Torres Strait Islander Health Survey but this cannot be used for continuous quality improvement (CQI) at the organisation level. As the data are only collected every 6 years, their usefulness for policy is also limited. Source: *Draft Ear Health indicator template, AIHW*.

The AIHW has a series of reports on hearing health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory, but the scope of the reports is limited to the NT. The AIHW also reports on Queensland's *Deadly Ears* program ([here](#)).

Inclusion of an ear health indicator in the nKPIs would provide important information for CQI as well as for policy.

## 2. Analysis

The Hearing for Learning Initiative ([here](#)) says hearing loss is not just about “ears”. Ear disease affects speech and language development, many of life's enjoyments, and access to culture, education, and employment. Children with ear problems cannot hear properly – they have trouble listening and talking and may have behaviour problems because they misunderstand their parents, teachers, and friends. If left untreated ear disease can have a significant impact on a child's development and entire life trajectory.

Middle ear infections commence predominantly in very young Aboriginal infants and persist throughout early childhood, causing hearing loss during the critical period of child development, with some effects on auditory processing and communication skills that may be lifelong and difficult to correct. Among over 1000 Aboriginal children aged <8 years living in urban and rural settings, otitis media (in any form) was identified in 37% of children, perforation in 2% and hearing loss in 10%. Speech skills were not age appropriate, and receptive and expressive language was impaired in approximately 40% of children, and 27% had concurrent receptive and expressive language impairments. In remote communities, the prevalence and severity of otitis media are much higher (up to 20% of children aged <3 years have perforation, 90% have some form of otitis media), but there are no data published on the prevalence of speech and language impairment. Source: *The National Guide Evidence Base* (available [here](#)).

Indigenous communities in parts of Australia have rates of chronic middle ear disease (otitis media) that are classified by the World Health Organisation (WHO) as a massive public health problem needing urgent attention ([here](#)). The hearing impairment produced by otitis media affects ability to learn; and development of the disease to its chronic suppurative stage is linked to inadequate antibiotic treatment, frequent upper respiratory tract infections, nasal discharge, and poor living conditions with poor access to medical care. Poor housing, hygiene and nutrition are also associated with higher prevalence rates. (Source: Evaluation of the Australian Government Indigenous Ear and Hearing Health Initiatives, Siggins Miller, 2017 [here](#)).

Ear health conditions proposed in the AIHW's ear health indicator template include acute otitis media with or without perforation, otitis media with effusion (may be persistent or chronic), chronic suppurative otitis media or persistent dry perforation, and recurrent otitis media.

These conditions are among the most common cause of hearing loss, and rural and remote communities are particularly susceptible due to social and economic factors and the effect these have on personal hygiene and living conditions like overcrowding. These social determinants of health can have wide reaching effect, as well as ongoing health challenges for the individual. The multifactorial nature of ear health, and the ongoing challenges in meeting first nation's needs, are factors which will not be accounted for in the proposed indicator but should be accounted for in the ongoing strategy in managing ear health issues. The use of vaccination in reducing risk of ear infections has been shown to improve outcomes but is only one of the recommended strategies listed in the guidelines below. Source: *The National Guide Evidence Base* (available [here](#)).

## Evidence Base

### The National Guide

The *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people* published by NACCHO and RACGP (The National Guide, [here](#)) recommends regular screening of individuals <15 years of age and regular immunisation for pneumococcus and influenza to reduce the rates of infection.

Screening	Newborn infants	Ensure parents of newborn infants are aware of the universal neonatal hearing screening program being implemented in each state and territory and have had their newborn screened for congenital hearing impairment  Advise parents that infants can fail hearing tests at a subsequent age and at-risk children should be periodically tested to three years of age	Prior to age one month. If missed, prior to age three months  If pass but still at high risk, periodic tests to age three years
	Children aged <15 years	Encourage parents to be aware of child developmental milestones in the early detection of hearing loss (Box 2). Parental or teacher suspicion of hearing loss should always be investigated (Box 3). Where relevant, provide advice regarding free hearing assessment <sup>†</sup>	Opportunistic, and as part of annual health check
		Conduct ear examinations (including pneumatic otoscopy or video otoscopy and tympanometry) in order to detect unrecognised acute or chronic otitis media. If detected, refer to clinical practice guidelines for management (refer to 'Resources')	Opportunistic and as part of annual health check

Screening	Children aged <5 years and older children at high risk of hearing impairment <sup>†</sup>	Maintain a high index of suspicion of hearing loss as there is a high prevalence of undetected hearing loss and disadvantage among Aboriginal and Torres Strait Islander school-age children	Opportunistic and as part of annual health check
	Children aged <5 years and older children at high risk of hearing impairment <sup>†</sup>	Use the following audiological tools to monitor for hearing loss: simplified parental questionnaires (Box 2), and three-monthly pneumatic otoscopy or video otoscopy and tympanometry (in children aged >4 months). Note: These methods do not assess hearing  Note: Pneumatic otoscopy or video otoscopy and tympanometry are used to identify otitis media and document duration (with possible conductive hearing loss). Refer to clinical practice guidelines for the identification and management of persistent otitis media with effusion (OME) or recurrent AOM <sup>§</sup> (refer also to 'Resources'). Those with suspected hearing loss (or caregiver concerns) should be referred as per Box 3	Opportunistic and as part of regular health check
	Children at school entry	The routine hearing screening of all children upon commencement of their first year of compulsory schooling may have limited public health value and is not encouraged. Regular surveillance is preferred  Advise parents that absenteeism is associated with hearing loss	
	Adults aged >15 years	Monitor for hearing impairment by questioning, provide advice regarding free hearing assessment, <sup>†</sup> and make referrals when appropriate  Hearing screening is not recommended for persons aged >50 years  Inform families of increased risk of hearing loss among incarcerated people	As part of annual health check
Immunisation	Children aged <15 years	Vaccination is recommended to prevent infections that may lead to congenital or acquired hearing loss (rubella, measles, <i>Haemophilus influenzae</i> type b, meningococcus) (refer to Chapter 3: Child health)	As per National Immunisation Program Schedule (NIPS) and state/territory schedules
		Pneumococcal conjugate vaccination (13vPCV) is recommended during infancy to prevent invasive disease, pneumonia and acute otitis media (AOM)* (refer to Chapter 9: Respiratory health)	At age six weeks, and at age four, six and 18 months, as per NIPS
		Annual influenza vaccination (inactivated virus) is recommended for any person aged ≥6 months who wishes to reduce the likelihood of becoming ill with influenza. Vaccination may reduce the incidence of AOM as a secondary complication of influenza (refer to Chapter 9: Respiratory health)	As per NIPS and state/territory schedules



**Box 1. Hygiene practices recommended by the Centers for Disease Control and Prevention to reduce risk of cytomegalovirus infection for women who are pregnant or planning to become pregnant<sup>122</sup>**

- Thoroughly wash hands with soap and warm water after activities such as:
  - nappy changes
  - feeding or bathing young child
  - wiping child's runny nose or drool
  - handling child's toys
- Do not share food, drinks, eating utensils used by young children
- Do not put a child's dummy in your mouth
- Do not share a toothbrush with a young child
- Avoid contact with saliva when kissing a young child
- Clean toys, countertops and other surfaces that come in contact with urine or saliva

Also refer to 'Resources'

Indicator 1 matches the screening recommendations from the National Guide for an ear health examination at least once a year among 0–14 year olds.

Indicator 2 is consistent with clinical practice guidelines for management of identified ear health conditions and matches the breakdown recommended in Sibthorpe et al. 2017 ([here](#)).

## **CARPA 7<sup>th</sup> Ed.**

The *Central Australian Rural Practitioners Association (CARPA) Standard Treatment Manual 7<sup>th</sup> Edition 2017* ([here](#)) provides guidance on management of *Ear and Hearing problems* (p172) and focuses on the 0-10 year old age group:

### **Ear and hearing problems**

Ear infections in Aboriginal children can become chronic, causing hearing impairment and long-term learning and social problems. Important to treat ear problems *AND* manage disability related to hearing loss.

#### **Prevention strategies**

##### **To reduce otitis media (ear infections)**

- Breastfeed
- Avoid smoke — cigarettes and campfire
- Tell families about the spread of germs — about regularly washing children's face and hands with soap
- Tell children to blow nose until there is no snot left when they sniff
  - If no tissue — use bush hanky (blow one nostril at a time onto ground) then wash hands and face
- If bottle fed — feed baby in upright position
- Don't discourage swimming (unless child gets runny ears afterwards)
- Immunisations — on time

##### **To prevent ear damage and hearing impairment**

- Examine ears whenever children come to clinic
- Treat ear infections, follow-up with expert advice and ensure recovery — doctor, ENT specialist, audiologist

##### **To prevent disability in children due to poor hearing**

- Strategies to help child listen — use clear louder speech, let child watch face of speaker, give lots of opportunities to learn speech and language
- School strategies — classroom or individual amplification, sit child in place with less distractions
- Get advice from or refer to audiologist and speech pathologist
- Give information to family and school about child's disability and strategies to manage



## Otitis Media Guidelines

The 2020 Otitis Media Guidelines for Aboriginal and Torres Strait Islander Children (Otitis Media Guidelines [here](#)) recommend regular screening of Indigenous children, as well as the follow up of any relevant clinical conditions:

### STRATEGY: Vaccination

RECOMMENDATION	Strength of Recommendation Grading of Evidence Benefit	WHAT HAPPENS Link to evidence based table **'possibly' infers limited confidence ***'probably' infers moderate confidence
<b>Give pneumococcal conjugate vaccination</b> during infancy according to local immunisation schedule to reduce AOM, rAOM, and the need for surgery.  Pneumococcal conjugate vaccination is primarily given to prevent invasive pneumococcal disease. [6]	<b>STRONG</b> recommendation	SoF Table- 1
	HIGH quality evidence ⊕⊕⊕⊕  Small effect	In children vaccinated with PCV compared to no PCV there is less <b>all cause AOM</b> (NNV ~63), less pneumococcal AOM (NNV ~111) and less vaccine serotype AOM (NNV ~143) at ~2 years follow-up. [6]  NNV ~63 to ~143
	MODERATE quality evidence ⊕⊕⊕○  Small effect	In children vaccinated with PCV compared to no PCV there are probably fewer <b>tympanostomy tube surgeries</b> at 2 to 3.5 year follow-up. [6]  NNV ~167
<b>Give influenza vaccination</b> according to local immunisation schedule.  Influenza vaccination is primarily given to prevent influenza illness. [7]	<b>STRONG</b> recommendation	SoF Table-2
	MODERATE quality evidence ⊕⊕⊕○  Moderate effect	In children receiving seasonal influenza vaccine compared to placebo / no treatment there is probably less risk of <b>OM</b> (NNV ~19) and fewer courses of <b>antibiotics</b> during 6-18 months follow-up (NNV ~9). [7]  NNT ~9 to ~19
	MODERATE quality evidence ⊕⊕⊕○ Moderate adverse events	In children receiving seasonal influenza vaccine compared to placebo / no treatment there are probably more <b>adverse events of fever</b> . [7]  NNH ~38

## STRATEGY: Encourage Personal Hygiene

RECOMMENDATION	Strength of Recommendation Grading of Evidence Benefit	WHAT HAPPENS Link to evidence based table **'possibly' infers limited confidence ***'probably' infers moderate confidence
<b>Keep sick children away from babies.</b> Nasal discharge carries germs (viruses and bacteria) which are responsible for OM.	<b>CONSENSUS</b> recommendation	
<b>Frequent hand washing and drying</b> is recommended. [9] <ul style="list-style-type: none"> <li>Children should wash and dry their hands after blowing their noses or coughing (into elbow).</li> <li>Children's faces and hands should be kept clean of nasal discharge.</li> </ul> <b>This is particularly important in crowded settings such as in day care centres or over-crowded households.</b>	<b>STRONG</b> recommendation	SoF Table-4
	LOW quality evidence ⊕⊕○○	In children <3 years attending daycare centres with hygiene promotion programs compared to no intervention there are possibly fewer days with <b>ear ache</b> per person year at risk, and fewer <b>doctor visits</b> for AOM. [9]  Benefits are similar in children > 3 years.  NNT not evaluable

## STRATEGY: Accurate Diagnosis of persistent otitis media with effusion – CONSENSUS recommendation

- Accurate diagnosis of OM requires assessment of the appearance of tympanic membrane (TM) by otoscope (or video otoscope) plus compliance or mobility of the TM by pneumatic otoscopy or tympanometry.
- Otitis media with effusion (OME) should be diagnosed in children with evidence of middle ear effusion (MEE) behind an intact tympanic membrane, in the absence of signs and symptoms of acute inflammation.
- Check the medical records to determine duration of OME.

## Hearing Health Sector Committee and Roadmap for Hearing Health

The Hearing Health Sector Committee (the HHS Committee) was established in June 2018 by the Hon Ken Wyatt AM, MP, Minister for Senior Australians and Aged Care and Minister for Indigenous Health. The HHS Committee developed a Roadmap of short, medium and long-term actions to address identified hearing health issues. HHS Committee members are listed [here](#).

Why does Australia need a Roadmap for Hearing Health? So that the diverse partners that make up our hearing sector can come together to discuss and agree on the steps to take us towards our destination — to equitably support all Australians who are deaf or hard of hearing to live well in the community, and to ensure all Australians value their hearing.

The Roadmap has six themes or domains. These are: enhancing awareness and inclusion; closing the gap for Aboriginal and Torres Strait Islander ear and hearing health; preventing hearing loss; identifying hearing loss; providing support; and enhancing the sector's workforce.

Within each domain, the Roadmap sets out future directions and priorities for the hearing sector that will

lead to short (next two years), medium (three to five years) and long-term (five to seven years) improvements in hearing health for all people in Australia. Where appropriate, the domains reference particular life-stages, research and monitoring needs, and steps towards closing the gap for Aboriginal and Torres Strait Islander people. Source: Roadmap for Hearing Health ([here](#)).

The HHS Committee highlighted several high priorities, most relevant to this indicator is:

- An integrated national approach to ear health checks of children aged 0-6 is agreed, where every child, particularly those in Aboriginal and Torres Strait Islander communities, has regular ear health checks and the results of these checks are recorded in a national database, with the objective of no child slipping through the cracks'.

## Hearing for Learning Initiative

The Hearing for Learning Initiative ([here](#)), July 2018 – June 2023, is a \$7.9m community-based service enhancement program running out of the Menzies School of Health Research, by Professors Amanda Leach and Kelvin Kong. Over a four-year period, the program will work with 20 communities, employ 40 part time ear health facilitators, and screen 5,000 children aged 0-16 years. The goal is to work with communities to establish reliable, sustainable, culturally appropriate services that ensure every ear of every child is healthy and hearing every day.

## Existing Indicators

The only existing indicator for ear health is the *Northern Territory's Aboriginal Health Key Performance Indicators* (NT AH KPI) *Indicator 1. 20 Ear Disease in Children* ([here](#)) which reports the:

- Number and proportion of Aboriginal children aged between 3 months and less than 6 years of age who have had an ear examination.
- Number and proportion of Aboriginal clients aged from 3 months to less than 6 years at the end of reporting period who have had an otoscopy ear examination during the reporting period and the proportion of children examined who have ear discharge. Each individual should be counted against each numerator once only Client's residential statuses are determined according to the end of reporting period.

The calculation includes both coverage ratio and ear discharge ratio:

1. Ear discharge ratio: number with ear discharge / number measured
2. Coverage ratio: number measured / total population.

### Numerator

- a. The number of resident Aboriginal clients aged greater than or equal to 3 months to less than 6 years at the end of reporting period who have had ear examination (otoscopy) and whose status is recorded as having ear discharge at any examination during the reporting period.
- b. The number of resident Aboriginal clients aged greater than or equal to 3 months to less than 6 years at the end of reporting period who have had ear examination (otoscopy) and whose status is recorded as having ear discharge at last examination during the reporting period.
- c. The number of resident Aboriginal clients aged greater than or equal to 3 months to less than 6 years at the end of reporting period who have had ear examination (otoscopy) during the reporting period.

(Child's ages are calculated according to the date for ear examination.)

### Denominator

- c. The number of resident Aboriginal clients aged greater than or equal to 3 months to less than 6 years at the end of reporting period who have had an ear examination (otoscopy) during the reporting period.

d. The number of resident Aboriginal clients greater than or equal to 3 months to less than 6 years of age at the end of the reporting period.

(Child's ages are calculated according to the end of reporting period.)

The proposed nKPI has a few differences to the existing NT AH KPI.

- The NT AH KPI measures ear examination and discharge, not ear conditions.
- The age range of the proposed new nKPI is broader than the existing NT AH KPI in line with the National Guide.
- Given there are concerns about data quality in the existing NT AH KPI it is possible any common issues would be replicated in the proposed nKPI and possibly compounded as a result of including a broader age range.

## Relevant MBS items

There is currently no item number specifically for ear checks.

In collecting background information for this paper, feedback from the Specialist advisors alluded to a body of work that has the potential to result in a new MBS item specifically for ear health in Indigenous children. Supporters of this work hope this will encourage primary care services to undertake specific screening (otoscopy, tympanometry and a hearing test) and remunerate them for this work.

Hearing Australia's HAPEE Program (Hearing Assessment Program - Early Ears [here](#)) is generating a minimum set of activities for an ear health assessment that may inform the requirements for this desired MBS item.

Implementation of the MBS item is not guaranteed, and the timeline is unknown. As the MBS review is now completed, implementation of a new MBS item may be challenging especially as there are financial implications from a new item number.

Other MBS items related to ear health/ear checks:

MBS Item 715: Health Assessment for Aboriginal and Torres Strait Islander people

- Patients 0-14 years are eligible.
- History of hearing (including neonatal hearing screening) is required
- Ear examination (including otoscopy) is required
- Undertaking or arranging audiometry, if required, especially for those of school age, should be considered.
- A health assessment may only be claimed by a general practitioner however, the below item numbers could be used to support an assessment:
  - MBS Item 10987 – *Follow up service provided by a practice nurse or Aboriginal and Torres Strait Islander health practitioner*, on behalf of a medical practitioner, for an Indigenous person who has received a health assessment if:
    - a) The service is provided on behalf of and under the supervision of a medical practitioner; and
    - b) the person is not an admitted patient of a hospital; and
    - c) the service is consistent with the needs identified through the health assessment; to a maximum of 10 services per patient in a calendar year
  - MBS Item 10990 or 10991 (bulk billing incentives) - can be claimed in conjunction with any health assessment provided to an Aboriginal and Torres Strait Islander person, provided the conditions of item 10990 and 10991 are satisfied.

The following items are the comparable non-VR item numbers, as identified in PI03 Proportion of regular clients for whom a MBS health assessment for Aboriginal and Torres Strait Islander people (MBS item 715) was claimed:

- Item 228 - Aboriginal and Torres Strait Islander peoples' health assessment (non-VR GPs)
- Item 92004 - Telehealth attendance by a general practitioner for health assessment of a patient
- Item 92016 - Phone attendance by a general practitioner for a health assessment of a patient
- Item 92011 - Telehealth attendance by a medical practitioner (not including a general practitioner, specialist or consultant physician), for a health assessment (non-VR GPs)
- Item 92023 - Phone attendance by a medical practitioner (not including a general practitioner, specialist or consultant physician), for a health assessment of a patient (non-VR GPs).

### 3. Clinical considerations

To report against the proposed ear health indicator there are several clinical considerations.

#### Definition of an ear check

- NATSIHHAP suggests the following as supporting ear health checks: Otoscopy (videotoscopy, pneumatic otoscopy, otoscopy photo documentation); Tympanometry.
- Sibthorpe et al. separates the screening into 2 separate indicators: screening using otoscopy and screening using tympanometry or pneumatic otoscopy.
- The RACGP/NACCHO guidelines recommend conducting ear examinations (including pneumatic otoscopy or videotoscopy and tympanometry) in order to detect unrecognised acute or chronic otitis media for all children <15 years opportunistically and as part of an annual health check.
- The NT AH KPIs use otoscopy only.
- Using the definition from MBS note *AN.0.44 - Health Assessment for an Aboriginal and Torres Strait Islander child (less than 15 years of age, [here](#))*, which accompanies MBS Item 715, an ear check should include:

b ix. vision and hearing (including neonatal hearing screening)

c iv. Ear examination (including otoscopy)

d.ii. audiometry, if required, especially for those of school age.

Ear checks are an existing component of MBS Item 715. Is completion of this MBS item considered a sufficient measure or is a specific test more acceptable as a robust screen?

- The Otitis Media Guidelines recommend the following as an ear examination:  
Accurate diagnosis of otitis media requires assessment of the appearance of tympanic membrane by otoscope (or videotoscope) plus compliance or mobility of the tympanic membrane by pneumatic otoscopy or tympanometry.
- The HAPEE project outlines an ear health assessment as:
  - Visual examination ... using an otoscope
  - Tympanometry
  - A hearing test, eg, Transitory evoked otoacoustic emission (TEOAE), PTA (Portable VROA or play audiometry).

It may be prudent for a cross sector group to agree which tests relevant to primary health care are included in this definition. These can be added to the nKPI specifications document and will inform scope for any clinical information system (CIS) development work.

#### Availability of equipment

Availability of equipment to assist health services with ear checks should also be considered.

## Record of clients who received an ear check

In addition to the definition of an ear check, measurement of clients who have received an ear check is also required for the proposed indicator. There are considerations for data entry and data capture, ie, whether the workflow encourages recording of the data, how often / likely is this to be recorded in the CIS and is this data in an extractable place and who performs the service, particularly if performed by someone outside of the health service for example remote services utilising a general practitioner elsewhere.

Feedback from health services and Health Services Data Advisory Group (HS DAG) members confirmed that although otoscopy is the most common check and may be performed within an MBS Item 715, it is often performed outside of the health check and is most likely to only be recorded in the patient's progress notes ie, in a non-extractable location. Tympanometry is done less frequently but is better recorded.

Dr Stephanie Davis' research, Australian National University, which looked at recording of chronic and acute conditions in CIS, found that otitis media was not recorded as a diagnosis in 32% of records. Otitis media was the most commonly recorded condition for persons aged <5 years. The research also noted chronic conditions are more likely to be recorded than acute. However, the project only analysed a random sample of 50 patient records. Source: *How good are routinely collected primary healthcare data for evaluating the effectiveness of health service provision in a remote Aboriginal community*, [here](#)).

## CIS capability to measure an ear check

Each of the 4 vendors have different capability. Communicare appear to be the most sophisticated, followed by MMEx.

All CIS have concepts or classes of conditions, procedures, reason for medication and reason for contact. They all draw from the same lists within the respective product. These are often referred to as the coded pick list or drop-down list.

The lists are diverse and include coded terms for disease, symptom, observation, procedure, an assessment or management plan and investigations. Adding new terms to this pick list is reasonably straightforward and simpler than larger changes, for example adding a new module, which often require waiting for a formal CIS version release.

### ► Communicare

Communicare currently reports Otoscopy for the NT AH KPI, for which ear discharge is also measured. Communicare's current reporting criteria for the NT AH KPI are:

Evidence of an ear examination:

- a. A Yes/No or checkbox qualifier with an export code of 'OTOSCOPY' where the value 'Yes' is selected or the checkbox is ticked.
- b. A reference qualifier with an export code of 'OTOSCOPY'.
- c. An image qualifier with an export code of 'OTOSCOPY'.
- d. A text qualifier with an export code of 'OTOSCOPY'.
- e. A Yes/No or checkbox qualifier with an export code of 'OTO-DSCH' where the value 'Yes' is selected or the checkbox is ticked.
- f. A Yes/No or checkbox qualifier with an export code of 'OTO-WPRF' where the value 'Yes' is selected or the checkbox is ticked.
- g. A checkbox qualifier with an export code that starts 'CI-70A' where the checkbox is ticked.

## NOTES:

- A reference qualifier with an export code of 'OTOSCOPY' where the selected reference has an export code of 'OTO-DSCH' or 'OTO-WPRF' indicates that the option is evidence of discharge.
- A Yes/No or checkbox qualifier with an export code of 'OTO-DSCH' or 'CI-70AR2' or 'CI-70AL2' indicates that the option is evidence of discharge.
- A text qualifier with an export code of 'OTOSCOPY' where the text entered contains the word 'discharge' (case insensitive) indicates that the option is evidence of discharge.

In addition, for any child with a qualifier that indicates evidence of an otoscopy being performed, any diagnosis with the International Classification of Primary Care (ICPC) code of 'H04' ('EAR DISCHARGE') or the ICPC2 code of 'H71 009' ('Otitis media;suppurative;acute') or 'H74 006' ('Otitis media;suppurative;chronic') will be deemed to be additional evidence of discharge. The date of the diagnosis will be used to decide if the latest or any of the otoscopies will be considered to have observed discharge.

Communicare has other reporting options for reporting evidence of an ear examination, using ICPC codes from H30 to H43 inclusive. Locally configured items can also be allocated to ICPC H30:

Common to all databases			Optionally installed on specific databases	Local data types
Check up;complete;ear	H30	001	Exam;ENT H30  Assessment;hearing H30	Audiometry H39  Check up;ear health H30  Unknown types configured locally
Exam;complete;ear	H30	002		
Assessment;complete;hearing	H30	003		
Check up;partial;ear	H31	001		
Exam;partial;ear	H31	002		
Assessment;partial;hearing	H31	003		
Test;audiometry	H39	001		
Test;caloric	H39	002		
Test;hearing	H39	003		
Test;vestibular	H39	004		
Test;tympanometry	H39	007		
Test;physical function;ear	H39	008		
Endoscopy;diagnostic;ear	H40	001		
Radiology;diagnostic;ear	H41	001		
X-ray;ear	H41	002		
CT scan;ear	H41	003		
Electrical tracings;ear	H42	001		
Procedures;diagnostic;ear	H43	001		

Further to this the following ear data may be collected as part of routine health checks where the item in itself is not specific (e.g. a child health check):



Central	BC Unmasked - 1000 Hz	dB	on Central hearing item
Central	BC Unmasked - 2000 Hz	dB	on Central hearing item
Central	BC Unmasked - 4000 Hz	dB	on Central hearing item
Central	BC Unmasked - 500 Hz	dB	on Central hearing item
Central	Ear Infection	Reference	on Central hearing item
Central	Glue ear	Reference	on Central hearing item
Central	LAC - 1000 Hz	dB	on Central hearing item
Central	LAC - 2000 Hz	dB	on Central hearing item
Central	LAC - 250 Hz	dB	on Central hearing item
Central	LAC - 4000 Hz	dB	on Central hearing item
Central	LAC - 500 Hz	dB	on Central hearing item
Central	LAC - 8000 Hz	dB	on Central hearing item
Central	Otorrhoea	Tick Box	on Central hearing item
Central	Otoscopy - Left	Text	on Central hearing item
Central	Otoscopy - Right	Text	on Central hearing item
Central	Perforation of tympanic membrane	Reference	on Central hearing item
Central	RAC - 1000 Hz	dB	on Central hearing item
Central	RAC - 2000 Hz	dB	on Central hearing item
Central	RAC - 250 Hz	dB	on Central hearing item
Central	RAC - 4000 Hz	dB	on Central hearing item
Central	RAC - 500 Hz	dB	on Central hearing item
Central	RAC - 8000 Hz	dB	on Central hearing item
Central	Tympanometry - L Canal Vol	cc	on Central hearing item
Central	Tympanometry - L Category	Reference	on Central hearing item
Central	Tympanometry - L Compliance	mL	on Central hearing item
Central	Tympanometry - L Pressure	daPa	on Central hearing item
Central	Tympanometry - R Canal Vol	cc	on Central hearing item
Central	Tympanometry - R Category	Reference	on Central hearing item
Central	Tympanometry - R Compliance	mL	on Central hearing item
Central	Tympanometry - R Pressure	daPa	on Central hearing item
Central	Audiometry Degree Left	Reference	on Local hearing item
Central	Audiometry Degree Right	Reference	on Local hearing item
Central	Otoscopy left ear	Reference	on Local hearing item
Central	Otoscopy right ear	Reference	on Local hearing item

Central	Discuss ear health	Tick Box	
Central	Ear exam: left	Reference	
Central	Ear exam: left comments/action	Text	
Central	Ear exam: right	Reference	
Central	Ear exam: right comments/action	Text	
Central	Family member had ear problem as a child	TrueFalse	
Central	Follow up hearing screen needed	TrueFalse	
Central	Hearing assessment	Reference	
Central	Hearing referral required?	TrueFalse	
Central	Hearing screen - 25dB 1000Hz - Left	Reference	
Central	Hearing screen - 25dB 1000Hz - Right	Reference	
Central	Hearing screen - 25dB 4000Hz - Left	Reference	
Central	Hearing screen - 25dB 4000Hz - Right	Reference	
Central	History - Vision & Hearing	Memo	
Central	Neonatal hearing screen attended?	TrueFalse	
Central	Parent has concerns re child's hearing	TrueFalse	
Central	Parent thinks baby can hear	TrueFalse	
Central	Supra-trochlear	Reference	
Central	Tympanometry - L ear - interpretation	Reference	
Central	Tympanometry - R ear - interpretation	Reference	
Local	Audiometry 1000 Hz (25dB) Left	dB	on Local hearing item
Local	Audiometry 1000 Hz (25dB) Right	dB	on Local hearing item
Local	Audiometry 4000 Hz (20dB) Left	dB	on Local hearing item
Local	Audiometry 4000 Hz (20dB) Right	dB	on Local hearing item
Local	Audiometry Total Left (dB)	dB	on Local hearing item
Local	Audiometry Total Right (dB)	dB	on Local hearing item
Local	Otoscope image left ear	Image	on Local hearing item
Local	Otoscope image right ear	Image	on Local hearing item
Local	Tympanometry left ear	Reference	on Local hearing item
Local	Tympanometry notes	Memo	on Local hearing item
Local	Tympanometry right ear	Reference	on Local hearing item
Local	Hearing appraisal	Reference	

## ► **MMEx**

MMEx's data collection process revolves around the care plan module. MMEx's Ear Health module has comprehensive data entry options and prompts and currently includes all of the National Guide ear health guidelines. Users manually enter details in either the Ear Health module, observations module or care plan module. Most of the time these three sections are in

sync meaning if entered in the Ear Health module it will display elsewhere. The module is very configurable, so new health initiatives can be implemented and therefore reported on.

The medical diagnosis added date could also be used; this is SNOMED coded.

Both the care plan and medical diagnosis have active/inactive statuses.

### ► Best Practice

Best Practice has an ear, nose, throat (ENT) examination screen but nothing specific to otoscopy or tympanometry.

They do have coded history items for 'ear check' and 'check ear'.

Assuming there is only a requirement to confirm the test was performed (rather than actual results) codes for the specific tests could be added to the coded pick list, so health professionals can add them when they're performed. These could then be measured easily.

### ► Medical Director

Unsurprisingly, Medical Director's functionality is similar to Best Practice. The ENT examination screen nicely segments ears but has nothing specific to otoscopy or tympanometry. Adding these as coded pick list items might be an option, if they don't exist already.

As with other indicators that require health services to make a change to their current recording practice, health services information and education will be essential to optimise complete data capture.

### **Timing of the ear check**

The proposed indicator requires a measure for clients who received at least one ear health check in the previous 12 months.

The ability to report this depends on the data source for example if the ear check/assessment is used whether this is date stamped.

In the case of MMEx, the date of the ear health 'care plan' would be used.

Further confirmation from vendors of this capability is needed.

If a coded pick list item is used eg, for otoscopy, then the date stamp could be used noting there are limitations regarding the reliability of this date as per the scenario with conditions. This is explained further in the Date of Diagnosis section below.

In summary, some vendors are more mature than others in capability and all vendors can make enhancements, or add screening modules, to capture specific checks with date stamps. Requirements should be carefully considered and discussed with vendors to minimise risk of multiple data entry points, more complex data entry and subsequent risk of missing data and to keep data entry as simple as possible for CIS users, ie, health services.

### **Definition of an ear condition**

The AIHW indicator template includes the following ear health conditions informed by Sibthorpe et al's definition (see below) after consultation with HS DAG: acute otitis media with or without perforation, otitis media with effusion (may be persistent or chronic), chronic suppurative otitis media or persistent dry perforation, and recurrent otitis media.

Definitions from other sources:

- The NATSIHSC paper defines ear conditions as those included in the Otitis Media Guidelines.
- The Otitis Media Guidelines include the following conditions: acute otitis media (AOM), AOM with perforation (AOMwiP), AOM without perforation (AOMwoP), otitis media with effusion (OME), persistent (Chronic) otitis media with effusion, chronic suppurative otitis media (CSOM), dry perforation, eustachian tube dysfunction (ETD), otitis externa, recurrent acute otitis media (rAOM).
- The following were reported in the *Hearing Health in the NT* report, 2020 ([here](#)), ie, AOM (acute otitis media), AOM with perforation, OME (otitis media with effusion), CSOM (chronic suppurative otitis media with discharge), CSOM without discharge, eustachian tube dysfunction (ETD).
- Sibthorpe et al developed a list of conditions specifically as ear health indicators for CQI in ACCHOs through an expert group consensus process. Conditions included: acute otitis media with or without perforation, otitis media with effusion (may be persistent or chronic), chronic suppurative otitis media or persistent dry perforation, recurrent otitis media.
- The NT AH KPI does not define ear conditions as this isn't a requirement for the indicator.

### **CIS condition coding capability**

Each of the CIS use different coding terminologies, some are proprietary, and most are tailored to primary health care, eg, Docle, Pyefinch and ICPC-2 plus. MMEx uses a different inclusion methodology

by including relevant plans with nKPI tags in their specifications. As a result, the range of coding options will differ by CIS. The new nKPI Condition Coding Framework, which includes conditions relevant to existing nKPIs, considers different CIS terminology and also the actual terms selected by the health professionals to ensure a transparent approach to coding as well as providing flexible guidance for vendors to include new terms in the future.

Allowing vendors to make their best choice based on high level terms or vague descriptors can lead to inaccurate reporting, under and/or overcounting. By way of illustration, the following table is a real example of one vendor's suggested terms related to 'ear' conditions. This clearly under counts, eg, otitis media is missing, and inaccurately includes some obviously unrelated terms.

Example of one vendor's suggested list of ear conditions			
Barotrauma to ear	Ear, wedge excision	<i>Early morning waking</i>	Ear injury
Bleeding from ear	Ear drum perforation	Ear effusion	Injured ear
Blocked ear	Ear foreign body	Foreign body in ear	Ear, Patella, Short stature syndrome
Ear ringing	Ear ringing	Foreign body removal from ear	Ear dermatitis
Discharge from ear	Ear surgery	Glue ear	<i>Early myoclonic encephalopathy</i>
Ear buzzing	Ear syringe	Pain in ear	<i>Early infantile epileptic encephalopathy</i>
Ear discharge	Ear toilet - curette	Removal of foreign body from ear	Check ear
Ear, foreign body removal	Ear toilet - dry mopping	Ring in ear	Ear check
Ear, grommet removal	Ear toilet - suction	Syringe ear	Swimmer's ear
Ear laceration repair	Ear toilet	Wax in ear	Earlobe infection
Ear pain	Ear Tuberculosis	Wedge excision from ear	
Ear polyp removal	Ear wax	Buzzing in ear	
Ear - Tophus	Earache	Ear polyp	

To ensure consistency across vendors and to align with the approach for the existing nKPIs, the ear health cohort may best be defined by including ear conditions in the nKPI Condition Coding Framework using the same methodology and rigour as was applied for existing conditions.

## Date of diagnosis

This indicator states clients that had an ear health condition in the previous 12 months. This should be clarified; is this indicator measuring:

- a client seen in the previous 12 months that had an ear health condition recorded
- a client that had an ear health condition recorded in the previous 12 months (ie, evidence the condition was entered in that period).

Option a) is suggested as a more reliable measure. In addition, a current/active diagnosis could be considered, although not all CIS currently have this capability, ie, Communicare.

Note. Reporting against a condition within a specific period of time is challenging in some CIS. There are known existing issues in CIS regarding the reliability of the recorded date matching the actual diagnosis date; this is a known data limitation. For example, the clinician may become aware of a pre-existing diagnosis but when this is entered into some CIS the default date stamp relates to the date of data entry, ie, the date they are made aware, rather than the diagnosis date. The clinician may choose to include the date of diagnosis where known but anecdotally this doesn't always happen.

## Data quality / completeness

Reassurance of completeness of data recorded for the measure to be meaningful to health services.  
Reliability and data interpretation, community confidence

There are several data quality challenges within this indicator that may require CIS development and health services education etc.

## Age range inclusion

### AIHW proposed indicator

The proposed indicator has age ranges 0-4, 5-9, 10-14, which is in keeping with the National Guide and other age brackets within the nKPI collection. However, based on the NT AH KPI these age brackets may not be specific enough for adequate data disaggregation.

### NT AH KPI

The NT AH KPI has much more specific, lower age brackets: 3-5 months, 6-11 months, 12-35 months and 36-72 months. With the maximum age of 6 years, and a minimum age of 3 months, the data collected focuses on the highest risk age groups.

### The National Guide

The National Guide refers to regular screening of children to the age of 15.

## Indicator focus

As a primary care indicator, it's important that any proposed indicator be meaningful to primary health care services. Health services have questioned whether the focus should be hearing loss or ear checks. Follow-up of existing ear health issues is also seen as important.

The ear assessments listed for inclusion in the proposed indicator do not completely satisfy the clinical advisors, for example the absence of audiology. Focus on infection and inflammation in the proposed indicator doesn't address the entire clinical picture. Exclusion of assessing potential hearing loss, compounds the potential health impact and financial burden on the health system. Clinical discussion around the importance of hearing checks, including audiology throughout childhood, would lead to reduced impact and burden on the health system as a whole.

The nKPI review found that whilst health services would like to provide audiology services themselves many are not resourced to do this and as a result audiology is provided by external organisations. To ensure the proposed indicator focuses on something primary health care services have control over the proposed indicator focuses on ear health not hearing loss.

## 4. Technical feasibility

Implementation of the ear health indicator as proposed:

### Ear health condition coding

Adding ear conditions to the nKPI Condition Coding Framework is straightforward.

### Defining an ear check

Measurement of specific ear checks/assessments is technically feasible but will require development particularly in Best Practice and Medical Director. This is technically straightforward subject to vendor agreement and payment.

The technical complexity for this depends on the decision/requirement to measure an ear check.

## Age range

Age ranges are straightforward to apply.

## 5. Options

The following table outlines considerations and options, noting multiple options may be relevant:

	Consideration	Options <i>Includes associated change where relevant</i>	Implications/ Pros and Cons <i>Discussion points</i>
1	<b>Viability of indicator</b>	a) Implement as is <i>Note. Also determine whether both indicator 1 and 2 are implemented.</i> b) Implement as is and revise specification if new MBS item is released <i>Note. Also determine whether both indicator 1 and 2 are implemented.</i> c) Do not implement d) Wait and implement if the new MBS item is released ie, indicator is more easily measurable.	Data quality concerns – will this be meaningful CQI for health services? Is a future MBS item more meaningful? How likely is a new item number? How important is ear health? Can it be measured another way? Limitations greater than the benefit of data collected. Costs of improving data capture in CIS and time lag? Challenges of reporting solely against MBS item numbers.
<b>If options 1a or 1b are selected, the following apply:</b>			
2	<b>Ear condition definition</b>	a) Include ear condition coding in the nKPI Condition Coding Framework. b) Allow vendors to implement their best interpretation and accept CIS variation and/or possible errors. <i>Note. This is not acceptable to the Department.</i>	CIS terminology differs. Nothing available to benchmark from. Clear definitions avoid implementation variation across CIS and provides consistency of data and interpretation. Including in the coding framework ensures consistent approach for all conditions.
3	<b>Ear check definition</b>	a) Implement AIHW suggested ear checks b) Thoroughly define ear checks and outline this detail in the specifications.	CIS options are complex. Some CIS include otoscopy within health checks. Consistent approach for all vendors required for consistency of reporting and interpretation.
4	<b>Age range</b>	a) Implement as per draft indicator ie, 0-4, 5-9, 10-14 b) Consider narrower age brackets, similar to NT AH KPI approach.	0-14 follows the National Guide. Is a bracket lower than a 5 year age group important, particularly for the younger age groups?

## 6. Recommendation

The following actions are recommended based on the clinical feedback, and evidence base:

- a) Implement Option 1b or 1d, depending on appetite for data now.

*If Option 1c or 1d are selected, the following recommendations are not applicable.*

- b) Implement Option 2a, ie, add ear conditions to the nKPI condition coding framework.
- c) Implement Option 3b.
- d) Consider Option 4b.





## Proposal template – new nKPI (Attachment B)

This template supports the process outlined in the *Indicator selection and maintenance framework for the nKPI collection* (the Framework). It is used to:

- submit a proposal to add a new indicator to the nKPIs
- record associated discussion and decisions in a consistent format
- enhance transparency around the decision-making process.

A description of each section of the template is provided in the table below, with further instructions provided in the template itself.

Section	Description
Submitter information	Captures the details of the submitting organisation. Completed by submitter.
A. Proposal indicator specification	Outlines the proposed indicator specifications. Completed by submitter.
B. Assessment against individual criteria	Records the submitter response to each review criteria and the committee's* assessment. Completed by submitter and the committee.
C. Committee* assessment and recommendations	Records a summary of the committee's* assessment along with their decision and any follow-up actions required.
D. Department of Health decision and follow-up actions	Records the decision made by the Department of Health and any follow-up actions required.
Appendix A: additional information	Records additional information to support the proposal, for example, evidence of any preliminary analyses/implementation/pre-testing. Completed by submitter.

*\*Note that initial consideration of the proposal is made by the Health Services Data Advisory Group (HSDAG). HSDAG may decide to convene the Specialist Working Group (SWG) to seek additional advice on the proposal. If the SWG is consulted, that should be noted in the template.*

*To be completed by submitter*

Submitter information	
Contact name	Rhonda Stirling
Contact email	
Contact phone number	
Submitting committee/agency/organisation	Australian Government Department of Health

To be completed by submitter

Section A: Proposed indicator specifications	
<b>Proposed indicator name</b>	<p><b>Indicator 1.</b> Proportion of Indigenous regular clients aged 0–14 who received an ear health check</p> <p><b>Indicator 2.</b> Proportion of Indigenous regular clients aged 0–14 with an ear health condition</p> <p>Note that this proposal is for two separate, but related indicators, rather than one indicator with two parts.</p>
<b>Type of indicator</b>	<p><input checked="" type="checkbox"/> Process-of-care (Indicator 1)</p> <p><input checked="" type="checkbox"/> Health-outcome (Indicator 2)</p>
<b>Reason for proposed inclusion</b>	<p>Ear disease and associated hearing loss disproportionately impacts Aboriginal and Torres Strait Islander children and is experienced earlier, more frequently and more severely compared with non-Indigenous children. Inflammation, usually caused by infection of the middle ear (known as otitis media) is the main cause of hearing loss in Indigenous children. It is particularly of concern in rural and remote communities, where up to 50% of Aboriginal and Torres Strait Islander children have chronic otitis media, which peaks at 2–24 months of age and then again at 4–5 years.</p> <p>In 2020, the National Aboriginal and Torres Strait Islander Hearing Health Advisory Panel (NATSIHHAP) submitted a proposal to NATSIHSC for the inclusion of two ear health related indicators to the nKPI collection which would capture the proportion of children (aged 0–15) who had had an ear health examination and who had a diagnosed ear health condition in order to support early intervention and treatment and to prevent hearing loss.</p> <p>All jurisdictions and the Commonwealth represented on NATSIHSC gave in-principle support and agreement to proceed to the Health Service Principal Committee for consideration on April 2020, and the Department of Health agreed to support the implementation of an ear health indicator in the nKPIs.</p>
<p><b>Rationale for indicator</b></p> <p><i>Outline why the indicator is important.</i></p> <p><i>Include relevance to services and policy makers.</i></p>	<p>Frequent assessment of ear health is important to ensure early identification, management and treatment of ear disease and associated hearing loss. Measuring ear health screening and the prevalence of ear health conditions will improve understanding of coverage and service access in primary health care to target areas most in need.</p>
<b>Proposed definition</b>	<p><b>Indicator 1.</b> Proportion of Indigenous regular clients aged 0–14 who received at least one ear health check in the previous 12 months.</p> <p>(Note that tests to support ear health checks include Otoscopy (videotoscopy, pneumatic otoscopy, otoscopy photo documentation), and Tympanometry.</p> <p><b>Indicator 2.</b> Proportion of Indigenous regular clients aged 0–14 who had an ear health condition in the previous 12 months.</p> <p>(Note that ear health conditions include Acute otitis media with or without perforation, Otitis media with effusion (may be persistent or chronic), Chronic suppurative otitis media or persistent dry perforation, and Recurrent otitis media)..</p>

## Section A: Proposed indicator specifications

<p><b>Proposed calculation</b></p> <p><i>Include computation, and specify numerator and denominator.</i></p>	<p><b>Computation:</b> <math>(\text{Numerator} \div \text{Denominator}) \times 100</math></p> <p><b>Indicator 1 calculation: Ear health checks</b></p> <p>Numerator: Number of Indigenous regular clients aged 0–14 who received at least one ear health check in the previous 12 months.</p> <p>Denominator: Number of Indigenous regular clients aged 0–14.</p> <p><b>Indicator 2 calculation: Ear health conditions</b></p> <p>Numerator: Number of Indigenous regular clients aged 0–14 who had an ear health condition in the previous 12 months</p> <p>Denominator: Number of Indigenous regular clients aged 0–14</p> <p>(Note that the denominator for the health-outcome indicator (Indicator 2) is Indigenous regular clients rather than Indigenous regular clients who had an ear check. The intent of this is to provide a better measure of the prevalence of ear conditions. As a result, the denominator of the health outcome indicator is not the same as the numerator of the associated process-of-care indicator (Indicator 1).)</p>
<p><b>Proposed disaggregation</b></p> <p><i>Be specific, for example, if disaggregation is by age group specify the age groups.</i></p>	<p><b>1. Age group:</b></p> <ul style="list-style-type: none"> <li>a) 0–4</li> <li>b) 5–9</li> <li>c) 10–14.</li> </ul> <p><b>2. Sex:</b></p> <ul style="list-style-type: none"> <li>a) male</li> <li>b) female.</li> </ul>

**Submitter**—complete ‘Submitter—response to criteria’ ensuring to provide responses to all criteria.

**Committee facilitator**—complete ‘Committee—record of discussion. Use the information provided by the submitter as a starting point and record the key points from the discussion, including if the submitter’s assessment against the criterion is not agreed with. Record the assessment (not met at all, partially met, fully met) for the criterion and provide an explanation for the assessment. While separate questions may be included within each criterion, only an overall assessment for the criterion is required to be recorded.

Section B. Assessment against individual criteria		Date discussed by committee: 28/05/2021	
B1. Importance			
Importance can be judged on a number of dimensions, including community priorities, gap between evidence and practice, relationship to morbidity and/or mortality, national priorities etc.			
Criteria	Submitter—response to criteria	Committee—record of discussion	
<p><b>For process-of-care indicators</b>—indicator captures an aspect of primary care delivery that is important for Aboriginal and Torres Strait Islander clients.</p> <p><b>For health-outcome indicators</b>—indicator captures a health status or level of risk that has important implications for the health and wellbeing of Aboriginal and Torres Strait Islander clients.</p>	Both symptomatic and asymptomatic ear health checks are part of standard primary health care for children, particularly among younger children. Given the high rates of ear health conditions and hearing loss among Indigenous children, the checks and treatment of diagnosed conditions are particularly important in preventing future hearing loss (which has significant impacts on all aspects of children’s lives, including social interactions and education).	<p>Indicator 1:</p> <ul style="list-style-type: none"><li>• The Working Group agreed that screening children for ear health is important, particularly for younger children.</li><li>• The Working Group discussed that the indicator is about process of care and is useful for continuous quality improvement (CQI) at the local level.</li></ul> <p>Indicator 2:</p> <ul style="list-style-type: none"><li>• The HS DAG Working Group discussed that if the purpose of the indicator is to look at the national prevalence, the nKPIs are not considered an appropriate measure for this purpose.</li><li>• The Working Group discussed that the denominator (the whole population) is not appropriate unless the whole population has been screened. If only a small proportion of the population is screened, there will only be a small number of people with an ear condition reported which is not a good measure of prevalence.</li></ul>	
Committee—assessment of extent criterion met for Indicator 1		Assessment	Reason

Section B. Assessment against individual criteria		Date discussed by committee: 28/05/2021
<i>Select one option only</i>  <b>Committee—assessment of extent criterion met for Indicator 2</b> <i>Select one option only</i>	<input type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input checked="" type="checkbox"/> Fully met	<b>The Working Group agreed that ear health is an important issue, particularly among younger children.</b>
	<b>Assessment</b> <input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<b>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</b>

<b>B2. Acceptability</b>		
<b>Criteria</b>	<b>Submitter—response to criteria</b>	<b>Committee—record of discussion</b>
Indicator is widely accepted	Currently only the NT has an ear health indicator. Recognition of the importance of ear health is widespread, as indicated by the number of programs focused on ear health and hearing loss at Indigenous-specific primary health care organisations.	<p>Indicator 1:</p> <p>It was noted that there have been no identified issues with the acceptability of the existing ear health indicator in the Northern Territory's Aboriginal Health Key Performance Indicators (NT AHKPI).</p> <p>Indicator 2:</p> <p>The HS DAG Working Group discussed that there are issues with the acceptability of collecting data for a health condition from primary health services as diagnoses are often done through specialist services that sit outside the primary health care service.</p>
Indicator and process of collecting is culturally safe	The NT AHKPIs are developed in partnership with the sector. The data would be extracted from the clinical information system and as with all nKPIs would be de-identified.	<p>Indicator 1:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p> <p>Indicator 2:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p>
Collection of indicator is ethical	Interpretation of results must take into account the external factors that influence whether children are screened, as well as the factors that relate to the prevalence of ear health conditions (such as housing).	<p>Indicator 1:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p> <p>Indicator 2:</p> <p>The HS DAG Working Group had differing views on whether the indicator is ethical.</p>
Health services are prepared to implement the indicator	The survey results from AIHW's Review showed that 76% of respondents felt there would be value in having a national	<p>Indicator 1:</p> <p>It was discussed that the NT AHKPI ear health indicator provides an idea of screening rates, which services can use for CQI.</p>



B2. Acceptability			
Criteria	Submitter—response to criteria	Committee—record of discussion	
	indicator on child ear health (16% said they didn't know, and 8% said there would not be value in a national indicator).	<p>Indicator 2:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p>	
<p>Inclusion in nKPIs provides more value than alternative sources of data</p> <p><i>Describe why collecting in the nKPIs is better than collecting via another data source. Applies to where a similar, or related, indicator exists in another data collection, and to completely new measures.</i></p>	<p>National data on ear health screening and conditions is sourced from the National Aboriginal and Torres Strait Islander Health Survey, but cannot be used for CQI at the organisation level. As the data are only collected every 6 years, their usefulness for policy is also limited.</p> <p>The AIHW has a series of reports on hearing health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory, but, again the scope of the reports is limited to the NT. The AIHW also reports on Queensland's Deadly Ears project (AIHW 2021).</p> <p>Inclusion in the nKPIs would provide important information for CQI and for policy.</p>	<p>Indicator 1:</p> <p>Please see responses to "Health services are prepared to implement the indicator" above.</p> <p>Indicator 2:</p> <p>Please see the response to "Indicator is widely accepted" above.</p>	
<p><b>Committee—assessment of extent criterion met for Indicator 1</b></p> <p><i>Select one option only</i></p>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input checked="" type="checkbox"/> Fully met	<p><b>The HS DAG Working Group agreed that the indicator fully meets this criterion due to the reasons outlined above.</b></p>
<p><b>Committee—assessment of extent criterion met for Indicator 2</b></p> <p><i>Select one option only</i></p>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<p><b>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</b></p>

B3. Evidence base		
Criteria	Submitter—response to criteria	Committee—record of discussion
<p>Indicator is derived from a high quality evidence base</p> <p><i>For example, it is based on clinical/best practice guidelines.</i></p> <p><i>Provide details on the strength of the evidence supporting the indicator—for example, NHMRC grading if available.</i></p>	<p>The NACCHO/RACHP Guidelines recommend that, for children &lt;15, ear examinations (including pneumatic otoscopy or video otoscopy and tympanometry) should be performed opportunistically or as part of a yearly health check in order to detect unrecognised acute or chronic otitis media.</p> <p>If detected, clinicians should follow the clinical practice guidelines for management (see p.68 of the guidelines).</p>	<p>Indicator 1:</p> <p>The HS DAG Working Group discussed that there is an evidence base for Indicator 1.</p> <p>Indicator 2:</p> <p>The HS DAG Working Group noted that although there is some evidence in the briefing paper, it is not an evidence base to support using primary health care to record prevalence. It was discussed that there is a skewed population attending primary health care, a skewed population getting reviewed and the information is not always recorded in an extractable format.</p>
<p>Indicator aligns with evidence base</p>	<p>Indicator 1 matches the screening recommendations from NACCHO/RACGP for an ear health examination at least once a year among 0–14 year olds.</p> <p>Indicator 2 is consistent with clinical practice guidelines for management of identified ear health conditions and matches the breakdown recommended in Sibthorpe et al. 2017).</p>	<p>Indicator 1:</p> <ul style="list-style-type: none"> <li>The HS DAG Working Group discussed that the indicator aligns with the guidelines.</li> <li>The HS DAG Working Group discussed that it is important to include both otoscopy and tympanometry.</li> </ul> <p>Indicator 2:</p> <p>It was proposed that it could be more beneficial to measure the proportion of conditions identified as a result of screening, rather than the population. The Working Group discussed that this could be achieved through an outcome indicator rather than a prevalence indicator. This would measure 'of those children who had an ear check, how many had a diagnosed ear condition'.</p>
<p>There is limited variation in the evidence base</p> <p><i>Describe any variation in the evidence base. For example, is variation uniform across Australia or</i></p>	<p>The recommendations are national and apply across Australia, although the incidence of ear disease is likely to vary.</p>	<p>Indicator 1:</p> <p>The HS DAG Working Group noted that there is some variation in what is recommended in the guidelines.</p> <p>Indicator 2:</p>

B3. Evidence base			
Criteria	Submitter—response to criteria	Committee—record of discussion	
<i>is there regional variation which affects acceptability and appropriateness of indicator.</i>		The HS DAG Working Group did not specifically discuss this criterion.	
<b>Committee—assessment of extent criterion met for Indicator 1</b> <i>Select one option only</i>		Assessment	Reason
		<input type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input checked="" type="checkbox"/> Fully met	The HS DAG Working Group agreed that there is an evidence base to support the indicator.
<b>Committee—assessment of extent criterion met for Indicator 2</b> <i>Select one option only</i>		Assessment	Reason
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.

B4. Actionable			
Criteria	Submitter—response to criteria	Committee—record of discussion	
<p><b>For process-of-care indicators:</b></p> <ul style="list-style-type: none"> <li>Results can be used to improve practice (that is, are actionable and within control of the organisation), which can contribute to improved health and wellbeing of clients in the future.</li> </ul> <p><b>For health-outcome indicators:</b></p> <ul style="list-style-type: none"> <li>The outcome itself (for example, the result) is amenable to change or improvement for individual clients.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Indicator provides information that the organisation can use for planning and resourcing purposes.</li> </ul>	<p>The data would enable an assessment of the current level of screening for ear health conditions at the organisation level.</p> <p>Organisations can use the results to identify whether further resources are needed to conduct the screenings or ensure that external screenings are recorded in their CIS.</p> <p>Early treatment of ear health conditions is critical in the prevention of hearing loss.</p>	<p>Indicator 1:</p> <p>The Working Group discussed that, similar to other process of care indicators, having the data available would support a discussion on how many children are getting screened and how this could be improved.</p> <p>Indicator 2:</p> <p>The HS DAG Working Group noted that the briefing paper included some ear disease conditions where there is a limited ability to be treated in primary health care.</p>	
<p><b>Committee—assessment of extent criterion met for Indicator 1</b></p> <p>Select one option only</p>		<p><b>Assessment</b></p> <p><input type="checkbox"/> Not met at all</p> <p><input type="checkbox"/> Partially met</p> <p><input checked="" type="checkbox"/> Fully met</p>	<p><b>Reason</b></p> <p>The HS DAG Working Group agreed that the results of the indicator can be used to improve practices.</p>
		<p><b>Assessment</b></p> <p><input type="checkbox"/> Not met at all</p> <p><input checked="" type="checkbox"/> Partially met</p> <p><input type="checkbox"/> Fully met</p>	<p><b>Reason</b></p> <p>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</p>
<p><b>Committee—assessment of extent criterion met for Indicator 2</b></p> <p>Select one option only</p>		<p><b>Assessment</b></p> <p><input type="checkbox"/> Not met at all</p> <p><input checked="" type="checkbox"/> Partially met</p> <p><input type="checkbox"/> Fully met</p>	<p><b>Reason</b></p> <p>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</p>

B5. Technical considerations and data quality		
Criteria	Submitter—response to criteria	Committee—record of discussion
<p>Indicator has clearly defined counting and calculation rules</p> <p><i>For example, numerator, denominator, exclusions.</i></p>	<p>The counting and calculation rules are clear (see Section A).</p>	<p>Indicator 1:</p> <p>The Working Group discussed that there would need to be clarity around what is included in the screening (e.g. tympanometry).</p> <p>Indicator 2:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p>
<p>Data are currently available in the right format to populate the indicator</p>	<p>It is not completely clear if the data are available in the right format to populate the indicator, however, initial consultation with the main CIS vendors and the NT identified the following issues (note that the NT will provide a formal data quality statement at a later date). The issues include:</p> <ul style="list-style-type: none"> <li>• Whether recording of otoscopies as procedures within children's records is consistently done (which was also cited by clinicians at the December HS DAG meeting)</li> <li>• The accuracy of the diagnoses of ear health conditions by clinicians</li> <li>• Whether the diagnostic ear health condition codes are consistent across CIS.</li> </ul> <p>It is expected that consistent coding of ear health conditions should be possible across CISs, noting condition/diagnosis names should be specified as SNOMED-CT-AU terms (e.g. 65363002—Otitis media (disorder) and all child concepts). All the vendors are familiar with this terminology and should be capable of mapping to local terms, as necessary.</p>	<p>Indicator 1:</p> <ul style="list-style-type: none"> <li>• The Working Group discussed that there is a large amount of work required in collecting the process of care indicator in the CIS.</li> <li>• It was discussed that data is not currently consistently recorded in an extractable location on the CISs.</li> </ul> <p>Indicator 2:</p> <p>The HS DAG Working Group noted that this would be more complex than proposed Indicator 1 – <i>Proportion of Indigenous regular clients aged 0–14 who received an ear health check</i>.</p>

B5. Technical considerations and data quality		
Criteria	Submitter—response to criteria	Committee—record of discussion
Technical specifications match the intent of the indicator	The technical specifications match the intent of the indicator which is to capture the proportion of children/young people screened for ear health conditions and the proportion with a diagnosed ear health condition.	Indicator 1: The HS DAG Working Group did not specifically discuss this criterion.  Indicator 2: The HS DAG Working Group noted that the proposed specifications match the intent of the indicator, however there are issues around the intent of the indicator.
Indicator is unambiguous in its interpretation	The indicator results will show the proportion with recorded ear health checks and with diagnosed ear health conditions.  Interpretation of the results must acknowledge the factors which may affect these proportions that reflect other factors (quality of the recording of screening test, availability/training of staff, and so on).	Indicator 1: The HS DAG Working Group did not specifically discuss this criterion.  Indicator 2: Refer to criterion <i>B1. Importance</i> .
Results are robust enough for use at the individual service level and for national reporting	NT to provide information on this based on their AHKPI.	Indicator 1: The HS DAG Working Group discussed that there is insufficient information available for this criterion.  Indicator 2: The HS DAG Working Group discussed that there is insufficient information available for this criterion.
Results are valid and reliable across subgroups and geographic regions	NT to provide information on this based on their AHKPI.	Indicator 1: The HS DAG Working Group discussed that there is insufficient information available for this criterion.  Indicator 2:

B5. Technical considerations and data quality			
Criteria	Submitter—response to criteria	Committee—record of discussion	
		The HS DAG Working Group discussed that there is insufficient information available for this criterion.	
<p>There are no known data quality issues in related data collections</p> <p><i>If a similar, or related, indicator exists in another data collection, outline any known data quality issues. For example, in a jurisdictional KPI collection such as the NT AHKPIs.</i></p>	NT to provide information on this based on their AHKPI.	<p>Indicator 1:</p> <p>The HS DAG Working Group discussed that there is insufficient information available for this criterion.</p> <p>Indicator 2:</p> <p>The HS DAG Working Group discussed that there is insufficient information available for this criterion.</p>	
The indicator reflects real change and is not masking other factors	In the early stages of the collection it may reflect data quality issues and access to resources. Over time, however, the indicator should be able to reflect real change in organisational practice and in disease prevalence.	<p>Indicator 1:</p> <p>The HS DAG Working Group discussed that there is insufficient information available for this criterion.</p> <p>Indicator 2:</p> <p>Refer to criterion B1. Importance.</p>	
<b>Committee—assessment of extent criterion met for Indicator 1</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input checked="" type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<p>The HS DAG Working Group discussed that there is insufficient information available for this criterion. As previously discussed by the HS DAG Working Group, where there is insufficient information available, the criterion is assessed as not being met.</p>
<b>Committee—assessment of extent criterion met for Indicator 2</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input checked="" type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<p>The HS DAG Working Group discussed that there is insufficient information available for this criterion. As previously discussed by the HS DAG Working Group, where there is</p>



B5. Technical considerations and data quality		
Criteria	Submitter—response to criteria	Committee—record of discussion
		insufficient information available, the criterion is assessed as not being met.

B6. Comparability			
Criteria	Submitter—response to criteria	Committee—record of discussion	
Results can be compared across organisations and/or over time within the organisation	An initial transition period will be required to ensure that the recording of screenings and ear health conditions is comparable across CIS and within organisations.  NT to provide feedback based on their experience with their AH KPI.		
<b>Committee—assessment of extent criterion met for Indicator 1</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input checked="" type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input type="checkbox"/> Fully met	The Working Group discussed that there is insufficient information available for this criterion. As previously discussed by the HS DAG Working Group, where there is insufficient information available, the criterion is assessed as not being met.
<b>Committee—assessment of extent criterion met for Indicator 2</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input checked="" type="checkbox"/> Not met at all <input type="checkbox"/> Partially met <input type="checkbox"/> Fully met	The HS DAG Working Group discussed that there is insufficient information available for this criterion. As previously discussed by the HS DAG Working Group, where there is insufficient information available, the criterion is assessed as not being met.

B7. Variation			
Criteria	Submitter—response to criteria	Committee—record of discussion	
<p>There is enough variation in the results to be useful</p> <p><i>For example, the indicator is responsive enough that when something changes it is meaningfully reflected</i></p>	<p>According to 2020 NT AHKPI data, the values for the proportion of children aged 3 months to 4 years with a recorded ear health test ranged from 57% to 98%, with the NT wide value of 75%.</p> <p>The presence of ear discharge at any exam ranged from 5% to 41%, with an NT wide value of 17%.</p> <p>The presence of ear discharge at the last exam ranged from 2% to 12%, with an NT wide value of 6%.</p>	<p>Indicator 1:</p> <p>The Working Group discussed that in one CIS (Communicare), there is good variation with the NT AHKPI.</p> <p>Indicator 2:</p> <p>The Working Group discussed that in one CIS (Communicare), there is good variation with the NT AHKPI.</p>	
<p><b>Committee—assessment of extent criterion met for Indicator 1</b></p> <p><i>Select one option only</i></p>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<p><b>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</b></p>
<p><b>Committee—assessment of extent criterion met for Indicator 2</b></p> <p><i>Select one option only</i></p>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<p><b>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</b></p>

B8. Risk		
Criteria	Submitter—response to criteria	Committee—record of discussion
The known or potential risks or unintended consequences of collecting and reporting are either minimal or can be managed	Interpretation of results must consider the impact of data quality, staffing, and expertise.	<p>Indicator 1:</p> <p>The Working Group discussed that work would be required to influence clinicians' behaviour to record the information in an extractable format.</p> <p>Indicator 2:</p> <p>Refer to criterion <i>B1. Importance</i>.</p>
The benefits of collecting the indicator outweigh the burden of reporting for services	<p>The risk of hearing loss for Indigenous children is high—collecting information on screening rates and the prevalence of ear health conditions can help prevent this.</p> <p>As the NT AHKPIs already collect this indicator, their experience can be used to minimise the burden in other jurisdictions by identifying issues early.</p>	<p>Indicator 1:</p> <ul style="list-style-type: none"> <li>The Working Group discussed that the costs for services relate to the additional time required to record the data in the required location to support being extracted from the CIS. It was discussed that this reduces the time the clinician can spend with patients.</li> <li>The Working group discussed that there are benefits at a service level for CQI purposes.</li> </ul> <p>Indicator 2:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p>
The associated resource implications and costs are either minimal or can be managed	<p>Advice should be sought from the NT on what resources were initially required to implement their indicator.</p> <p>Resources will be required for training, changes to the Health Data Portal, and changes to the CIS.</p>	<p>Indicator 1:</p> <ul style="list-style-type: none"> <li>The Working Group discussed that the costs to implement this indicator would be significant.</li> <li>It was noted that an influential stakeholder is currently lobbying for an MBS item for ear health checks.</li> </ul> <p>Indicator 2:</p> <p>The HS DAG Working Group did not specifically discuss this criterion.</p>

B8. Risk			
Criteria	Submitter—response to criteria	Committee—record of discussion	
<b>Committee—assessment of extent criterion met for Indicator 1</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<b>The HS DAG Working Group agreed that the indicator partially meets this criterion due to the reasons outlined above.</b>
<b>Committee—assessment of extent criterion met for Indicator 2</b> <i>Select one option only</i>		<b>Assessment</b>	<b>Reason</b>
		<input type="checkbox"/> Not met at all <input checked="" type="checkbox"/> Partially met <input type="checkbox"/> Fully met	<b>The HS DAG Working Group agreed that the indicator partially meets this criterion.</b>

**Committee facilitator**—record the key points from the discussion and summarise the advantages/disadvantages of adding the indicator. Record the final group recommendation and assessment of priority, noting any dissenting opinions.

Section C. Assessment and recommendations – Indicator 1		
<b>Summary of discussion</b>  <i>Record an overview of the assessment noting key advantages and disadvantages of the proposal</i>	<b>Advantages</b> <ul style="list-style-type: none"> <li>The HS DAG Working Group agreed that ear health is an important issue for Aboriginal and Torres Strait Islander people, particularly for young children.</li> <li>The Working Group discussed that the indicator is about process of care and is useful for CQI at the local level.</li> </ul> <b>Disadvantages</b> <ul style="list-style-type: none"> <li>The Working Group discussed that there is a large amount of work required in collecting the process of care indicator in the CIS.</li> <li>The Working Group discussed that data is not currently consistently recorded in an extractable location on the CISs.</li> <li>The Working Group noted that there is insufficient information available for the <i>Technical Considerations and Data Quality</i> and <i>Comparability</i> criteria.</li> </ul> <b>Recommendations</b> <ul style="list-style-type: none"> <li>The HS DAG Working Group supported the inclusion of Indicator 1 in the nKPIs, refer to the <i>Recommendation</i> section below.</li> </ul>	
<b>Feasibility</b>  <i>Consider the proposal and any briefing papers accompanying the proposal and document advice against the specified areas on the feasibility of including the indicator</i>	Service data collection/recording processes	Please refer to the information provided in the briefing paper.
	Client Information Systems (CIS)	Please refer to the information provided in the briefing paper.
	National reporting	Please refer to the information provided in the briefing paper.
<b>Recommendation</b>  <i>Select one option only</i>	<input checked="" type="checkbox"/> Supported for inclusion	<i>Provide modifications to specifications, if applicable</i>  The HS DAG Working Group recommended: <ul style="list-style-type: none"> <li>The indicator be implemented as proposed and the specifications are revised if a new MBS item is released.</li> <li>Include ear condition coding in the nKPI Condition Coding Framework.</li> <li>Thoroughly define ear checks and outline this detail in the specifications.</li> </ul>

## Section C. Assessment and recommendations – Indicator 1

		<ul style="list-style-type: none"> <li>Include age ranges as proposed (0-4, 5-9, and 10-14 years) but with narrower age ranges within the 0-4 years age group (3-5 months, 6-11 months, 12-35 months and 36-59 months).</li> </ul>
	<input type="checkbox"/> Not supported for inclusion	<i>Provide reason(s)</i>
<b>Assessment of priority</b> <i>Reflects how important is it in practice for the change to be made.</i> <i>Select one option only.</i> <i>Provide reason(s) if applicable.</i>	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
<b>Follow up actions required</b> <i>(add additional rows as required)</i>		
Action 1:	Responsible party:	Timeframe:
Action 2:	Responsible party:	Timeframe:

## Section C. Assessment and recommendations – Indicator 2

<b>Summary of discussion</b> <i>Record an overview of the assessment noting key advantages and disadvantages of the proposal</i>	<b>Advantages</b> <ul style="list-style-type: none"> <li>No specific advantages were discussed. It was proposed that it could be more beneficial to measure the proportion of conditions identified as a result of screening, rather than the population.</li> </ul> <b>Disadvantages</b> <ul style="list-style-type: none"> <li>The HS DAG Working Group discussed that if the purpose of the indicator is to look at the national prevalence, the nKPIs are not considered an appropriate measure for this purpose.</li> <li>The Working Group discussed that the denominator (the whole population) is not appropriate if the whole population hasn't been screened. If there is only a small proportion of the population screened, there will only be a small number of people with an ear condition reported which is not a good measure of prevalence.</li> <li>The Working Group discussed that the information is not always recorded in an extractable format.</li> <li>The HS DAG Working Group discussed that there are issues with the acceptability of collecting data for a health condition from primary health services.</li> </ul>
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## Section C. Assessment and recommendations – Indicator 2

	<ul style="list-style-type: none"> <li>The Working Group noted that there is insufficient information available for the <i>Technical Considerations and Data Quality</i> and <i>Comparability</i> criteria.</li> </ul> <p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>The HS DAG Working Group recommended that there is further consideration of the approach for Indicator 2 following implementation of Indicator 1 – <i>Proportion of Indigenous regular clients aged 0–14 who received an ear health check.</i></li> </ul>	
<b>Feasibility</b> <i>Consider the proposal and any briefing papers accompanying the proposal and document advice against the specified areas on the feasibility of including the indicator</i>	Service data collection/recording processes	Please refer to the information provided in the briefing paper.
	Client Information Systems (CIS)	Please refer to the information provided in the briefing paper.
	National reporting	Please refer to the information provided in the briefing paper.
<b>Recommendation</b> <i>Select one option only</i>	<input type="checkbox"/> Supported for inclusion	<i>Provide modifications to specifications, if applicable</i>
	<input checked="" type="checkbox"/> Not supported for inclusion	<i>Provide reason(s)</i> <ul style="list-style-type: none"> <li>The HS DAG Working Group recommended that there is further consideration of the approach for Indicator 2 following implementation of Indicator 1 – Proportion of Indigenous regular clients aged 0–14 who received an ear health check.</li> </ul>
<b>Assessment of priority</b> <i>Reflects how important is it in practice for the change to be made.</i> <i>Select one option only.</i> <i>Provide reason(s) if applicable.</i>	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
<b>Follow up actions required</b> <i>(add additional rows as required)</i>		
Action 1:	Responsible party:	Timeframe:
Action 2:	Responsible party:	Timeframe:

## Section D. Department of Health decision and follow-up actions

### Decision

Select one option only

☐ HS DAG recommendations accepted

☐ HS DAG recommendations not accepted

Provide reason(s)

### Assessment of priority

Reflects how important is it in practice  
for the change to be made

Select one option only

☐ High

☐ Medium

☐ Low

### Follow up actions required (add additional rows as required)

Action 1:

Responsible party:

Timeframe:

Action 2:

Responsible party:

Timeframe:



## Appendix A. Additional information

*For example, evidence of any preliminary analyses/implementation/pre-testing*