



**Australian Government**

**Australian Institute of  
Health and Welfare**

# **Hearing health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory: reference material**

**July 2012 to December 2018**

Australian Institute of Health and Welfare  
Canberra

Cat. no. IHW 213



# Contents

<b>Background</b> .....	<b>1</b>
Australian government funded hearing health programs in the Northern Territory.....	1
How services are provided .....	2
Hearing facility locations in the Northern Territory .....	4
<b>Technical notes</b> .....	<b>5</b>
Methods of audiological assessment .....	5
Testing hearing loss: pure tone audiometry.....	5
Testing hearing loss in younger children: visual reinforced orientation audiometry ...	5
Definitions of hearing loss and degrees of hearing impairment.....	5
Hearing loss status .....	5
Type of hearing loss .....	6
Common types of surgery to manage ear disease .....	8
<b>Data collection and quality information</b> .....	<b>9</b>
Data collection, management and reporting .....	9
Data limitations .....	9
Data item summary for hearing health data collections.....	10
Northern Territory outreach audiology data collection.....	10
Northern Territory ENT teleotology data collection.....	10
Northern Territory Clinical Nurse Specialist data collection.....	11
Data collection forms and information collected .....	12
Outreach audiology data collection form.....	12
CHHC audiology data collection form—used from October 2012 to June 2015.....	13
CNS data collection form—used from July 2015 to December 2018.....	14
ENT teleotology data collection form—used from July 2012 to December 2017.....	15
ENT teleotology data collection form—used from January 2018 .....	16
<b>References</b> .....	<b>17</b>



# Background

## Australian government funded hearing health programs in the Northern Territory

The extent of poor ear health among Indigenous children and young people in the Northern Territory was corroborated during the Child Health Check Initiative (CHCI) introduced under the Northern Territory Emergency Response (NTER). Child Health Check data showed that between July 2007 and June 2009, of the 9,373 Indigenous children who received health checks, 30% had ear disease in NTER Prescribed Areas. Of these children, 1,291 (14%) were referred to audiology services and 896 (10%) were referred to an ENT specialist at their initial health check (AIHW & DoHA 2009). The WHO Burden of Disease report (WHO 2004) indicates that where the prevalence of chronic otitis media exceeds the 4% prevalence, it is 'indicative of a massive public health problem requiring urgent attention'.

In response to the high level of need in this area, an ear and hearing health program was established as part of the NTER in mid-2007. This program continued under the Closing the Gap program (CtG) in the Northern Territory National Partnership Agreement from mid-2009 to mid-2012. These programs targeted services to children and young people in Prescribed Areas of the Northern Territory, which were remote areas that lacked specialist services. For more background information on these two initiatives, see Northern Territory Emergency Response Child Health Check Initiative—follow-up services for oral and ear health: final report 2007–2012 (AIHW 2012).

By the end of the CHCI and CtG programs—referred to as 'CHCI(CtG)'—evidence from the data collected showed that among children and young people who received ear and hearing health services, the prevalence of middle ear conditions decreased, and the majority experienced improvements in hearing (AIHW 2012). However, despite those improvements, ear disease and hearing loss remain critical health issues of concern for this population (AIHW 2014).

From July 2012 to June 2015, the ear and hearing health services were replaced and expanded by the National Partnership Agreement on Stronger Futures in the Northern Territory (SFNT). Since July 2015, these services have been continued through a new national partnership on the Northern Territory Remote Aboriginal Investment (NTRAI) Hearing Health Program. The funding from both the SFNT and the NTRAI (from here on simplified to NTRAI) was mainly used to provide audiology and CNS (formerly called Child Hearing Health Coordinator, or CHHC) services to children and young people aged under 16.

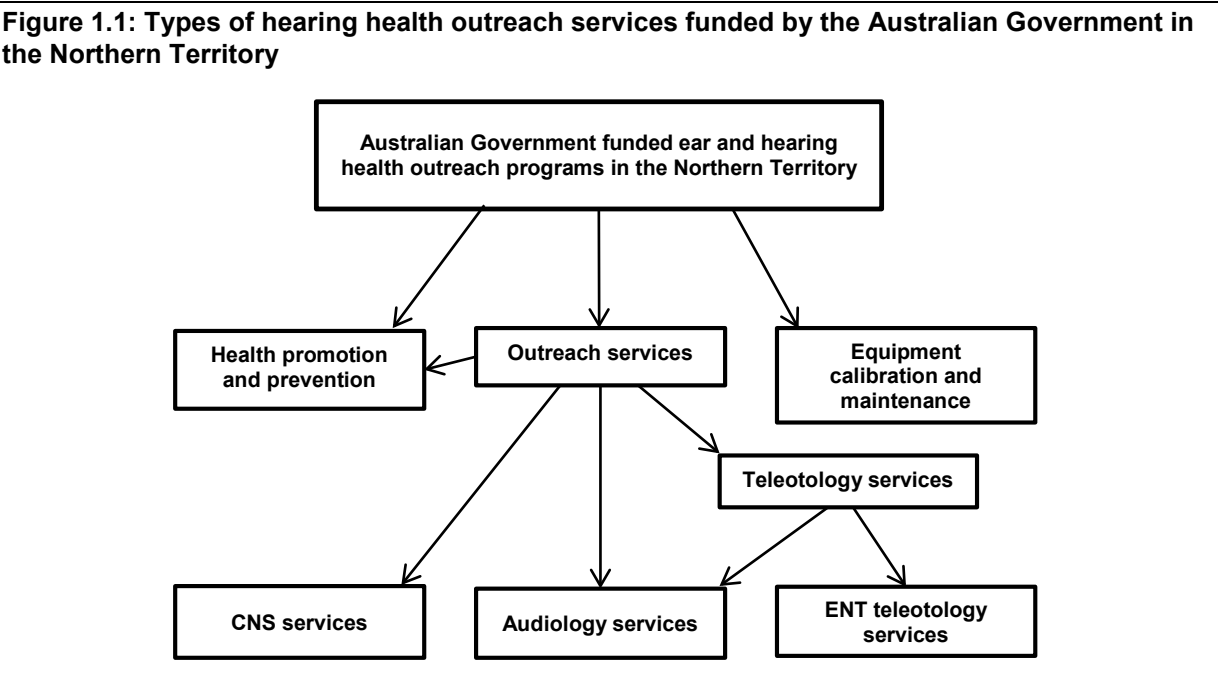
The Australian Government also provides funds to the Northern Territory Government through the Healthy Ears—Better Hearing, Better Listening program (HEBHBL). The Northern Territory Government used this funding to support audiology services and ENT teleotology services for children and young people aged 21 and under, especially in remote areas, where there is high demand and a lack of local services.

While services provided under the CHCI(CtG) were limited to prescribed communities in the Northern Territory, services provided under the SFNT and the HEBHBL are territory wide, and target—but are not limited to—remote communities. NTRAI services are implemented with a focus on remote communities due to high needs in these areas.

# How services are provided

The Hearing Health Program mainly provides outreach hearing health services at community level, including interventional (treatments) services, with technical support from the ENT services in the Royal Darwin Hospital. The program functions that include scheduling, logistics, information management, assets management, and communication functions are provided by core management and administration staff. The services provided by the program include four components: health promotion and prevention, audiology services, CNS services and teleotology services. The outreach teams also dedicate time and resources to maintain medical equipment to ensure these services run smoothly. Since 2010, the number of outreach visits to remote communities across regions in the Northern Territory continues to increase as integration strategies reduce costs and improve efficiencies of service delivery.

Figure 1.1 summarises information about these services, including the scope, service providers and the specific functions of each service type.

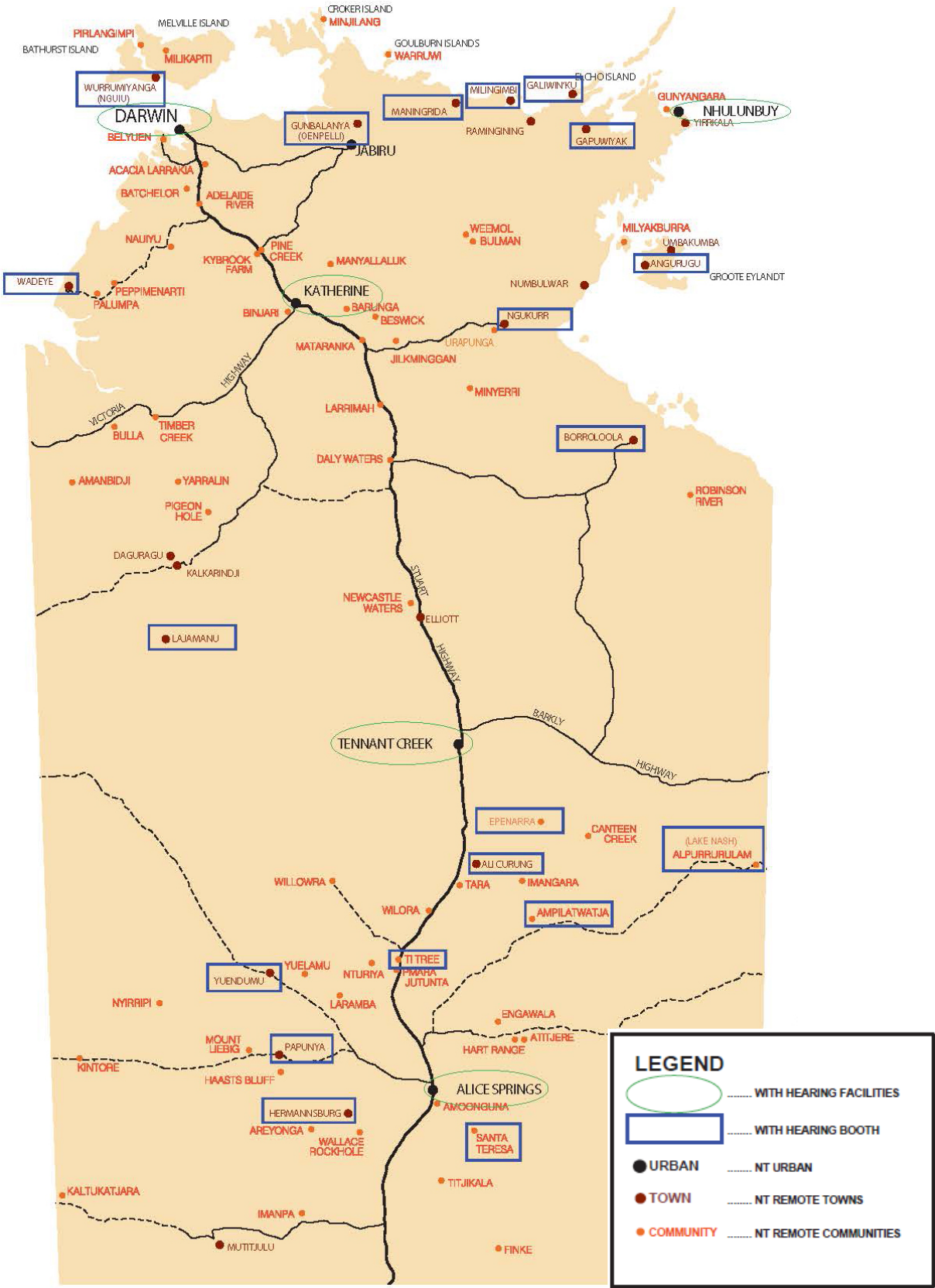


**Table 1.1: Scope of hearing health outreach services funded by the Australian Government in the Northern Territory<sup>(a)</sup>**

Scope of service recipients	Service provider/staff	Services provided
<b>Ear and hearing health promotion and prevention</b>		
Whole community, including council, school, clinic and health services, women's and family groups	Hearing health outreach team members, which can include audiologists, CNSs, Aboriginal health workers, and ENT nurses	Increasing ear and hearing health knowledge by various education activities, including dissemination of health promotion material and conducting health education sections
<b>Audiology services</b>		
Indigenous children and young people in the Northern Territory aged 21 and under Services for children and young people aged under 16 are funded through the NTRAI National Partnership Agreement Services for those aged 21 and under are funded through the HEBHBL	Outreach teams consisting of an audiologist and at least one other member of staff, such as a registered nurse, nurse audiometrist, Aboriginal health worker, or a community hearing worker Teleotology service teams: CNS (ENT), audiologist and ENT specialist	Assessment of middle ear function Diagnosis of hearing loss and middle ear conditions Recommendations for clinical care and rehabilitation (for example, communication strategies, classroom amplification, hearing aids, speech therapy and education support) Outreach teams working with local families, primary health organisations, community personnel, schools and early childhood organisations
<b>ENT Teleotology services</b>		
Indigenous children and young people in the Northern Territory aged 21 and under	Teleotology service teams: CNS (ENT), audiologist and ENT specialist	ENT specialist advice and oversight Diagnosis and assessment of hearing loss Diagnosis and assessment of middle ear conditions Recommendations for treatment (for example, medications, surgery, hearing aids) Care coordination
<b>CNS services</b>		
Indigenous children who have a priority listing (that is, a diagnosed middle ear condition or documented hearing impairment) See Chapter 5 for more information	CNS	Coordination of treatment strategies by: establishing what support communities need and promoting hearing health supporting local staff to identify priority children managing schedules of children for audiology and other specialist services engaging and connecting communities with a range of service providers training local staff helping local staff with data recording and running reports

(a) Services presented here are only the types of hearing health services included in *Hearing health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory* report, and not an exhaustive representation of all hearing health services available in the Northern Territory.

# Hearing facility locations in the Northern Territory





# Technical notes

## Methods of audiological assessment

During audiology services, middle ear and hearing status are investigated and examined by an audiologist. This includes:

- detailed clinical history of ear health, family history, general health, noise exposure, speech development and language development
- visual examination of the ear canal and tympanic membrane
- examination of the mobility of the ear membrane
- examination of functional hearing acuity.

### Testing hearing loss: pure tone audiometry

Pure tone audiometry is the standard technique of testing hearing ability among children and young people who are old enough to cooperate with the test procedure. It records a subjective response to threshold (softest) sound stimuli presented through a headphone, bone conductor or speaker at discrete frequencies that are essential for detecting and discriminating speech. Any response deviation from the normal range, at any sound stimuli, in either ear, is described as a hearing loss, and the type of hearing loss is diagnosed.

### Testing hearing loss in younger children: visual reinforced orientation audiometry

Visual reinforced orientation audiometry (VROA) is used to assess hearing in children aged between 9 months and 3 years. Results are obtained in a sound field where both ears are presented to test stimulus simultaneously through a calibrated speaker. As the results recorded are obtained in a sound field (both ears are being presented with stimuli without differentiation), diagnostic audiology results do not provide detailed information on separate ears and generally reflect the ear with the best hearing acuity.

## Definitions of hearing loss and degrees of hearing impairment

### Hearing loss status

- Unilateral: hearing loss in one ear
- Bilateral: hearing loss in both ears
- Tested by sound field: where children are tested using VROA, it is not possible to determine whether hearing loss is unilateral or there is no hearing loss; instead, the test indicates hearing acuity in the better ear.

## Type of hearing loss

- Sensorineural: deviation of hearing threshold from the normal range attributable to problems in the inner ear or the cochlear nerve
- Conductive: deviation of hearing threshold from normal range associated with reduced conduction of sound through the outer ear, tympanic membrane (eardrum) or middle ear, including ossicles (middle ear bones)
- Mixed: deviation of hearing threshold from the normal range that has combined conductive and sensorineural components.

## Degree of hearing impairment

Hearing impairment describes the degree of impairment associated with hearing loss in the 'better hearing ear', using a scale of mild, moderate, severe and profound. It is based on the degree of deviation from normal thresholds in the 'better ear', calculated as a 3-frequency average of the threshold of hearing (in decibels Hearing Level—dB HL): 500 hertz (Hz), 1000 Hz and 2000 Hz.

In the AIHW's hearing health data collections, a person's degree of hearing impairment is classified based on the categorical variable in the data collection form provided by the Northern Territory Department of Health (NT DoH) (see Data collection forms and information collected section). The NT DoH applies a conservative categorisation of hearing impairment, as it is regarded to be more suitable for children aged under 15 (Access Economics 2006). For example, this means that a child classified with moderate hearing impairment by the NT DoH might have been classified as having mild hearing impairment in the standard system (see Table 1.2 below). The system used by the NT DoH is as follows:

- Mild: On average, the quietest sounds that people can hear with their better ear are between 16–30 dB HL in soundproof conditions and 26–35 dB HL in non-soundproof conditions. They are able to hear and repeat words spoken in normal voice at 1 metre. Counselling and hearing aids may be needed.
- Moderate: On average, the quietest sounds that people can hear with their better ear are between 31–60 dB HL in soundproof conditions and 36–60 dB HL in non-soundproof conditions. They are able to hear and repeat words spoken in raised voice at 1 metre and have difficulty keeping up with conversations without using a hearing aid.
- Severe: On average, the quietest sounds that people can hear with their better ear are between 61–90 dB HL either in soundproof conditions or non-soundproof conditions. They are able to hear some words when shouted into the better ear. Hearing aids are needed. If no hearing aids are available, lip-reading and signing may be necessary.
- Profound: On average, the quietest sounds that people can hear with their better ear are 91 + dB HL either in soundproof conditions or non-soundproof conditions. They are unable to hear and understand even a shouted voice. Hearing aids may help with hearing words. Additional rehabilitation and cochlear implants, as appropriate, combined with communication skills such as lip reading and signing provide valuable support to the profoundly deaf.

**Table 1.2: Comparison of standards for classifying degree of hearing impairment between the NT DoH and the WHO**

Degree of hearing impairment	NT DoH standard <sup>(a)</sup> (dB HL)	WHO standard (dB HL)
Mild	16–30	26–40
Moderate	31–60	41–60
Severe	61–90	61–80
Profound	91+	81+

(a) Standard for services analysed in the Northern Territory Outreach Hearing Health Program: Ear and Hearing Health Program report.

Note: dB HL refers to the quietest sounds that people can hear with their better ear in soundproof conditions.

## Changes in hearing loss and hearing impairment

- Improved hearing loss and impairment: Hearing loss and impairment was classified as ‘improved’ if a child or young person’s hearing loss status or degree of hearing impairment improved between the first and second services and the second and third services, or if there was an improvement between 2 services and no change between the other 2 services:
  - Improved hearing loss was defined as a change in hearing loss status between audiology services in the following scenarios: (1) from bilateral hearing loss to unilateral hearing loss or no hearing loss and (2) from unilateral hearing loss to no hearing loss.
  - Improved hearing impairment was defined as a movement between audiology services to a lower degree of hearing impairment (for example, from profound hearing impairment to severe, moderate or mild hearing impairment).
- Deteriorated hearing loss and impairment: Hearing loss status and degree of hearing impairment was classified as ‘deteriorated’ if a child or young person’s hearing loss status or degree of hearing impairment deteriorated between services (between the first and second services, and between the second and third services), or if there was a deterioration between only 2 services and no change between the other 2 services:
  - Deteriorated hearing loss status was defined as a change between audiology services in the following scenarios: (1) from no hearing loss to unilateral or bilateral hearing loss and (2) from unilateral hearing loss to bilateral hearing loss.
  - Deteriorated hearing impairment was defined as a movement between audiology services to a higher degree of hearing impairment (for example, from mild hearing impairment to moderate, severe or profound hearing impairment).
- Stabilised hearing loss and impairment: Hearing loss and impairment was classified as ‘stabilised’ if a service recipient’s hearing loss status or degree of hearing impairment was the same in all 3 audiology services included for analysis in this study.
- Fluctuated hearing loss and impairment: Hearing loss and impairment were classified as ‘fluctuating’ if a child or young person’s hearing loss status or degree of hearing impairment differed between services included for analysis in this study, without a clear pattern in either improvement or deterioration (that is, if hearing loss status or degree of hearing impairment improved between the first and second services and deteriorated between the second and third services, or vice versa).

## **Common types of surgery to manage ear disease**

- Adenoidectomy: the surgical removal of adenoids.
- Examination under anaesthetic: the examination of a child's ear(s) while under anaesthetic.
- Grommet: a tiny tube that is surgically placed across the eardrum to re-establish ventilation to the middle ear. It is also called a 'ventilation tube', a 'pressure equalisation tube' or a 'tympanostomy tube'.
- Myringoplasty: the repair of a perforation of the tympanic membrane (ear drum).
- Myringotomy: a procedure in which a tiny incision is created in the eardrum to relieve pressure caused by excessive build-up of fluid, or to remove fluid from the middle ear.

# Data collection and quality information

## Data collection, management and reporting

The AIHW was commissioned by the Department of Health to collect, manage and report on data from ear and hearing health outreach services in the Northern Territory. The information supports the monitoring of health services for Indigenous children and young people in an area of critical need—both geographically and health-wise—in the Northern Territory, and builds the evidence required for program monitoring and evaluation.

The data analysed in the *Northern Territory Outreach Hearing Health Program* are collected by the AIHW from the following services:

- hearing health outreach audiology data collection
- ENT teleotology data collection
- CNS services data collection.

These data are collected using paper data collection forms. Health professionals responsible for providing services complete a form with information about the child or young person's demographic characteristics, types of services provided, community where the service was provided, date of service, examination results and medical interventions and recommendations.

How much data the AIHW receives on each child or young person depends on whether the child or young person's parent or guardian provides consent to share the information. There are two scenarios for the provision of data under the consent requirements:

- If consent is given, all de-identified data are sent to the AIHW.
- If consent is not given, a limited amount of aggregate information is provided to the AIHW. This includes the number of services provided and the number of children and young people receiving a service by 5-year age group, sex, and community where the service was provided.

Therefore, apart from aggregate numbers, data used include only children and young people for whom consent was obtained from parents or guardians to share information with the AIHW.

Throughout the report, the term 'services' refers to occasions of service. A child or young person may receive a number of services and have more than 1 record in each data collection. Each record in the collection corresponds to a single service, not to a single person.

## Data limitations

The audiology, CNS and ENT data collections have some limitations that should be considered when interpreting the findings presented in the report.

- Children and young people who receive audiology, ENT or CNS services are not a random sample of Indigenous children and young people in the Northern Territory because these services are targeted at children with high need. The data includes over 10,400 children and young people aged under 21, who received services between August 2007 and December 2018. Of these children and young people, around 9,100 were still eligible for hearing health outreach services in 2018. This

accounts for approximately 30% of the Northern Territory Indigenous population in this age group in 2018. Additionally, the scope of the report is limited to programs funded by the Australian Government. Services provided through other funding sources (for example, the Northern Territory Government or private sector) are not included. Thus, the results of the report do not represent ear and hearing health services in the Northern Territory as a whole, and they are not representative of the total Indigenous population aged under 21 in the Northern Territory.

- In general, the report does not include information on children and young people if their parent or guardian did not provide consent to share the data with the AIHW. The exceptions to this are for summary tables on the total number of services and service recipients, which contain aggregate non-consent data. The accuracy of analysis results for audiology and ENT services was not greatly affected as the extent of non-consent data was minimal, at around or less than 1% for audiology and ENT services between 2013 and December 2018. However, rates of non-consent were high for CNS services, but there have been improvements to non-consent rates over time for CNS services.
- When using and interpreting the data, the extent of missing and 'not tested' responses should be taken into account. Where possible, tables show the percentage of missing and not tested responses.

## **Data item summary for hearing health data collections**

### **Northern Territory outreach audiology data collection**

The Northern Territory outreach audiology data collection includes:

- information about the child (hospital registration number (HRN), date of birth and sex)
- information about the service (community where service was provided and date of service)
- outcomes from the audiology check, including hearing loss status, hearing loss type, degree of hearing impairment, and middle ear conditions diagnosed
- further action(s) recommended.

### **Northern Territory ENT teleotology data collection**

The Northern Territory ENT teleotology data collection includes:

- information about the child or young person (HRN, date of birth and sex)
- information about the service (community where the service was provided and date of service)
- middle ear diagnosis
- actions recommended and follow-up required
- type of surgery recommended.

## **Northern Territory Clinical Nurse Specialist data collection**

The Northern Territory Clinical Nurse Specialist data collection includes:

- information about the child (HRN, date of birth and sex)
- information about the service (community where the service was provided and date of service)
- hearing health priority category
- ear health of children, including diagnosis of middle ear condition
- clinical service activities provided to children
- contacts made with other service providers.

# Data collection forms and information collected

## Outreach audiology data collection form

 Northern Territory Government	<b>HEARING HEALTH PROGRAM</b> AIHW SERVICES FORM
	DEPARTMENT OF HEALTH

### AUDIOLOGY SERVICES FORM

<b>1. ORGANISATION DETAILS</b>		
Date of service:        /        /20        (dd/mm/yyyy)		
ID of Community or Town Camp where this service was provided:		
<b>2. CHILD DETAILS</b>		
HRN:	Date of Birth:        /        /	<input type="checkbox"/> Male <input type="checkbox"/> Female
<b>3. SUMMARY OF AUDIOLOGY FINDINGS (select one option under each heading)</b>		
<b>Hearing Loss</b>		
<input type="checkbox"/> None	<b>Type of hearing loss</b>	
<input type="checkbox"/> Unilateral	<input type="checkbox"/> Conductive	
<input type="checkbox"/> Bilateral	<input type="checkbox"/> Sensorineural	
<input type="checkbox"/> Sound Field	<input type="checkbox"/> Mixed ( both conductive and sensorineural)	
	<input type="checkbox"/> CNT/DNT	
	<input type="checkbox"/> Indeterminate	
<b>Degree of hearing impairment (based on better ear)</b>		
<i>(av. HTL)</i>	<i>Sound Proof Conditions</i>	<i>Non-Sound Proof Conditions</i>
<input type="checkbox"/> Normal	(0 - 15 dbHL)	(0 - 25 dbHL)
<input type="checkbox"/> Mild	(16 - 30dbHL)	(26 - 35 dbHL)
<input type="checkbox"/> Moderate	(31 - 60 dbHL)	(36 - 60 dbHL)
<input type="checkbox"/> Severe	(61 - 90 dbHL)	(61 - 90 dbHL)
<input type="checkbox"/> Profound	(91 dbHL+)	(91 dbHL+)
<b>Middle ear condition</b>		
<b>Right</b>		<b>Left</b>
<input type="checkbox"/> None		<input type="checkbox"/> None
<input type="checkbox"/> Eustachian Tube Dysfunction		<input type="checkbox"/> Eustachian Tube Dysfunction
<input type="checkbox"/> Acute Otitis Media		<input type="checkbox"/> Acute Otitis Media
<input type="checkbox"/> Otitis Media with Effusion		<input type="checkbox"/> Otitis Media with Effusion
<input type="checkbox"/> Chronic Suppurative Otitis Media		<input type="checkbox"/> Chronic Suppurative Otitis Media
<input type="checkbox"/> Dry Perforation		<input type="checkbox"/> Dry Perforation
<input type="checkbox"/> Other, (please specify).....		<input type="checkbox"/> Other, (please specify).....
<input type="checkbox"/> Unsure		<input type="checkbox"/> Unsure
<b>4. ACTION (please indicate all that apply)</b>		
<input type="checkbox"/> No further action required		
<input type="checkbox"/> Case management by Primary Health Centre		
<input type="checkbox"/> Case management by ENT		
<input type="checkbox"/> Ongoing monitoring by NT Hearing Services		
<input type="checkbox"/> Referral to Australian Hearing (rehabilitation)		
<input type="checkbox"/> Referral to Department of Education Employment		
<input type="checkbox"/> Other, (please specify).....		



# CHHC audiology data collection form—used from October 2012 to June 2015





## HEARING HEALTH PROGRAM CHHC SERVICE FORM

### DEPARTMENT OF HEALTH

COMMUNITY:	CHHC:	VISIT DATE: / /
FIRST NAME:	OTHER NAME:	
FAMILY NAME:	HRN:	
DOB: / /	<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE	CARER:

#### EAR HEALTH

OTOSCOPY						PRIORITY																			
 <p>Right Tympanic Membrane</p>		 <p>Left Tympanic Membrane</p>		<input type="checkbox"/> HP1 <input type="checkbox"/> HP2 <input type="checkbox"/> HP3 <input type="checkbox"/> HP4 See Table 2: Priority Activities																					
Pneumatic Otoscopy Mobility: <input type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Normal <input type="checkbox"/> DNT COMMENTS:		Pneumatic Otoscopy Mobility: <input type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Normal <input type="checkbox"/> DNT COMMENTS:		<table border="1"> <thead> <tr> <th>CLINICAL SERVICE ACTIVITIES</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>Verified Diagnosis <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Verified or Amended Treatment <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Confirmed Regular Follow Up &amp; Care Plan <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Discussed Treatment Adherence Strategies <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Discussed Hearing Loss Strategies <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Discussed Ear Health Education <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Supported Audiological M'tment <input type="checkbox"/></td> <td></td> </tr> <tr> <td>Supported ENT Management <input type="checkbox"/></td> <td></td> </tr> </tbody> </table>		CLINICAL SERVICE ACTIVITIES	Comments	Verified Diagnosis <input type="checkbox"/>		Verified or Amended Treatment <input type="checkbox"/>		Confirmed Regular Follow Up & Care Plan <input type="checkbox"/>		Discussed Treatment Adherence Strategies <input type="checkbox"/>		Discussed Hearing Loss Strategies <input type="checkbox"/>		Discussed Ear Health Education <input type="checkbox"/>		Supported Audiological M'tment <input type="checkbox"/>		Supported ENT Management <input type="checkbox"/>			
CLINICAL SERVICE ACTIVITIES	Comments																								
Verified Diagnosis <input type="checkbox"/>																									
Verified or Amended Treatment <input type="checkbox"/>																									
Confirmed Regular Follow Up & Care Plan <input type="checkbox"/>																									
Discussed Treatment Adherence Strategies <input type="checkbox"/>																									
Discussed Hearing Loss Strategies <input type="checkbox"/>																									
Discussed Ear Health Education <input type="checkbox"/>																									
Supported Audiological M'tment <input type="checkbox"/>																									
Supported ENT Management <input type="checkbox"/>																									
TYMPANOMETRY																									
EAR	TYPE	MEP	MEC	ECV	DNT																				
RIGHT																									
LEFT																									
DIAGNOSIS AS PER CARPA				Right	Left	CONTACT WITH OTHER PROVIDERS																			
NAD / None				<input type="checkbox"/>	<input type="checkbox"/>	Education Providers <input type="checkbox"/>																			
Eustachian Tube Dysfunction				<input type="checkbox"/>	<input type="checkbox"/>	Health Provider <input type="checkbox"/>																			
Otitis Media with effusion				<input type="checkbox"/>	<input type="checkbox"/>	Community-based Worker <input type="checkbox"/>																			
Acute Otitis Media without perforation				<input type="checkbox"/>	<input type="checkbox"/>	Australian Hearing <input type="checkbox"/>																			
Acute Otitis Media with perforation				<input type="checkbox"/>	<input type="checkbox"/>	Other <input type="checkbox"/>																			
Chronic Suppurative Otitis Media				<input type="checkbox"/>	<input type="checkbox"/>																				
Dry Perforation				<input type="checkbox"/>	<input type="checkbox"/>																				
Other.....				<input type="checkbox"/>	<input type="checkbox"/>																				
COMMENTS																									
<input type="checkbox"/> Results entered into PCIS / Communicare    Clinician Name:.....    Signature:.....																									

# CNS data collection form—used from July 2015 to December 2018



## HEARING HEALTH PROGRAM

CNS/AHP CONSULTATION FORM  
DEPARTMENT OF HEALTH

<b>COMMUNITY:</b>		<b>COMMUNITY ID:</b>	<b>VISIT DATE:</b> / /	
<b>PATIENT NAME:</b>		<b>DOB:</b> / /	<b>HRN:</b>	
<b>ABORIGINAL/TSI:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE		<b>CARER:</b>
<b>TIME REVIEWED:</b>		<b>SCHOOL:</b>		

<b>POST OP CHECK</b> <input type="checkbox"/>	<b>SURGICAL HISTORY:</b>
<b>KEY EAR HEALTH HISTORY:</b>	

RIGHT EAR	PRESENTING CONDITION				
<b>Otoscopy Images:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO	<b>Pain</b> <input type="checkbox"/> No <input type="checkbox"/> Yes Duration:..... Rx:.....				
	<b>Discharge</b> <input type="checkbox"/> No <input type="checkbox"/> Yes Duration:..... Rx:.....				
	<b>Hearing Loss</b> <input type="checkbox"/> No <input type="checkbox"/> Yes	<b>Hearing aid/s fitted:</b> <input type="checkbox"/> No <input type="checkbox"/> Yes			
	<b>ACTIONS BEFORE OTOSCOPY</b>				
	<input type="checkbox"/> None	<input type="checkbox"/> Wax Removed	<input type="checkbox"/> Pus removed	<input type="checkbox"/> Foreign body removed	<b>Irrigation:</b> <input type="checkbox"/> Betadine <input type="checkbox"/> Water
<b>TYMPANOMETRY:</b>	<b>TYPE</b>	<b>MEP</b>	<b>MEC</b>	<b>ECV</b>	<b>DNT</b>
<b>Pneumatic Otoscopy</b> <input type="checkbox"/> Valsalva	<b>Mobility:</b>	<input type="checkbox"/> Immobile	<input type="checkbox"/> Hypomobile	<input type="checkbox"/> Mobile	<input type="checkbox"/> Hypermobile <input type="checkbox"/> Indeterminate

LEFT EAR	PRESENTING CONDITION				
<b>Otoscopy Images:</b> <input type="checkbox"/> YES <input type="checkbox"/> NO	<b>Pain</b> <input type="checkbox"/> No <input type="checkbox"/> Yes Duration:..... Rx:.....				
	<b>Discharge</b> <input type="checkbox"/> No <input type="checkbox"/> Yes Duration:..... Rx:.....				
	<b>Hearing Loss</b> <input type="checkbox"/> No <input type="checkbox"/> Yes	<b>Hearing aid/s fitted:</b> <input type="checkbox"/> No <input type="checkbox"/> Yes			
	<b>ACTIONS BEFORE OTOSCOPY</b>				
	<input type="checkbox"/> None	<input type="checkbox"/> Wax Removed	<input type="checkbox"/> Pus removed	<input type="checkbox"/> Foreign body removed	<b>Irrigation:</b> <input type="checkbox"/> Betadine <input type="checkbox"/> Water
<b>TYMPANOMETRY:</b>	<b>TYPE</b>	<b>MEP</b>	<b>MEC</b>	<b>ECV</b>	<b>DNT</b>
<b>Pneumatic Otoscopy</b> <input type="checkbox"/> Valsalva	<b>Mobility:</b>	<input type="checkbox"/> Immobile	<input type="checkbox"/> Hypomobile	<input type="checkbox"/> Mobile	<input type="checkbox"/> Hypermobile <input type="checkbox"/> Indeterminate




  

PRESUMPTIVE DIAGNOSIS	R	L	HIGH PRIORITY:		
NAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> HP1	<input type="checkbox"/> HP2	<input type="checkbox"/> HP3 <input type="checkbox"/> HP4
NAD (Post Op)	<input type="checkbox"/>	<input type="checkbox"/>	<b>PREVIOUS HIGH PRIORITY RATING:</b> <input type="checkbox"/> HP1 <input type="checkbox"/> HP2 <input type="checkbox"/> HP3 <input type="checkbox"/> HP4 <b>DATE:</b> / /		
Eustachian Tube Dysfunction	<input type="checkbox"/>	<input type="checkbox"/>	<b>Health Promotion:</b> <input type="checkbox"/> Noseblowing <input type="checkbox"/> Hand and face hygiene <input type="checkbox"/> Nutrition <input type="checkbox"/> Smoke exposure <input type="checkbox"/> Dry ear precautions		
AOM	<input type="checkbox"/>	<input type="checkbox"/>	<b>TREATMENT COMMENCED AS PER CARPA</b>		
AOM with perforation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Amoxicillin	Other Abx: _____	<b>Weight:</b> _____
OME	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Ciloxan	<input type="checkbox"/> Kenacomb	<input type="checkbox"/> R <input type="checkbox"/> L
CSOM (active discharge)	<input type="checkbox"/>	<input type="checkbox"/>	<b>Other Rx:</b> .....		
CSOM (inactive dry perforation)	<input type="checkbox"/>	<input type="checkbox"/>	<b>Dosage mg/drops:</b> <b>Frequency:</b> <b>Duration:</b>		
Foreign Body	<input type="checkbox"/>	<input type="checkbox"/>	<b>FOLLOW UP REQUIRED</b>		
Other	<input type="checkbox"/>	<input type="checkbox"/>	<b>Primary Health:</b> <input type="checkbox"/> PRN	<input type="checkbox"/> Review ears and medication in .....	
Unsure	<input type="checkbox"/>	<input type="checkbox"/>	<b>Referred to TELEO:</b> <input type="checkbox"/> NO <input type="checkbox"/> YES	<b>Audiology follow-up required:</b> <input type="checkbox"/> NO <input type="checkbox"/> YES	



  

<b>COMMENTS:</b>	<b>OTHER SERVICE PROVIDER:</b>		<b>CASE MANAGEMENT REQUIRED:</b>		
	<b>EDUCATION</b>	<input type="checkbox"/>	<b>Follow up care initiated by CNS/AHP</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>HEALTH CENTRES</b>	<input type="checkbox"/>	<b>Discussed treatment adherence strategies</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>FAFT</b>	<input type="checkbox"/>	<b>Discussed hearing loss strategies</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>CHW</b>	<input type="checkbox"/>	<b>Discussed ear health education</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>INTERPRETER PRESENT</b>	<input type="checkbox"/>	<b>Supported Audiological management</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>OTHER</b>	<input type="checkbox"/>	<b>Vaccination status checked and up to date</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	<b>CHHC/AHP Name:</b> _____				
	<b>SIGNATURE:</b> _____ <b>DATE:</b> / /				
	<b>Consultation entered into PCIS/CCARE:</b> <input type="checkbox"/>				

# ENT teleotology data collection form—used from July 2012 to December 2017

 Northern Territory Government	<h2 style="margin: 0;">HEARING HEALTH PROGRAM</h2> <h3 style="margin: 0;">TELEOTOLOGY ENT SPECIALIST CONSULTATION</h3> <h4 style="margin: 0;">DEPARTMENT OF HEALTH</h4>																																																																																														
COMMUNITY:	ENT SPECIALIST:	VISIT DATE: / /																																																																																													
COMMUNITY ID:	DOB: / /	HRN:	MEDICARE:																																																																																												
PATIENT NAME:		<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE	CARER:																																																																																												
<input type="checkbox"/> Post-Op Check <small>THE FOLLOWING CLINICAL DIAGNOSIS AND RECOMMENDATIONS BY THE ENT SPECIALIST ARE BASED ON CASE HISTORY, AUDIOLOGY AND OTOSCOPY INFORMATION COLLECTED THROUGH TELEOTOLOGY PROTOCOL WITH NO DIRECT EXAMINATION OF THE PATIENT BY THE ENT SPECIALIST.</small>																																																																																															
Right Tympanic Membrane   Left Tympanic Membrane 	Comment:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: left;">RIGHT EAR</th> </tr> <tr> <td><input type="checkbox"/> Intact TM</td> <td><input type="checkbox"/> Normal</td> <td><input type="checkbox"/> Healed</td> <td><input type="checkbox"/> Other:</td> </tr> <tr> <td><input type="checkbox"/> Perforation</td> <td><input type="checkbox"/> Central</td> <td><input type="checkbox"/> Marginal</td> <td><input type="checkbox"/> Attic</td> </tr> <tr> <td></td> <td><input type="checkbox"/> WET</td> <td><input type="checkbox"/> Purulent</td> <td><input type="checkbox"/> DRY</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Moist (serous)</td> <td><input type="checkbox"/> Squamous</td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Mucosal</td> </tr> <tr> <td><input type="checkbox"/> Grommet</td> <td><input type="checkbox"/> Insitu</td> <td><input type="checkbox"/> Patent</td> <td><input type="checkbox"/> Blocked</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Extruded</td> <td><input type="checkbox"/> TM Intact</td> <td><input type="checkbox"/> Residual perforation</td> </tr> <tr> <th colspan="4" style="text-align: left;">LEFT EAR</th> </tr> <tr> <td><input type="checkbox"/> Intact TM</td> <td><input type="checkbox"/> Normal</td> <td><input type="checkbox"/> Healed</td> <td><input type="checkbox"/> Other:</td> </tr> <tr> <td><input type="checkbox"/> Perforation</td> <td><input type="checkbox"/> Central</td> <td><input type="checkbox"/> Marginal</td> <td><input type="checkbox"/> Attic</td> </tr> <tr> <td></td> <td><input type="checkbox"/> WET</td> <td><input type="checkbox"/> Purulent</td> <td><input type="checkbox"/> DRY</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Moist (serous)</td> <td><input type="checkbox"/> Squamous</td> </tr> <tr> <td></td> <td></td> <td></td> <td><input type="checkbox"/> Mucosal</td> </tr> <tr> <td><input type="checkbox"/> Grommet</td> <td><input type="checkbox"/> Insitu</td> <td><input type="checkbox"/> Patent</td> <td><input type="checkbox"/> Blocked</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Extruded</td> <td><input type="checkbox"/> TM Intact</td> <td><input type="checkbox"/> Residual perforation</td> </tr> </table>		RIGHT EAR				<input type="checkbox"/> Intact TM	<input type="checkbox"/> Normal	<input type="checkbox"/> Healed	<input type="checkbox"/> Other:	<input type="checkbox"/> Perforation	<input type="checkbox"/> Central	<input type="checkbox"/> Marginal	<input type="checkbox"/> Attic		<input type="checkbox"/> WET	<input type="checkbox"/> Purulent	<input type="checkbox"/> DRY			<input type="checkbox"/> Moist (serous)	<input type="checkbox"/> Squamous				<input type="checkbox"/> Mucosal	<input type="checkbox"/> Grommet	<input type="checkbox"/> Insitu	<input type="checkbox"/> Patent	<input type="checkbox"/> Blocked		<input type="checkbox"/> Extruded	<input type="checkbox"/> TM Intact	<input type="checkbox"/> Residual perforation	LEFT EAR				<input type="checkbox"/> Intact TM	<input type="checkbox"/> Normal	<input type="checkbox"/> Healed	<input type="checkbox"/> Other:	<input type="checkbox"/> Perforation	<input type="checkbox"/> Central	<input type="checkbox"/> Marginal	<input type="checkbox"/> Attic		<input type="checkbox"/> WET	<input type="checkbox"/> Purulent	<input type="checkbox"/> DRY			<input type="checkbox"/> Moist (serous)	<input type="checkbox"/> Squamous				<input type="checkbox"/> Mucosal	<input type="checkbox"/> Grommet	<input type="checkbox"/> Insitu	<input type="checkbox"/> Patent	<input type="checkbox"/> Blocked		<input type="checkbox"/> Extruded	<input type="checkbox"/> TM Intact	<input type="checkbox"/> Residual perforation																												
RIGHT EAR																																																																																															
<input type="checkbox"/> Intact TM	<input type="checkbox"/> Normal	<input type="checkbox"/> Healed	<input type="checkbox"/> Other:																																																																																												
<input type="checkbox"/> Perforation	<input type="checkbox"/> Central	<input type="checkbox"/> Marginal	<input type="checkbox"/> Attic																																																																																												
	<input type="checkbox"/> WET	<input type="checkbox"/> Purulent	<input type="checkbox"/> DRY																																																																																												
		<input type="checkbox"/> Moist (serous)	<input type="checkbox"/> Squamous																																																																																												
			<input type="checkbox"/> Mucosal																																																																																												
<input type="checkbox"/> Grommet	<input type="checkbox"/> Insitu	<input type="checkbox"/> Patent	<input type="checkbox"/> Blocked																																																																																												
	<input type="checkbox"/> Extruded	<input type="checkbox"/> TM Intact	<input type="checkbox"/> Residual perforation																																																																																												
LEFT EAR																																																																																															
<input type="checkbox"/> Intact TM	<input type="checkbox"/> Normal	<input type="checkbox"/> Healed	<input type="checkbox"/> Other:																																																																																												
<input type="checkbox"/> Perforation	<input type="checkbox"/> Central	<input type="checkbox"/> Marginal	<input type="checkbox"/> Attic																																																																																												
	<input type="checkbox"/> WET	<input type="checkbox"/> Purulent	<input type="checkbox"/> DRY																																																																																												
		<input type="checkbox"/> Moist (serous)	<input type="checkbox"/> Squamous																																																																																												
			<input type="checkbox"/> Mucosal																																																																																												
<input type="checkbox"/> Grommet	<input type="checkbox"/> Insitu	<input type="checkbox"/> Patent	<input type="checkbox"/> Blocked																																																																																												
	<input type="checkbox"/> Extruded	<input type="checkbox"/> TM Intact	<input type="checkbox"/> Residual perforation																																																																																												
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:80%;">PRESUMPTIVE DIAGNOSIS</th> <th style="width:5%;">R</th> <th style="width:5%;">L</th> </tr> </thead> <tbody> <tr><td>NAD</td><td></td><td></td></tr> <tr><td>AOM</td><td></td><td></td></tr> <tr><td>AOM with Perforation</td><td></td><td></td></tr> <tr><td>CSOM (active discharge)</td><td></td><td></td></tr> <tr><td>CSOM (inactive dry perforation)</td><td></td><td></td></tr> <tr><td>OME</td><td></td><td></td></tr> <tr><td>Foreign Body</td><td></td><td></td></tr> <tr><td>Other</td><td></td><td></td></tr> </tbody> </table>	PRESUMPTIVE DIAGNOSIS	R	L	NAD			AOM			AOM with Perforation			CSOM (active discharge)			CSOM (inactive dry perforation)			OME			Foreign Body			Other			<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">ACTIONS RECOMMENDED</th> <th style="width:30%;">INSTRUCTIONS</th> <th style="width:5%;">R</th> <th style="width:5%;">L</th> </tr> </thead> <tbody> <tr> <td>Medication:</td> <td><input type="checkbox"/> Amoxyl <input type="checkbox"/> Ciloxan <input type="checkbox"/> Kenacomb <input type="checkbox"/> Other</td> <td><input type="checkbox"/> as per CARPA</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other:</td> <td><input type="checkbox"/> Foreign body removal <input type="checkbox"/> Aural Toilet <input type="checkbox"/> Other</td> <td>Specific Instructions:</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>	ACTIONS RECOMMENDED	INSTRUCTIONS	R	L	Medication:	<input type="checkbox"/> Amoxyl <input type="checkbox"/> Ciloxan <input type="checkbox"/> Kenacomb <input type="checkbox"/> Other	<input type="checkbox"/> as per CARPA	<input type="checkbox"/>	Other:	<input type="checkbox"/> Foreign body removal <input type="checkbox"/> Aural Toilet <input type="checkbox"/> Other	Specific Instructions:	<input type="checkbox"/>																																																							
PRESUMPTIVE DIAGNOSIS	R	L																																																																																													
NAD																																																																																															
AOM																																																																																															
AOM with Perforation																																																																																															
CSOM (active discharge)																																																																																															
CSOM (inactive dry perforation)																																																																																															
OME																																																																																															
Foreign Body																																																																																															
Other																																																																																															
ACTIONS RECOMMENDED	INSTRUCTIONS	R	L																																																																																												
Medication:	<input type="checkbox"/> Amoxyl <input type="checkbox"/> Ciloxan <input type="checkbox"/> Kenacomb <input type="checkbox"/> Other	<input type="checkbox"/> as per CARPA	<input type="checkbox"/>																																																																																												
Other:	<input type="checkbox"/> Foreign body removal <input type="checkbox"/> Aural Toilet <input type="checkbox"/> Other	Specific Instructions:	<input type="checkbox"/>																																																																																												
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">           Insufficient information for Dx  <input type="checkbox"/> Needs teleotology review  <input type="checkbox"/> Needs ENT F2F             Comment:         </td> <td> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">FOLLOW-UP REQUIRED</th> </tr> </thead> <tbody> <tr> <td style="width:15%;">PRIMARY HEALTH:</td> <td> <input type="checkbox"/> Not Required  <input type="checkbox"/> Review progress after medication  <input type="checkbox"/> Dry ear precautions  <input type="checkbox"/> Monitor-Rx as required  <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN            Comment:         </td> </tr> <tr> <td>Audiology:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN         </td> </tr> <tr> <td>Australian Hearing:</td> <td> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table> </td> </tr> <tr> <td>ENT Review:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT         </td> </tr> </tbody> </table> </td> </tr> <tr> <td> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">SURGERY RECOMMENDATIONS</th> <th style="width:10%;">Yes</th> <th style="width:10%;">No</th> <th style="width:10%;">Too young for surgery</th> <th style="width:5%;">R</th> <th style="width:5%;">L</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Decide ear at operation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> TWAIT completed</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Comment:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringoplasty (Tympanoplasty Type 1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringotomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Adenoidectomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Grommets</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>EUA</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Exploration of middle ear/mastoid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Removal of tubes</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Other procedure</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </td> <td>         Signature: _____           Date: ____/____/____       </td> </tr> </table>	Insufficient information for Dx <input type="checkbox"/> Needs teleotology review <input type="checkbox"/> Needs ENT F2F  Comment:	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">FOLLOW-UP REQUIRED</th> </tr> </thead> <tbody> <tr> <td style="width:15%;">PRIMARY HEALTH:</td> <td> <input type="checkbox"/> Not Required  <input type="checkbox"/> Review progress after medication  <input type="checkbox"/> Dry ear precautions  <input type="checkbox"/> Monitor-Rx as required  <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN            Comment:         </td> </tr> <tr> <td>Audiology:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN         </td> </tr> <tr> <td>Australian Hearing:</td> <td> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table> </td> </tr> <tr> <td>ENT Review:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT         </td> </tr> </tbody> </table>	FOLLOW-UP REQUIRED		PRIMARY HEALTH:	<input type="checkbox"/> Not Required <input type="checkbox"/> Review progress after medication <input type="checkbox"/> Dry ear precautions <input type="checkbox"/> Monitor-Rx as required <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN Comment:	Audiology:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN	Australian Hearing:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table>	<input type="checkbox"/> Hearing aid: Medical clearance given to fit <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold <input type="checkbox"/> Has hearing aid/s Review required	R	L	ENT Review:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">SURGERY RECOMMENDATIONS</th> <th style="width:10%;">Yes</th> <th style="width:10%;">No</th> <th style="width:10%;">Too young for surgery</th> <th style="width:5%;">R</th> <th style="width:5%;">L</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Decide ear at operation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> TWAIT completed</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Comment:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringoplasty (Tympanoplasty Type 1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringotomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Adenoidectomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Grommets</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>EUA</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Exploration of middle ear/mastoid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Removal of tubes</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Other procedure</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	SURGERY RECOMMENDATIONS	Yes	No	Too young for surgery	R	L	<input type="checkbox"/> Decide ear at operation						<input type="checkbox"/> TWAIT completed						Comment:							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Myringoplasty (Tympanoplasty Type 1)						Myringotomy						Adenoidectomy						Grommets						EUA						Exploration of middle ear/mastoid						Removal of tubes						Other procedure					Signature: _____  Date: ____/____/____
Insufficient information for Dx <input type="checkbox"/> Needs teleotology review <input type="checkbox"/> Needs ENT F2F  Comment:	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">FOLLOW-UP REQUIRED</th> </tr> </thead> <tbody> <tr> <td style="width:15%;">PRIMARY HEALTH:</td> <td> <input type="checkbox"/> Not Required  <input type="checkbox"/> Review progress after medication  <input type="checkbox"/> Dry ear precautions  <input type="checkbox"/> Monitor-Rx as required  <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN            Comment:         </td> </tr> <tr> <td>Audiology:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN         </td> </tr> <tr> <td>Australian Hearing:</td> <td> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table> </td> </tr> <tr> <td>ENT Review:</td> <td> <input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT         </td> </tr> </tbody> </table>	FOLLOW-UP REQUIRED		PRIMARY HEALTH:	<input type="checkbox"/> Not Required <input type="checkbox"/> Review progress after medication <input type="checkbox"/> Dry ear precautions <input type="checkbox"/> Monitor-Rx as required <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN Comment:	Audiology:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN	Australian Hearing:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table>	<input type="checkbox"/> Hearing aid: Medical clearance given to fit <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold <input type="checkbox"/> Has hearing aid/s Review required	R	L	ENT Review:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT																																																																																	
FOLLOW-UP REQUIRED																																																																																															
PRIMARY HEALTH:	<input type="checkbox"/> Not Required <input type="checkbox"/> Review progress after medication <input type="checkbox"/> Dry ear precautions <input type="checkbox"/> Monitor-Rx as required <input type="checkbox"/> 1 week <input type="checkbox"/> 2 week <input type="checkbox"/> 1month <input type="checkbox"/> 6 months <input type="checkbox"/> PRN Comment:																																																																																														
Audiology:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN																																																																																														
Australian Hearing:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;"> <input type="checkbox"/> Hearing aid: Medical clearance given to fit  <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold  <input type="checkbox"/> Has hearing aid/s Review required           </td> <td style="width:5%;">R</td> <td style="width:5%;">L</td> </tr> </table>	<input type="checkbox"/> Hearing aid: Medical clearance given to fit <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold <input type="checkbox"/> Has hearing aid/s Review required	R	L																																																																																											
<input type="checkbox"/> Hearing aid: Medical clearance given to fit <input type="checkbox"/> Bone conductor aid <input type="checkbox"/> Hearing aid/s with mold <input type="checkbox"/> Has hearing aid/s Review required	R	L																																																																																													
ENT Review:	<input type="checkbox"/> Not Required <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> PRN <input type="checkbox"/> Needs F2F ENT																																																																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">SURGERY RECOMMENDATIONS</th> <th style="width:10%;">Yes</th> <th style="width:10%;">No</th> <th style="width:10%;">Too young for surgery</th> <th style="width:5%;">R</th> <th style="width:5%;">L</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Decide ear at operation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> TWAIT completed</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Comment:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringoplasty (Tympanoplasty Type 1)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Myringotomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Adenoidectomy</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Grommets</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>EUA</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Exploration of middle ear/mastoid</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Removal of tubes</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Other procedure</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	SURGERY RECOMMENDATIONS	Yes	No	Too young for surgery	R	L	<input type="checkbox"/> Decide ear at operation						<input type="checkbox"/> TWAIT completed						Comment:							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				Myringoplasty (Tympanoplasty Type 1)						Myringotomy						Adenoidectomy						Grommets						EUA						Exploration of middle ear/mastoid						Removal of tubes						Other procedure					Signature: _____  Date: ____/____/____																
SURGERY RECOMMENDATIONS	Yes	No	Too young for surgery	R	L																																																																																										
<input type="checkbox"/> Decide ear at operation																																																																																															
<input type="checkbox"/> TWAIT completed																																																																																															
Comment:																																																																																															
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																												
	Myringoplasty (Tympanoplasty Type 1)																																																																																														
	Myringotomy																																																																																														
	Adenoidectomy																																																																																														
	Grommets																																																																																														
	EUA																																																																																														
	Exploration of middle ear/mastoid																																																																																														
	Removal of tubes																																																																																														
	Other procedure																																																																																														

# ENT teleotology data collection form—used from January 2018

		<b>HEARING SERVICES</b> <b>TELEOTOLOGY ENT SPECIALIST CONSULTATION</b>			
COMMUNITY: - <i>SELECT COMMUNITY</i> -		ATSI: -	NEW REFERRAL: -	VISIT DATE:	
PATIENT NAME:		DOB:	GENDER: -	HRN:	
CARER NAME:		ENT SPECIALIST: - <i>SELECT ENT SPECIALIST</i> -			
THE FOLLOWING CLINICAL DIAGNOSIS AND RECOMMENDATIONS BY THE ENT SPECIALIST ARE BASED ON CASE HISTORY, AUDIOLOGY AND OTOSCOPY INFORMATION COLLECTED THROUGH TELEOTOLOGY PROTOCOL WITH NO DIRECT EXAMINATION OF THE PATIENT BY THE ENT SPECIALIST.					
1 <sup>ST</sup> POST OP REVIEW <input type="checkbox"/>	TYPE OF SURGERY:			OPERATION DATE:	
	TYPE OF SURGERY:			OPERATION DATE:	
	TYPE OF SURGERY:			OPERATION DATE:	
	TYPE OF SURGERY:			OPERATION DATE:	
<b>RIGHT EAR</b>					
DIAGNOSIS: - <i>SELECT DIAGNOSIS</i> -					
TYMPANIC MEMBRANE	STATUS	FEATURES	DESCRIPTION	SIZE	OTHER
	POSITION				
<b>LEFT EAR</b>					
DIAGNOSIS: - <i>SELECT DIAGNOSIS</i> -					
TYMPANIC MEMBRANE	STATUS	FEATURES	DESCRIPTION	SIZE	OTHER
	POSITION				
<b>TREATMENT</b>					
TREATMENT DISPENSED BY CNC		FURTHER TREATMENT RECOMMENDED			
ENT SUFFICIENT: -		AMOXYL DOSE:	FREQUENCY:	KENACOMB DOSE:	FREQUENCY:
		CLOXAN DOSE:	FREQUENCY:	CLOXIN HC DOSE:	FREQUENCY:
		OTHER:			
<b>FOLLOW UP</b>					
PRIMARY HEALTH CARE:	NOT REQUIRED <input type="checkbox"/>	PHN <input type="checkbox"/>	REVIEW PROGRESS AFTER MEDICATION <input type="checkbox"/>	DRY EAR PRECAUTION <input type="checkbox"/>	CASE MANAGEMENT BY CNS <input type="checkbox"/>
ALLIED HEALTH:	NOT REQUIRED <input type="checkbox"/>	SPEECH PATHOLOGY <input type="checkbox"/>	OCCUPATIONAL THERAPIST <input type="checkbox"/>		
HEARING SERVICES OUTREACH:	AUDIOLOGY ONLY -	NEXT AUDIO VISIT	TELEOTOLOGY (Includes AUDIOLOGY) -	NEXT TELEO VISIT	
AUSTRALIAN HEARING: (hearing aid - Medical clearance to fit)	BOONE CONDUCTOR AID <input type="checkbox"/>	HEARING AID/S WITH MOLD <input type="checkbox"/>	HAS HEARING AID/S R/V REQUIRED <input type="checkbox"/>		
ENT OUTPATIENT DEPARTMENT:	HOSPITAL <input type="checkbox"/>	SONT <input type="checkbox"/>	DISCHARGE PATIENT: <input type="checkbox"/>		
COMMENT		<b>SURGERY RECOMMENDATION</b>			
		SIDE: -		TYPE OF SURGERY: -	
		DECIDE EAR AT SURGERY <input type="checkbox"/>	TWAIT COMPLETED <input type="checkbox"/>	PRE-OP AUDIOGRAM REQUIRED <input type="checkbox"/>	
		SURGERY COMMENT			
SIGNATURE					

# References

Access Economics (Firm) & CRC (Cooperative Research Centre) for Cochlear Implant and Hearing Aid Innovation (Australia) & Vicdeaf (Victorian Deaf Society) 2006. Listen hear! The economic impact and cost of hearing loss in Australia: a report. East Melbourne: CRC for Cochlear Implant and Hearing Aid Innovation and Vicdeaf.

AIHW (Australian Institute of Health and Welfare) 2012. Northern Territory Emergency Response Child Health Check Initiative—follow-up services for oral and ear health: final report, 2007–2012. Cat. no. DEN 223. Canberra: AIHW.

AIHW 2014. Stronger Futures in the Northern Territory: hearing health services 2012–2013. Cat. no. IHW 117. Canberra: AIHW.

AIHW & DoHA (Department of Health and Ageing) 2009. Progress of the Northern Territory Emergency Response Child Health Check Initiative: update on results from the Child Health Check and follow-up data collections. Cat. no. IHW 28. Canberra: AIHW.

WHO (World Health Organization) 1996. Prevention of hearing impairment from chronic otitis media: report of a WHO/CIBA Foundation Workshop, London, UK, 19–21 November 1996. Geneva: WHO.