

Use PLUM and HATS to check bub's listening and talking skills









We acknowledge the Aboriginal and Torres Strait Islander peoples, the Traditional Owners and Custodians of the land that we live and work on, and we pay our respects to Elders past, present and emerging.

Why do we need the PLUM & HATS



What happens in the first 2000 days can improve long-term outcomes



- Hearing well from an early age supports brain development to learn language skills (Ching et al)
- Early language influences learning to read in school (Ching & Cupples)
- Ear disease (otitis media) starts in the first year of life, is often chronic by 2-3 years, and leads to mild to moderate hearing loss in Aboriginal & Torres Strait Islander children

(Boswell et al, 1995; Kong & Coates, 2009; State of Qld, 2016)

- Chronic illness in early childhood reduces school readiness (Bell et al, 2016)
- Early detection & treatment is critical to child development



NSW Health (2019) First 1000 days Framework



Early detection improves outcomes

HEAR. LISTEN. YARN.

- Newborn hearing screening identifies children born with hearing loss early so they can receive early treatment
- But, there are **no screening tools** to detect hearing problems that start after birth.
- Hearing assessments for young children require special equipment and are not always available
- Ear disease can cause hearing problems that can come and go
- No one knows how well a child listens and learns in everyday life!



Early recognition of hearing problems relies on Primary Health staff and early childhood teachers



- Parents know a lot, but when asked,
 - "Do you have concerns about your child's hearing?"
- It is hard to answer
 - What behaviours show a hearing problem?
 - Ear trouble is so common that these behaviours can seem normal
 - "It's just selective hearing. They can hear perfectly well. They just don't want to answer"

To find out how well the child hears in everyday life, we need good tools.

Good tools need to be -

HEAR. LISTEN. YARN.

- Simple, quick, and easy to use
- Culturally appropriate
- Valid for the target age group
- Valid for the population
- Normed: so we know whether results mean the child is on track, or not yet on track
- But there were none!

Introduction to PLUM and HATS



HEAR. LISTEN. YARN.



Use PLUM and HATS to check bub's listening and talking skills



What are the PLUM & HATS



What are the PLUM and HATS?

HEAR. LISTEN. YARN.

- The PLUM has 10 questions to check hearing and listening skills
- The HATS has 5 questions to check communication skills
- The tools have been co-designed with Aboriginal and Torres Strait Islander health and early education workers
 - Tharawal Aboriginal Medical Service & Waranwarin Early Learning Centre, NSW
 - Wurli Wurlinjang & Binjari Health Service, NT
 - Western Sydney University Aboriginal Research Officers in Katherine, NT
 - Birra Li Maternal & Child Health Service, Newcastle, NSW
 - Inala Indigenous Health Service, Brisbane, QLD
 - Kalwun Health Service, Miami, QLD



Validated tools



- Validated for use with parents of Aboriginal and Torres Strait Islander children below 6 years of age
 - Urban communities
 - Regional and remote communities
- PLUM screens for hearing and listening problems
 - Accuracy > 80%
 - i.e. of 10 children who had a fail score, 8 of them would fail a standard hearing test.
- HATS screen for communication problems
 - Accuracy >80%
 - i.e. of 10 children who had a fail score, 8 of them would fail a standard language assessment

PLUM



The PLUM checklist with pictures



· PWM · Parent-evaluated Listening and Understanding Measure 2 7. When it's quiet, and you're talking, singing or telling a story, does your child join in and follow? O NOT YET 1 A LITTLE 2 SOMETIMES 3 A LOT 4 ALWAYS e.g. settles and listens, sings along, copies, ask questions about a story. 8. When it's noisy, does your child understand you when they can't see you? O NOT YET 1 A LITTLE 2 SOMETIMES 3 A LOT 4 ALWAYS e.g. in the stroller/pram facing away; in the car child in the back and parent/carer in front. 9. Without seeing them, does your child know people by their voices? NOT YET

A LITTLE

SOMETIMES

A LOT

ALWAYS e.g. bub hears Dad and looks for him; knows who's on the phone; knows who's talking in another room. QUESTION 10. Does your child notice other sounds around them? O NOT YET TA LITTLE SOMETIMES A LOT ALWAYS e.g. knock at the door, dogs in the distance, birds, cars, TV sounds, phone, rain and thunder, sirens. Write down the score

© National Acoustic Laboratories

for each question,

the total score.

then add these up for

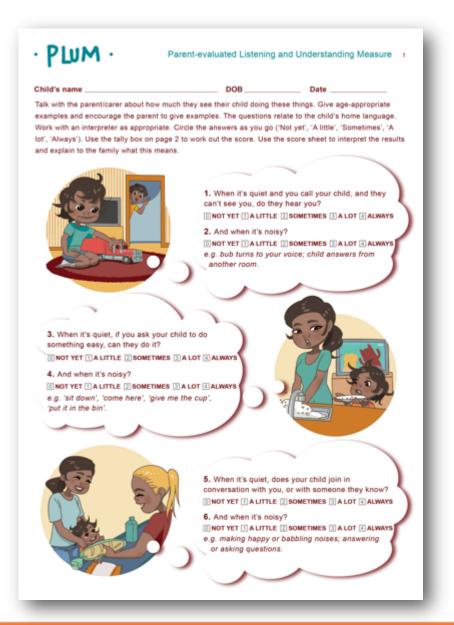




SCORE

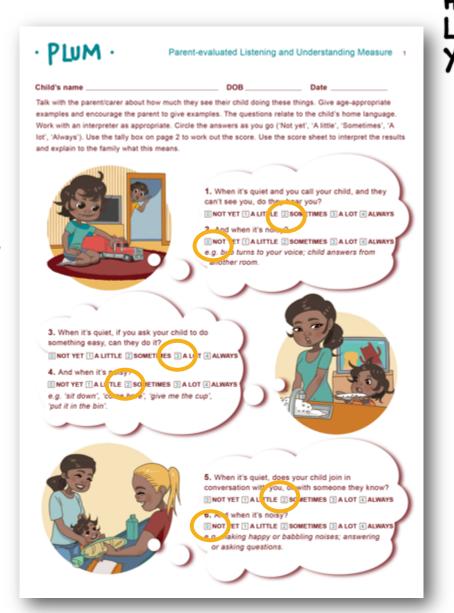
The PLUM checklist with pictures

- Explain to the parent
- How your child uses their hearing at home is important
- Can I ask you a few questions about what they do day?
- For each question, please tell me whether your child does these things:
 - Not yet
 - A little
 - Sometimes
 - A lot, or
 - Always



The PLUM checklist with pictures

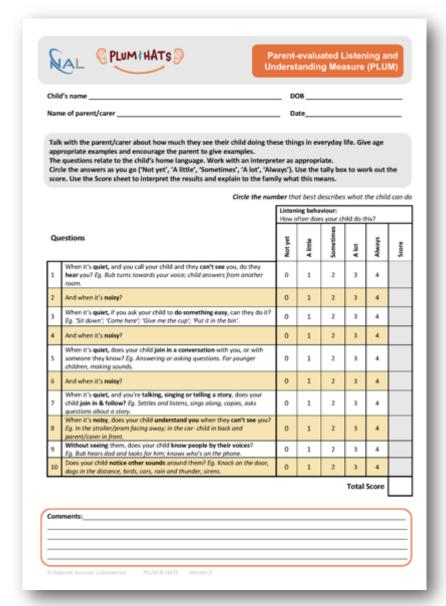
- For each question think of an age-appropriate example
- E.g. Q5:
 - When it's quiet, does your child join in conversation with you, or with someone they know?
- If asking the parent of a 10 month old baby, you could add:
 - Does your baby make happy babbling noises when you talk to them?
- Parents will often give examples as you talk through the questions: this is wonderful and is encouraged.
- Scoring: mark up the parent or carer's response and add up the scores





The PLUM checklist

A version without pictures is also available



HEAR. LISTEN. YARN.

81.41	0
NAL	@ PLUM & HATS D
\sim	01
IATIONAL ACOUSTIC	

How to administer the PLUM



- Watch an example
- Take note how the tool is used to guide a conversation about the child's listening.



Scoring the PLUM

- Mark the child's score in the appropriate age bracket
- For example: a 22 months old child with a score of 21



									Parson administering:								
											_						
Administer an	d score	the PL	UM an	a HATS	accora	ling to I	the dire	ctions	n the s	tep by .	step gu	ide.					
PLUM																	
PLUM total so	ore:																
Mark the chile				in the c	hart be	low, us	ing the	row th	at corr	espono	is to th	eir age	in mor	nths.			
															_		
Score	0	13	15	17	19	21	23	25	27	29	31	33	35	37	39		
Age	to 12	to 14	to 16	to 18	to 20	to 22	to 24	to 26	to 28	to 30	10 32	to 34	to 36	to 38	to 40		
months															- 11		
6 to 11m	0	0	0	0	0	0	Ô	o	O	•	•	•	•	•	Ŀ		
12 to 18m	0	0	0	0	0	0	0	•	Ŀ	•	•	•	_		•		
19 to 24m	0	0	0	0		0		0	•	•	•	•	•	•	Ľ		
25 to 30m	0	0	0	0	0	0	0	0	0	•	•	•	•	•	•		
>30m	0	0	0	0	0	0	0	0	0	•							
PLUM INTERP																	
				Little was		st as a to	not Do	fer to a	m. Accedite	allowder.							



Interpreting the PLUM

HEAR. LISTEN. YARN.

If a child scores in the **white** area their listening skills are **not yet on track**

If a child scores in the grey area, *most skills are on track*: reassess in 3 months

If a child scores in the **black** area their listening skills are **on track**

PLUM

PLUM total score:

Mark the child's total PLUM score in the chart below, using the row that corresponds to their age in months.

Score	0 to	13 to	15 to	17 to	19 to	21 to	23 to	25 to	27 to	29 to	31 to	33 to	35 to	37 to	39 to
Age months	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
6 to 11m	0	0	0	0	0	0		•	•		•		•	•	•
12 to 18m	0	0	0	0	0	0	0		•		•			•	•
19 to 24m	0	0	0	0	0	0	0	0	•					•	•
25 to 30m	0	0	0	0	0	0	0	0	0					•	
>30m	0	0	0	0	0	0	0	0	0					•	•

PLUM INTERPRETATION

Score in the white area: Listening skills are not yet on track. Refer to an Audiologist.

Score in the shaded area: Listening skills are in the borderline range. Reassess in 3 months.

Score in the black area: Listening skills are on track. Reassess in one year. Earlier if there are concerns.

Provide home strategies to help develop listening and communication skills.

If the parent/carer is worried about their child's listening and understanding skills, refer to an Audiologist.

If they have a high level of concern that their child may need hearing aids, refer to Hearing Australia.

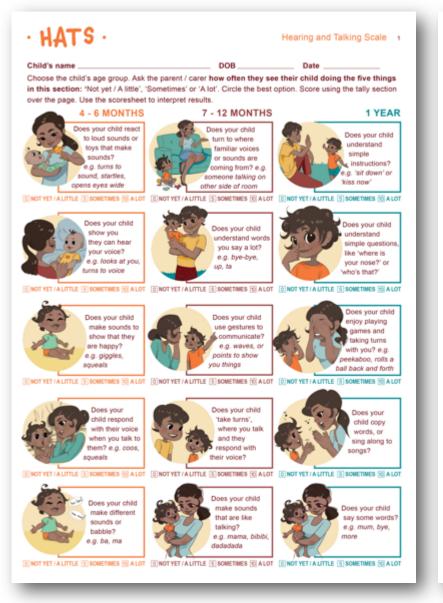


HATS



The HATS checklist with pictures

The HATS looks at how a child is communicating, how they are talking at home.





Hearing and Talking Scale 2

3 YEARS







Does your child brush your teeth and then choose

4 YEARS

HEAR.

YARN.

ONOT YET / A LITTLE SOMETIMES © A LOT ONOT YET / A LITTLE SOMETIMES © A LOT



Does your child listen to simple stories and understand

2 YEARS



Does your child answer questions like 'what do you want for unch?" or "who ame yesterday?

you read them a story? e.g. asks questions or guesses what's

ONOT YET A LITTLE SOMETIMES SALOT ONOT YET A LITTLE SOMETIMES SALOT ONOT YET A LITTLE SOMETIMES SALOT



Does your child enjoy pretend play? e.g. feeds a feddy or a doll, pretends to talk on the phone





ONOTYPET/ALITTLE (SOMETIMES TO ALOT ONOTYPET/ALITTLE (SOMETIMES TO ALOT ONOTYPET/ALITTLE (SOMETIMES TO ALOT



words at a time?



Does your child they are doing. using sentences about what they like 'look mum did during the I'm jumping day? e.g. what they did at preschool

[O] NOT YET / A LITTLE [S] SOMETIMES [S] A LOT [D] NOT YET / A LITTLE [S] SOMETIMES [S] A LOT [D] NOT YET / A LITTLE [S] SOMETIMES [S] A LOT



Do family or close friends understand what your



Do people who don't know your child understand what your child



ONOT YET / A LITTLE S SOMETIMES TO A LOT O NOT YET / A LITTLE S SOMETIMES TO A LOT O NOT YET / A LITTLE S SOMETIMES TO A LOT

write down	the score	for each	question,	then add	mese up	for the tot	ш
QUESTION	1	2	3	4	5	TOTAL	
SCORE							

© National Acoustic Laboratories



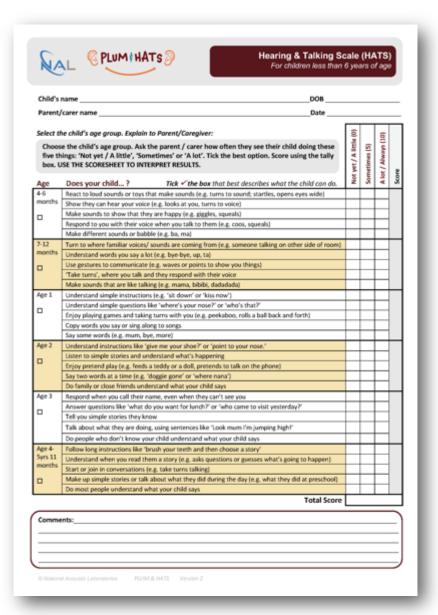






The HATS checklist

- Explain to the parent
- Can I ask you a few questions about what they do day?
- Think about how your child plays, talks, and listens.
- For each question, please tell me whether your child does these things:
 - Not yet or a little
 - Sometimes, or
 - A lot or always



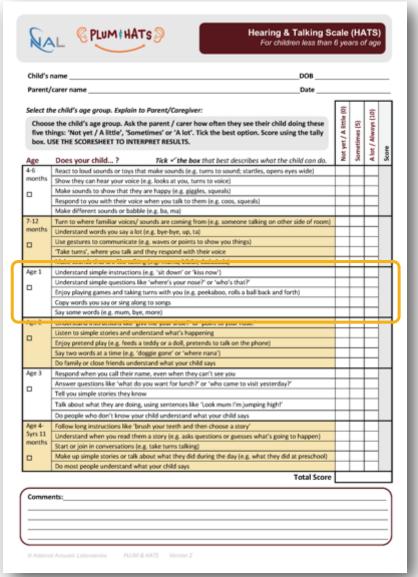




The HATS checklist

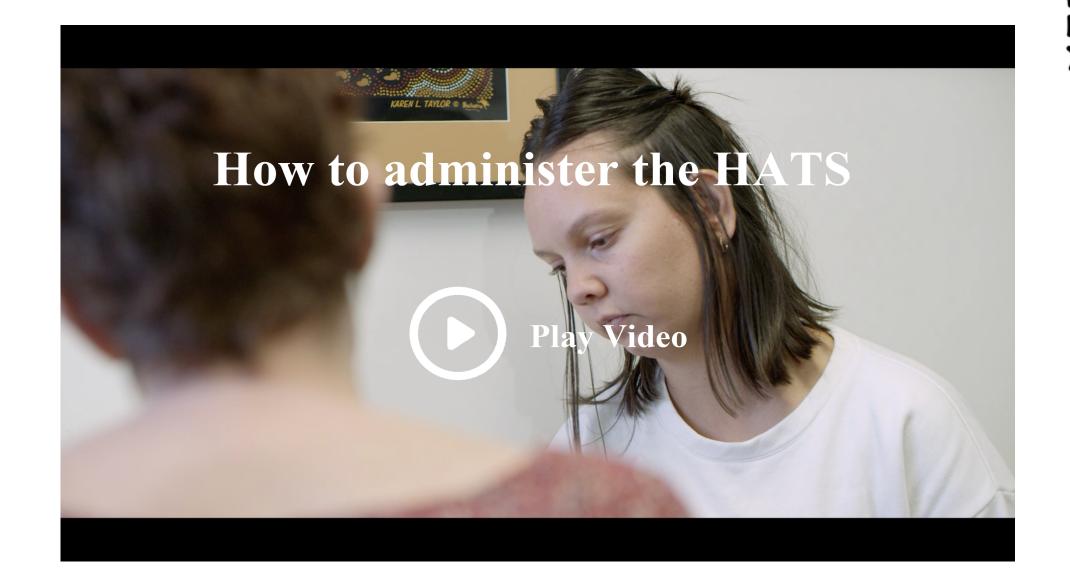
- Find the age bracket of the child e.g. 16 months
- Ask the parent these five questions.
- Tick the parent's answers.
- Add up the scores for the 5 items.









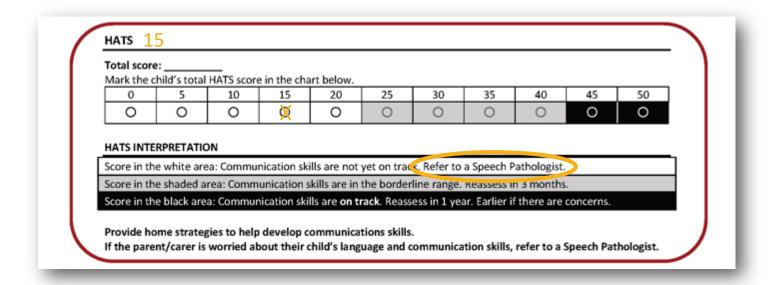


Scoring the HATS

HEAR. LISTEN. YARN.

Mark the child's score

• For example: a score of 15



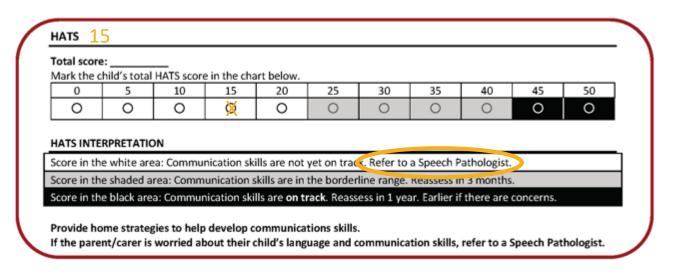
Interpreting the HATS

HEAR. LISTEN. YARN.

If a child scores in the **white** area their listening skills are **not yet on track**

If a child scores in the grey area, *most skills are on track*: reassess in 3 months

If a child scores in the **black** area their listening skills are **on track**





In summary



To summarise,



- The PLUM helps to identify children with hearing and listening problems
- The HATS helps to identify children with communication problems
- The tools are valid and reliable
- They help to guide conversation with parents and increase awareness
- The parents' relationship and knowledge about their child are valued
- The PLUM and HATS can be used as part of a test battery in the primary health setting
- The tools trigger referrals for diagnosis and treatment

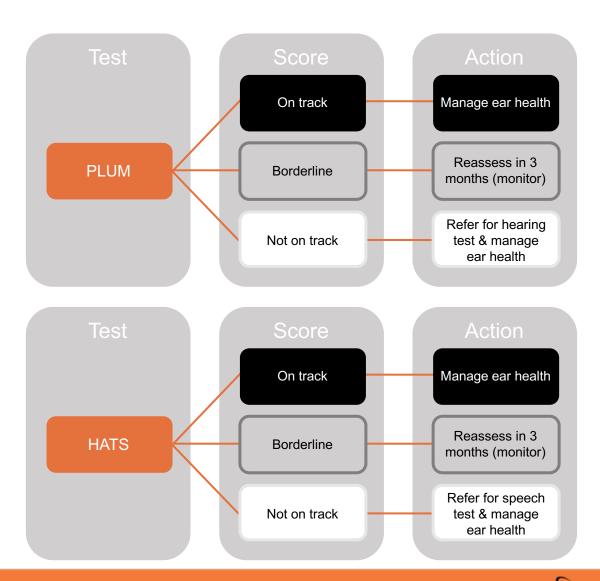
Follow up and referral

I've done the tests, now what?

We recommend the following pathway after you have completed the PLUM and HATS

For children who score in the borderline area, we recommend you reassess them in three months time.

If they score in the borderline area again when reassessed, then refer them for a hearing assessment or speech assessment.



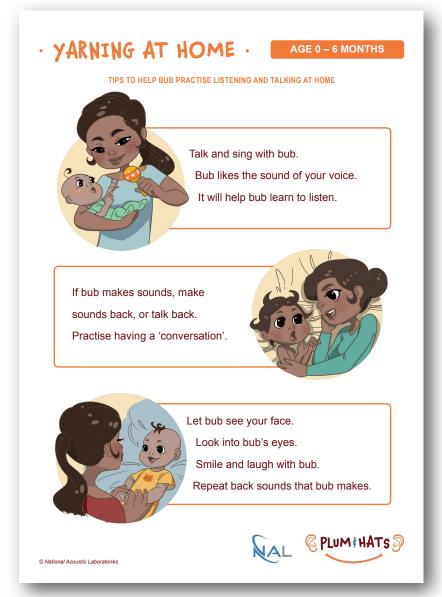


Parents can help children at home

 Yarning at Home gives parents and carers some ideas to help their children develop listening and communication skills at home

This can be downloaded

www.plumandhats.nal.gov.au





Thank you

- The tools can be downloaded from our website.
- Please remember to complete the quiz. You can then download a certificate of completion.
- We would appreciate your feedback on the PLUM and HATS tools and this webinar, if you have time would you mind completing a short survey.





HEAK. LISTEN. YARN.

We would like to acknowledge:

- Tharawal Aboriginal Medical Service & Waranwarin Early Learning Centre, NSW
- Wurli Wurlinjang & Binjari Health Service, NT
- Western Sydney University Aboriginal Research Officers in Katherine, NT
- Birra Li Maternal & Child Health Service, Newcastle NSW
- A. Prof. Kelvin Kong and all staff at Hunter ENT, NSW
- Inala Indigenous Health Service, Brisbane, QLD
- Kalwun Health Service, Miami, QLD
- Financial support through the Prime Minister and Cabinet Grant
- Financial support of the Department of Health through its Health Discretionary Fund scheme
- Family and friends who have worked with NAL and HA on the production of this video
- Cultural Consultant, Sarah Corrigan
- Partner and creative agency, Rollingball





Use PLUM and HATS to check bub's listening and talking skills





