

Immunisation for All : the ups and downs



Acknowledgement of Country

I would like to acknowledge the Traditional Owners of the land that we present from today. I would also like to pay my respect to the Elders past, present and emerging. I would like to acknowledge any Aboriginal or Torres Strait Islander people in the meeting



Immunisation save lives

Vaccines are important to:

- 1) Protect against serious vaccine preventable diseases- if we stop vaccinating these diseases will come back
- 2) Give immunity to serious disease without complications from disease
- 3) protect populations and the vulnerable (herd immunity).

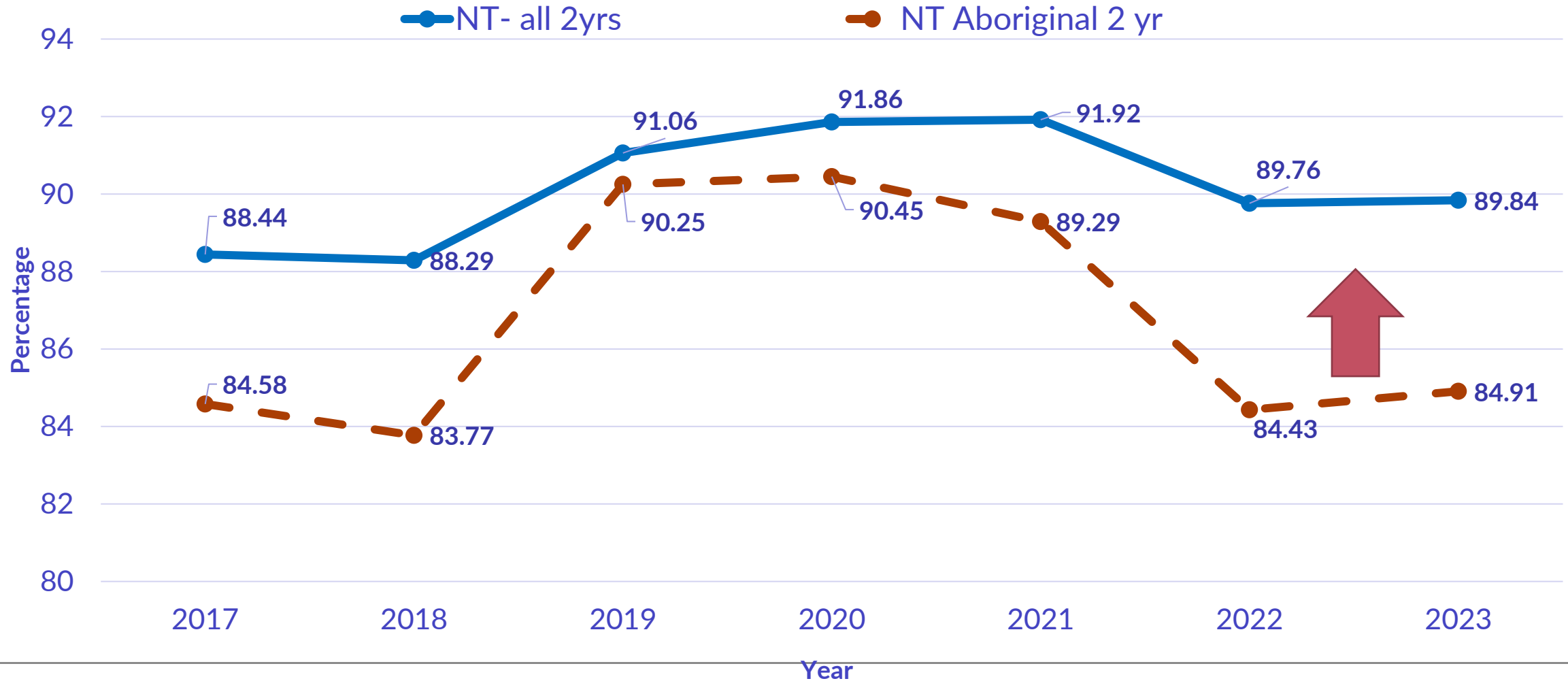


Current NT childhood immunisation coverage by Aboriginal status

	Aboriginal and Torres Strait Islander NT children	All NT children
12-<15 months	88.0%	93%
24-<27 months	84.9%	89.8%
60-<63 months	94.7%	93.7%

Latest annualised quarterly report on childhood immunisation coverage from the [Australian Immunisation Register \(AIR\)](#), which combines the September 2022, December 2022, March 2023 and June 2023 assessment quarters.

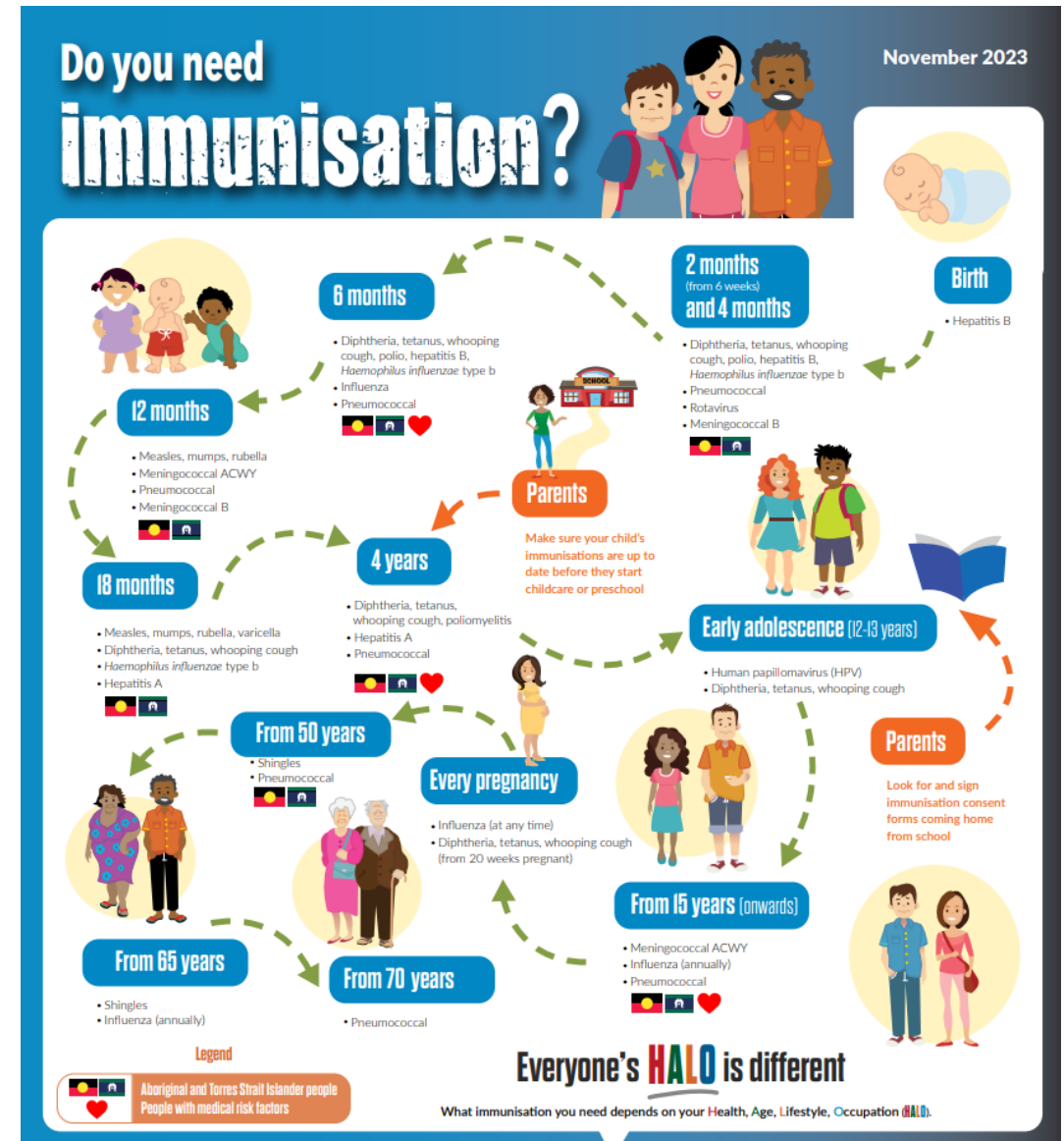
2 year old coverage- NT 2017-2023 by Aboriginal status



Source Australian Immunisation Register accessed
11th Oct 2023

Immunisation for all

- Childhood
- Adolescents
- Pregnant
- Older adults
- Medically at Risk



Timeliness



Why is timeliness important?

Vaccines given within



days

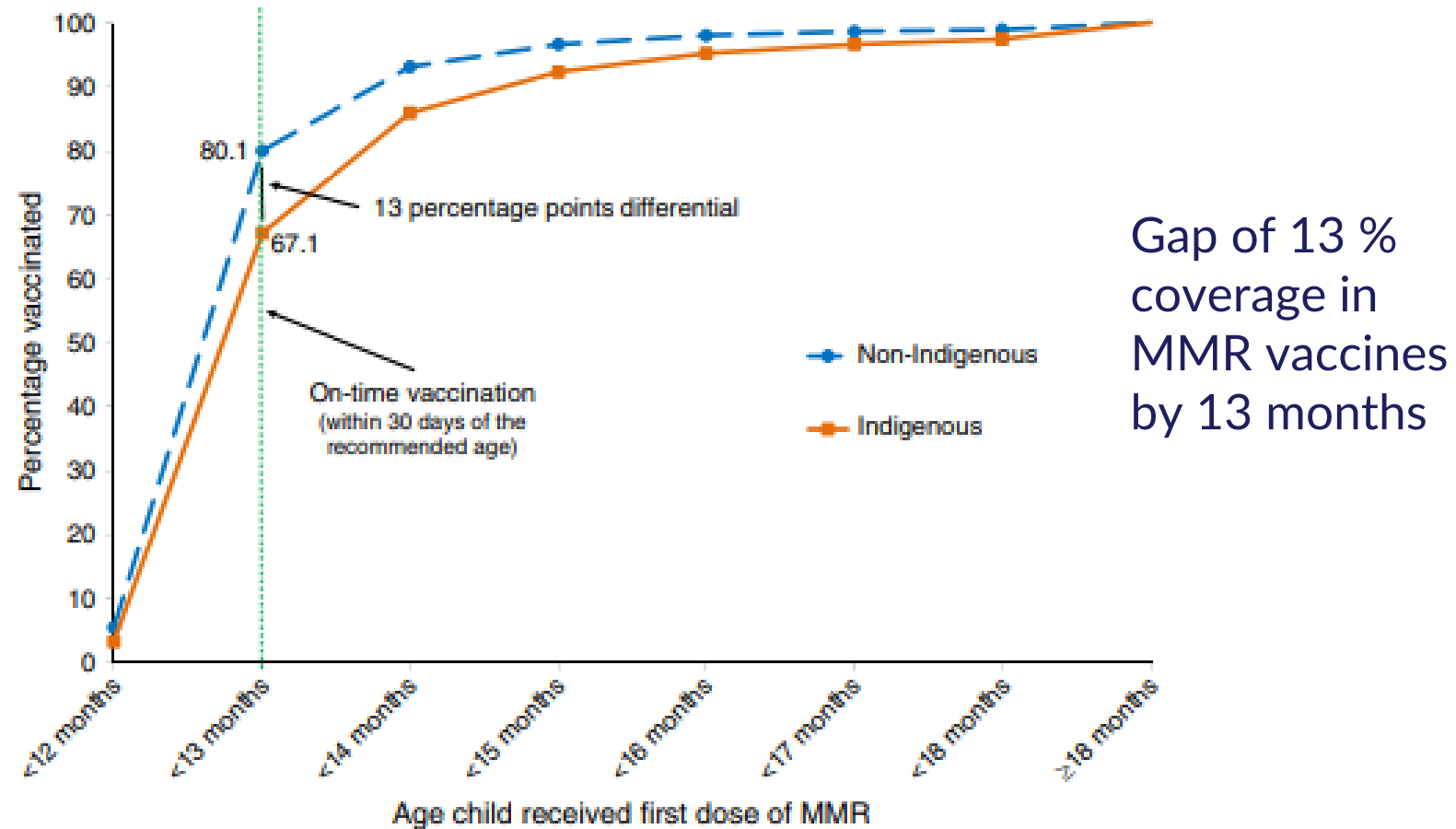
Related to risk of exposure to disease and immunity at different ages.

- Multiple doses for full protection
- **Serious complications can occur at younger age (i.e pertussis).**
- Maternal antibodies only short term.

The Right Age for Baby Needles			
Based on the NT <i>Childhood Immunisation Schedule</i>			
Protect your children from serious diseases by getting their free baby needles (vaccinations) at the right time			
	Age	How many needles	Recommended needles to protect against these diseases
BIRTH	In hospital		Hepatitis B
6 WEEKS	Baby starting to smile and lift head		Diphtheria, Tetanus, Pertussis (Whooping Cough), Hepatitis B, Poliomyelitis (Polio), <i>Haemophilus influenzae</i> type b
			Pneumococcal
			Meningococcal B (<i>Aboriginal and some medically at risk children</i>)
		ORAL	Rotavirus
4 MONTHS	Baby starting to roll over		Diphtheria, Tetanus, Pertussis (Whooping Cough), Hepatitis B, Poliomyelitis (Polio), <i>Haemophilus influenzae</i> type b
			Pneumococcal
			Meningococcal B (<i>Aboriginal and some medically at risk children</i>)
		ORAL	Rotavirus
6 MONTHS	Baby starting to sit up		Diphtheria, Tetanus, Pertussis (Whooping Cough), Hepatitis B, Poliomyelitis (Polio), <i>Haemophilus influenzae</i> type b
			Pneumococcal (<i>Aboriginal and some medically at risk children</i>)

Influenza vaccine – Yearly – from 6 months of age

Timeliness of vaccination with MMR vaccine, 2021



* Shown as cumulative percentage vaccinated (number of infants who received vaccine dose at particular age / total number of children who received the vaccine dose, expressed as a percentage).

MMR = measles-mumps-rubella vaccine

Cohort born 1 January 2019 – 31 December 2019 (i.e. due for their first dose of MMR in 2020).

Source: Australian Immunisation Register, data as at 3 April 2022.

[NCIRS Annual Immunisation Coverage Report 2021_FINAL.pdf](#)

Serious diseases– not gone and can return

HEALTH ●

Third baby dies from whooping cough in New Zealand's 2023 outbreak

04/04/2023

Molly Swift



Clinician alert: toxigenic diphtheria cases across North Queensland are on the rise

Allison Hempenstall, Jay Short, Tonia Marquardt, Valmay Fisher and Janice Johnson
Med J Aust 2023; 218 (5): . || doi: 10.5694/mja2.51858
Published online: 20 March 2023

Bali tourist sparks health alert after being hospitalised with measles

Nathan Schmidt | NCA NewsWire
September 14, 2023 9:32AM

Pertussis vaccine – maternal vaccine and on time in infants

Infants at highest risk-pneumonia and apnoea in young babies

- Death – 1 infant death and >200 hospitalisations < 6 months before maternal vaccination.
- The NT pertussis hospitalisation rate between 2013-2022 was 8 x higher in Aboriginal and Torres Strait Islander children under 5 years (NTNDS).



On time vaccination :

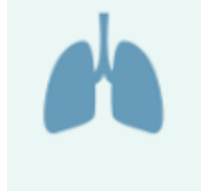
- Maternal- passive immunity
- early vaccine at 6 weeks cf 8 weeks – reduced 8% of infant pertussis



Measles

It is very contagious and maintaining high population immunity prevents outbreaks.

Complications



Pneumonia – 1 out of every 20 children infected with measles



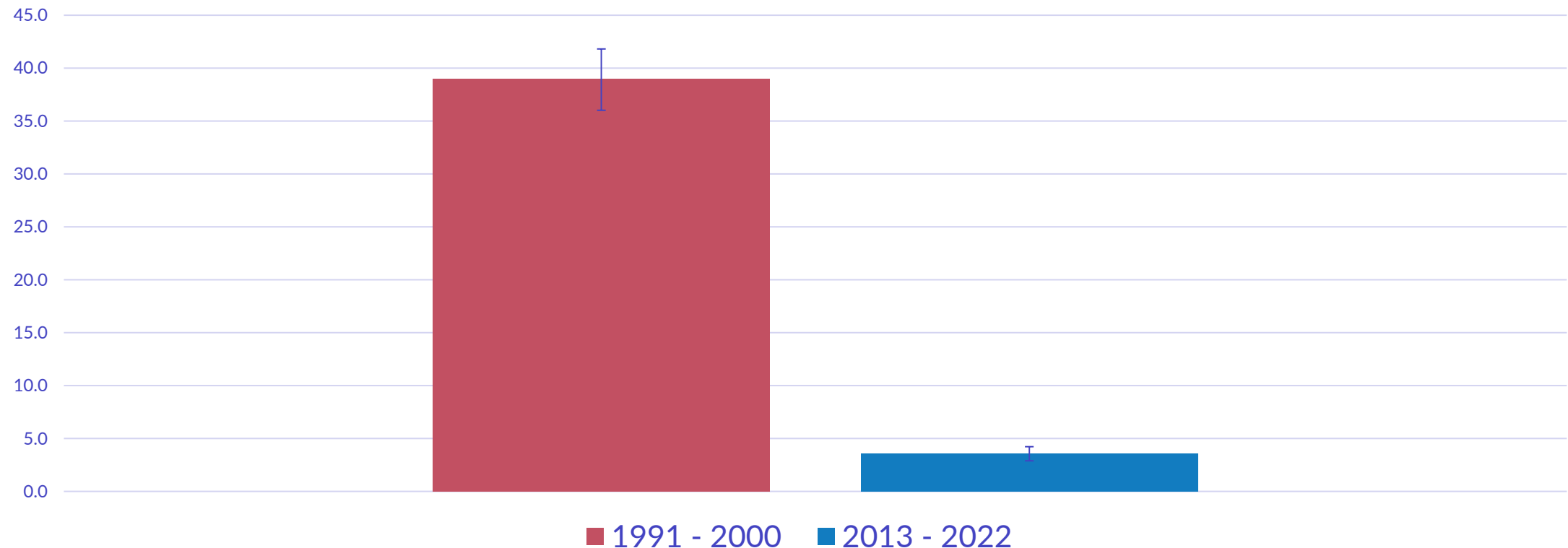
Encephalitis – 1 out of 1000 children infected with measles (deafness and intellectual disabilities)



[Measles Signs and Symptoms | CDC](#)

Measles incidence in NT 1991-2022

Incidence rate per 100,000 population of measles in 1991-2000 and 2013-2022 in the Northern Territory



Measles vaccine timing

At 12 months

maternal antibodies to measles decline progressively over the first year of life. These may interfere with active immunisation before 12 months of age.

Children from 6 months can receive MMR vaccine if travelling to endemic country or during outbreaks but need 2 further doses



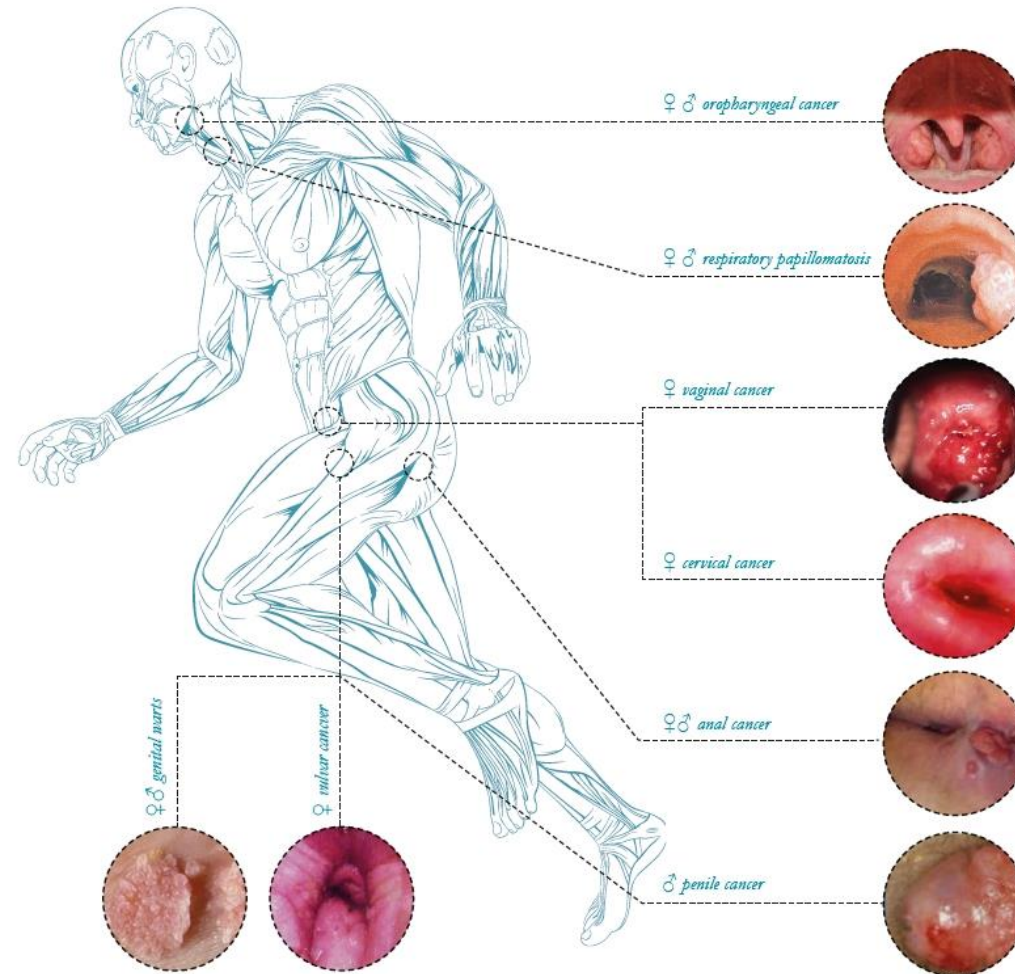
**Baby can stand up
and is walking**

HPV disease and vaccine

HPV disease

Causes

- Genital warts
- Cervical cancer
- Respiratory papillomatosis
- Anal cancer
- Vulvar/ vaginal cancer
- Penile cancer
- Oropharyngeal cancer

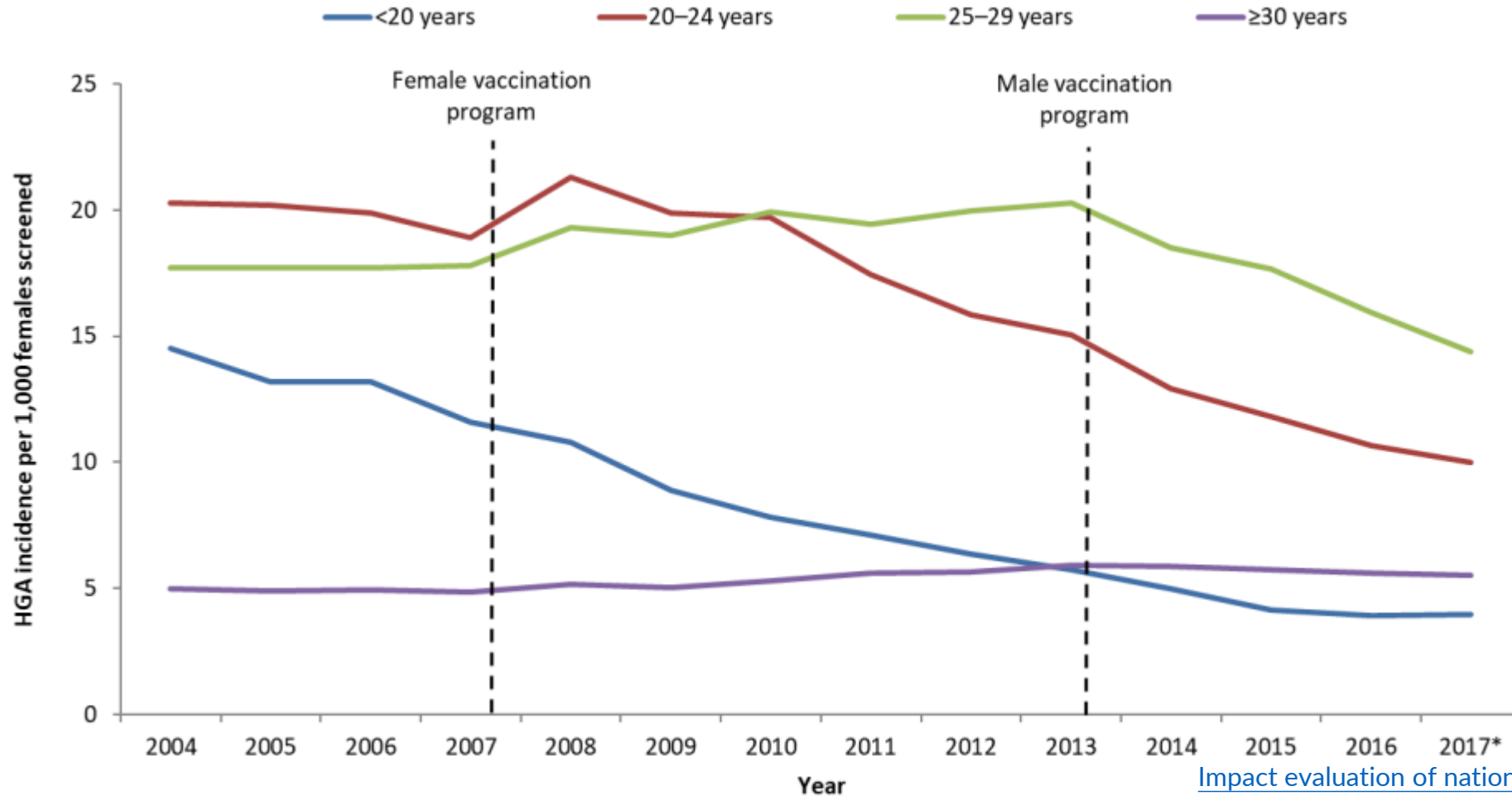


[Spectrum of HPV related diseases \(hvpworld.com\)](http://hvpworld.com)

Annually, in women HPV infections cause 530,000 cancer cases in the cervix, 18,000 in the anus, 8,500 in the vulva, 12,000 in the vagina and 5,500 in the oropharynx. In men, HPV infections cause 17,000 cancer cases in the anus, 13,000 in the penis and 24,000 in the oropharynx. Ref. (1)

HPV vaccines are very effective

High grade cervical abnormalities in females 2004-2017 by age group



Hospitalisations for Aboriginal and Torres Strait Islander women for high grade abnormalities decreased by 58% in < 20 year age group.

¹Source: AIHW histology data table – S4.8. *2017 January–June annualised

[Impact evaluation of national HPV vaccination program_February 2021 Report_0.pdf \(ncirs.org.au\)](#)

Indicators for cervical cancer elimination

⊕ Indicator

🕒 2030 WHO Target

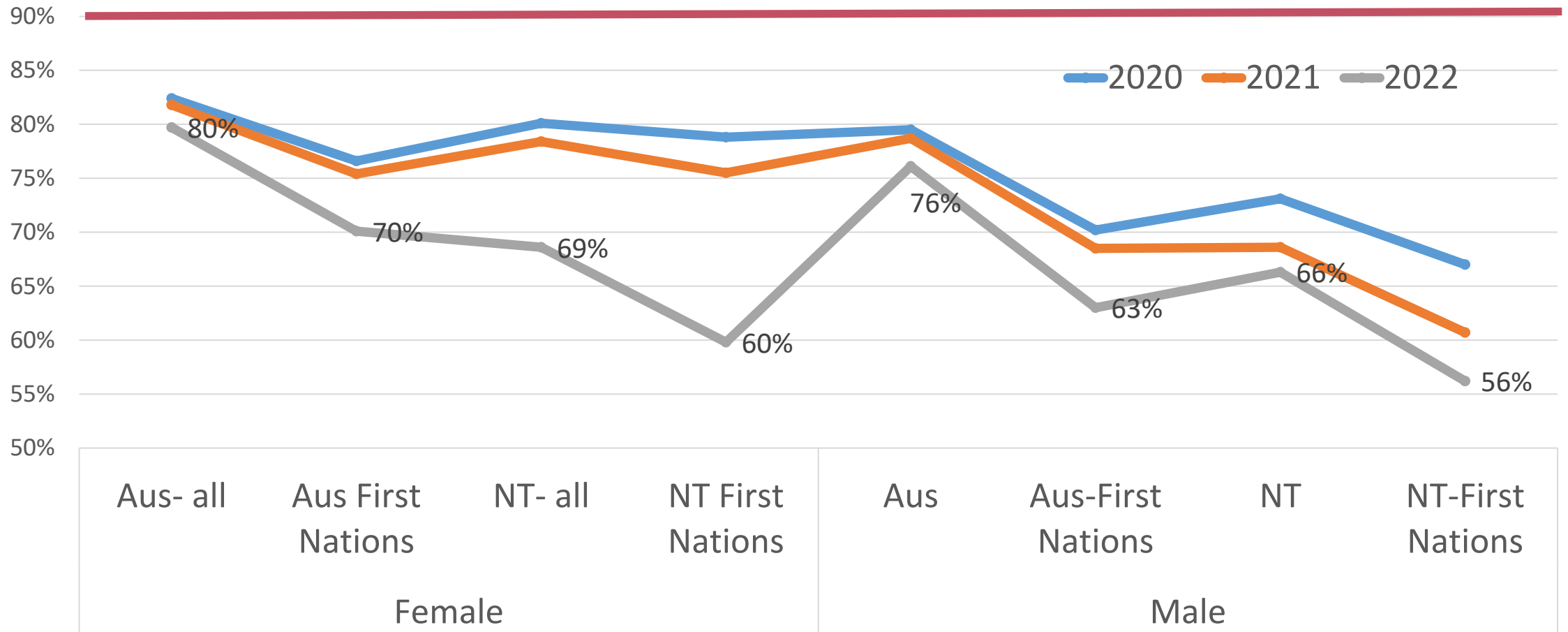
HPV vaccine coverage by 2030

90% of girls fully vaccinated by the age of 15 years

WHO Global Strategy to accelerate elimination of cervical cancer

Australian report - [2022 Cervical Cancer Elimination Progress Report | C4 \(cervicalcancercontrol.org.au\)](https://cervicalcancercontrol.org.au/2022-Cervical-Cancer-Elimination-Progress-Report-C4)

HPV immunisation coverage rates- NT Australia 2020-2022



How can we improve coverage?



What are the issues?

Are vaccines effective?

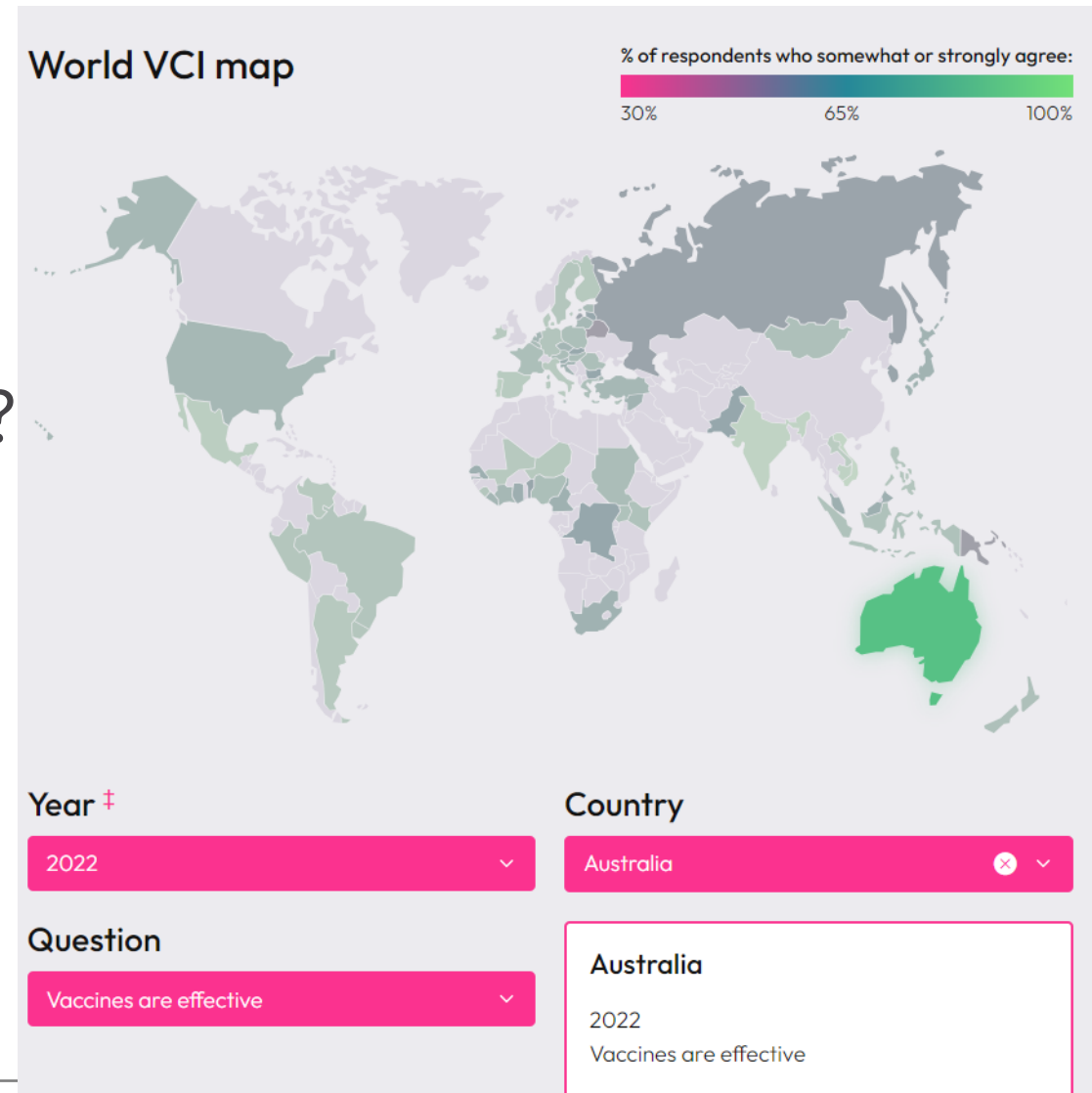
Are vaccine safe?

Do families/individuals value vaccines?

Are vaccines a priority?

Are vaccines accessible?

Are there enough trained health staff?



Possible issues related to lower childhood immunisation coverage

- Multiple vaccines required not given at once
- Missed opportunities- mild illness not given vaccines
- High mobility- updating child to correct immunisation clinic
- Misinformation/ fatigue/safety concerns
- Workforce issues
- Others



Multiple vaccines are safe and effective



✓ It is safe for children to have more than one vaccine at the same time.



Your child's immune system is very strong. Having more than one vaccine at the same time does not overwhelm their immune system.



Giving several vaccines at the same time is safe. Most side effects are mild and resolve within a few days.



If vaccines are delayed or spaced out, your child will be unprotected for longer. Vaccinating on time will give them the best protection.



Vaccines contain only a small number of antigens.* Children come in contact with a large number of antigens in their environment every day.



If you have moved to Australia recently, your child may need some additional vaccines. It is safe to receive most of these vaccines at the same time.



Having multiple vaccines at once can be less upsetting for your child as well as save time, since fewer appointments are required.

*An antigen is any substance that causes the body to make an immune response. Antigens include toxins, chemicals, bacteria, viruses and other substances that come from outside the body. Further information: [What is in a vaccine?](#) Australian Academy of Science

Combined vaccines are safe and beneficial.

Giving several vaccines at the same time has no negative effect on a child's immune system; reduces discomfort for the child; and saves time and money. Children are exposed to more antigens from a common cold than they are from vaccines.



World Health
Organization

Safety- TGA/ AusVaxsafety

2023 influenza vaccine safety data - at a glance

Data from 13 March 2023 - 4 September 2023

215,455

safety surveys completed

4,911

safety surveys completed by Aboriginal and Torres Strait Islander people

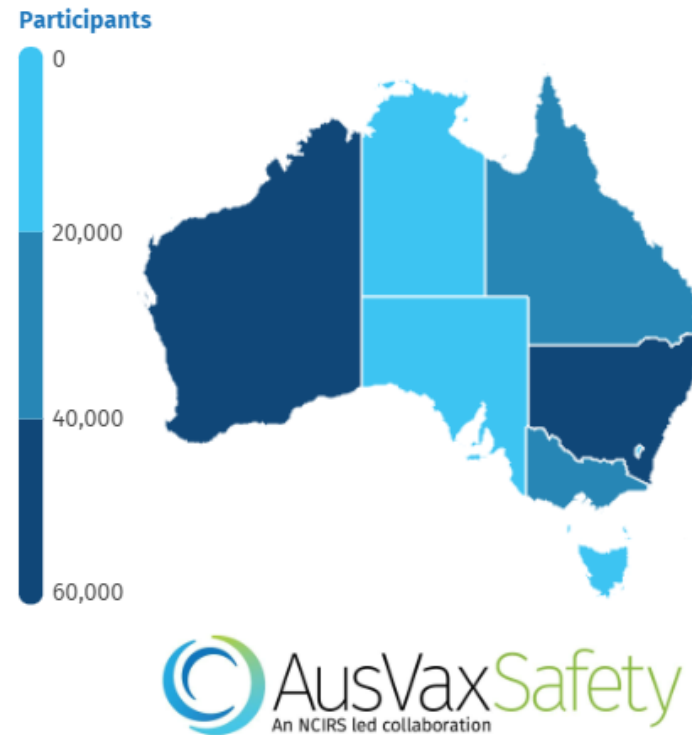
17.3%

reported at least one adverse event*

0.3%

reported visiting a GP or ED

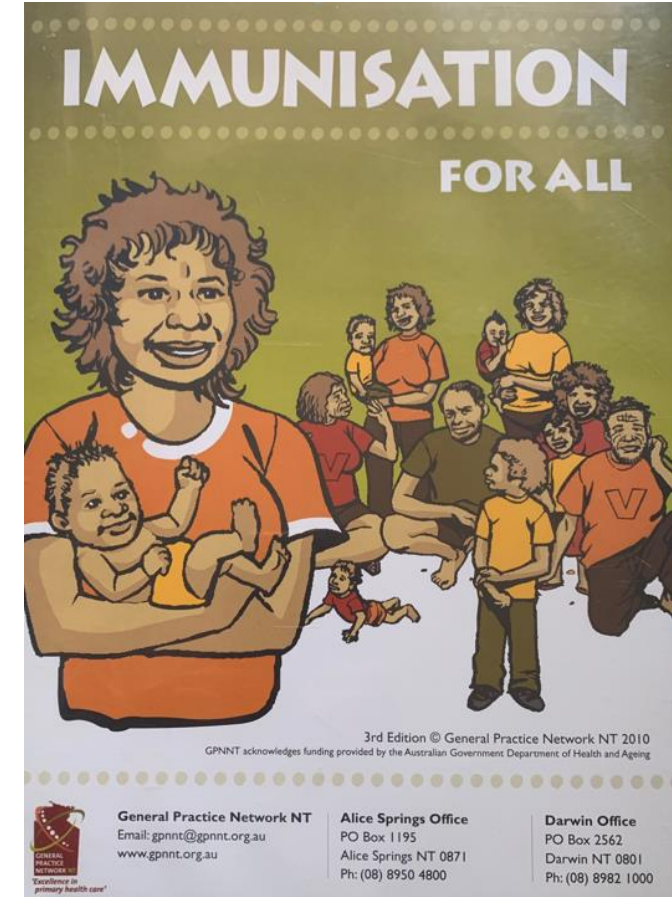
*Adverse events are self-reported, have not been clinically verified, and do not necessarily have a causal relationship with the vaccine.



[Home](#) | [AusVaxSafety](#)

Success over the years

- Dedicated trusted health professionals
- Vaccine professional education- Aboriginal health practitioners and nurse training
- Community engagement-local based solutions -build trust in the vaccine story/ stories relevant to people's lives
- Data systems/CQI -dashboards on coverage and timeliness in local clinics, local based reminder systems
- Access – outreach



Questions



Figure 20 Population number by age group and proportion of children under 6 years fully immunised, 2010–2021

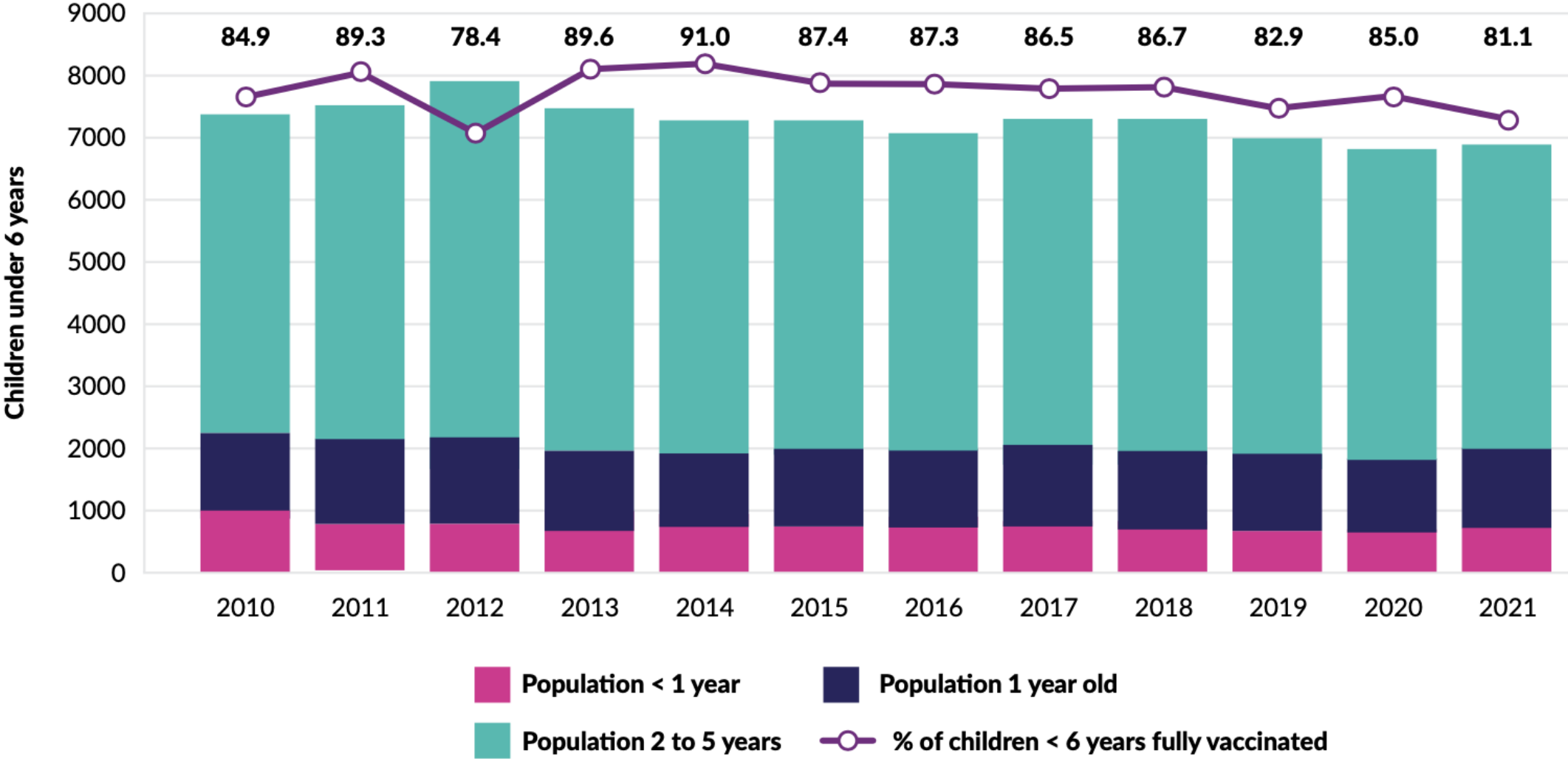
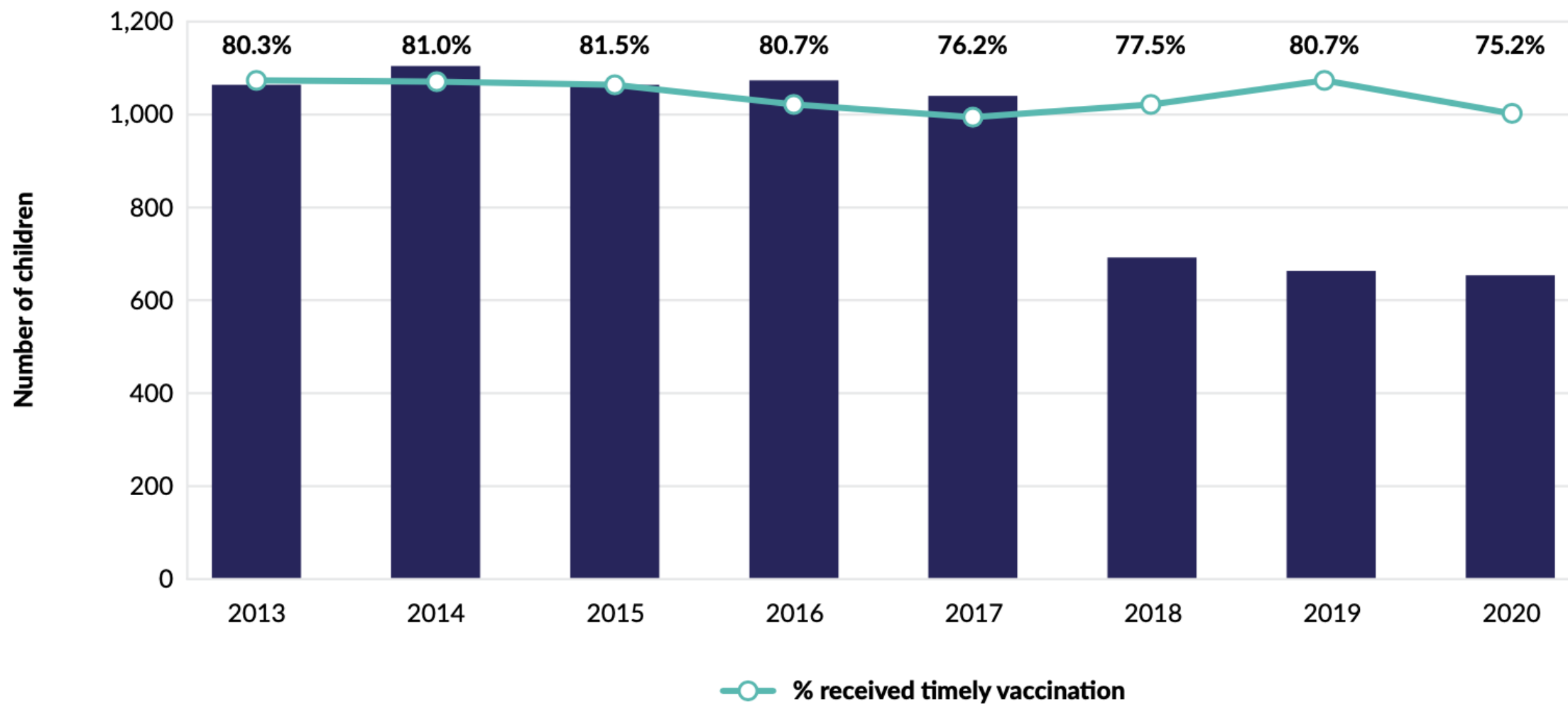


Figure 23 Number of children aged 1–11 months (2013–2017), 6–11 months (2018–2020) and proportion who received timely immunisation, 2013–2020



Annualised childhood immunisation coverage- NT and Australia 2017-2023

