Australian Government
Department of Health and Aged Care

National Immunisation Program (NIP) Business Rules

Digital Australian Immunisation Handbook System (DAIHS)

National Immunisation Catch-Up Calculator (NICC)

Cohort: Children and Adolescents Under 20 Years (v4.4.4)

Contents

1 Purpose

This document describes the agreed business rules stipulated for the Australian Immunisation Handbook (AIH) National Immunisation Catch-up Calculator for the '***Children and Adolescents Under 20 Years of Age***' cohort.

These rules are the basis for the software code development for the online calculator available on the official Australian Immunisation Handbook (AIH) website.

2 References

The NICC Cohort rules for each antigen listed in this document have been developed using the following reference sources:

- Online Australian Immunisation Handbook (AIH)
- National Immunisation Program (NIP) Schedule for each state and territory.
- Compromised Vaccine Guidelines for Jurisdictional Immunisation Coordinators, Australian Technical Advisory Group on Immunisation (ATAGI), November 2012
- The Australian Immunisation Register (AIR) National Due and Overdue Rules
- National Centre for Immunisation Research and Surveillance (NCIRS)

3 Document Details

3.1 Version Control

Version	Date	Details
1.0	1 March 2020	Initial rules extracted from SA Health document
1.1	30 June 2020	ATAGI July 2020 Updates
3.61	June 2022	Refinements to business rules to better cater to children under 10 years with multiple at-risk conditions.
4	June 2023	Expanded business rules to include catch-up recommendations for all infants, children, and adolescents under the age of 20.
4.1	April 2024	Minor refinements to the business rules for splenectomy (Men ACWY & Men B) and heart transplant (Men B).
4.2	June 2024	Minor refinements to business rules for DTPa, Men ACWY, and MenB to improve clarity.
4.3	July 2024	Minor refinements to General provisions. Minor refinements to business rules for Men ACWY, and MenB to further improve clarity for certain age-based cohorts.
4.4.4	September 2025	Miscellaneous refinements and improvements.

3.2 Document Location

TRIM Location	File Name
D20-1632102	DAIHS – Business Rules – National Immunisation Catch-up Schedule – Cohort – Children and Adolescents Under 20 Years

4 General Provisions

- All non-overdue antigens are due at the schedule points of 2, 4, 6, 12 and 18 months and 4, 12–13 and 14–16 years of age provided minimum intervals from previous doses have been met.
- Overdue antigen calculations are based on an interval of 28 days or 4 weeks except when the interval between doses is higher than 6 months then calendar months apply.
- Day of birth is counted as Day 0.
- Rules apply to all children and adolescents living in Australia unless otherwise specified.
- The NICC provides catch-up advice for vaccines recommended as per the Australian Immunisation Handbook, as well as those funded under the NIP. Those incurring a cost to the patient (not funded under the NIP) with be indicated with a $ sign.
- Some vaccines may not be funded under the NIP but may be funded by an individual state or territory. These vaccines will be marked as at-cost (with a $ sign) in the NICC.
- This guidance does not consider situations where post-exposure prophylaxis is needed (e.g. tetanus, rabies). For these details, please refer to the Australian Immunisation Handbook.
- Tables have only been provided for younger age groups because at that age, how many doses a child needs is very dependent on what the child has had in the past and when. For older children, adolescents and young adults, the number of doses becomes simpler and this is covered in the text.

4.1 NICC Considerations/Exceptions

The NICC:

- will not accept history or provide recommendations for adults from their 20th birthday onwards
- will accept history for people vaccinated overseas but recommends catch-up based on the Australian schedule. Vaccines given overseas which are additional or different to the NIP schedule will be 'excluded' from the catch-up calculations.
- requires the user to flag whether a person has received vaccinations overseas to alert the user to be diligent in checking doses given and recommendations provided and provide additional information regarding overseas vaccines.
- requires the user to flag that a person has medical conditions to allow relevant vaccines to be recommended and to flag any contraindications.
- will only be as accurate as the data entered by operators/user

4.2 Hexavalent vaccine (DTPa / IPV / Hib / Hep B) Rule

When DTPa / IPV / Hib / Hep B are due and recommended within 4 weeks of each other, the antigens may be grouped together and administered on the latest date that any of the 6 antigens are

recommended. (Note: DTP is always administered as a combination). Infanrix hexa and Vaxelis will be presented as the only choices when all 6 antigens are due (irrespective of the vaccination history, i.e. whether the antigens were received as a combination or monovalent vaccines including overseas variants i.e. 'Generic/Other'). No other combinations will be presented. If one or more of the 6 Infanrix hexa antigens are NOT due together then other vaccine brand names will be provided (e.g. DTPa only, IPV only, Hep B only, Hib only, DTP-IPV).

4.3 Medical risk conditions

The NICC provides catch-up recommendations for people with some medical conditions (see 4.3.3), taking into account additional vaccines and doses that are required, and contraindications (see 4.3.2). For a person with more than one medical condition, the NICC will recommend vaccines for only one of the conditions, however the provider can select to see a schedule for any alternative condition (see 4.3.1)

The NICC will not modify a catch-up schedule for a person who is undergoing cancer therapy. However for a person who is in remission and/or completed treatment, the catch-up schedule will include any additional dose of vaccine recommended at this time. .For any procedure or treatment that has a blackout period for receiving vaccines before or after, these will be applied in the catch-up schedule.

4.3.1 Medical conditions rule

If a person who has a medical risk condition completes the recommended vaccine schedule and then develops another medical risk condition with the same vaccine recommendations, they do not need to repeat the vaccine schedule. However, if the second medical risk condition warrants additional vaccine recommendations, these should be given.

The only exception to this is for people receiving a haematopoietic stem cell transplant (HSCT). If a person who has a medical risk condition completes the recommended vaccine schedule and then receives a HSCT, they may need to repeat vaccination with vaccines already given for the original medical risk condition. This will be indicated in the individual vaccine guidance below.

4.3.2 Live vaccine indicator

For some immunocompromising conditions, live vaccines are contraindicated. If a person flags as having an immunocompromising condition, a live vaccine indicator will appear on the catch-up schedule warning of this contraindication and advising that specialist advice be sought prior to administering a live vaccine. All live vaccines listed in the schedule will have an exclamation warning beside them.

4.3.3 Medical conditions supported by the NICC

- Alcohol use: Harmful use of alcohol (≥60 g of alcohol (6 Australian standard drinks) per day for males or ≥40 g of alcohol (4 Australian standard drinks) per day for females)
- Asplenia (Anatomical asplenia or splenectomy, functional asplenia)
- Cancer treatment completed or cancer in remission
- Cardiac disease
    - Congenital heart disease
    - Coronary artery disease
    - Heart failure
    - Other cardiac disease

- Long-term aspirin therapy in children aged 6 months to 10 years
- Chronic liver disease (Conditions with progressive deterioration of liver function for more than 6 months including cirrhosis and other advanced liver diseases)
- Chronic metabolic condition e.g. amino acid disorder, mitochondrial disorder
- Chronic neurological condition e.g. degenerative CNS disease, seizure disorder
- Chronic renal disease
    - Stage 4 kidney disease – eGFR <30 mL/min
    - Stage 5 kidney disease (kidney failure) – eGFR <15 mL/min
    - Chronic obstructive pulmonary disease (COPD) or chronic emphysema
- Chronic respiratory disease
    - Chronic lung disease in preterm infants
    - Chronic obstructive pulmonary disease (COPD) or chronic emphysema
    - Interstitial and fibrotic lung disease
    - Severe asthma (defined as requiring frequent hospital visits or the use of multiple medications)
    - Suppurative lung disease, bronchiectasis and cystic fibrosis
    - Other chronic respiratory disease
- Developmental disability attending a care facility
- Diabetes
- Haematological disorder e.g. Sickle cell disease or other haemoglobinopathy
- Haematopoietic stem cell transplant (HSCT)
- Immunocompromising conditions:
    - Congenital or acquired immune deficiency
    - Current or future treatment with complement inhibitor therapy (e.g. eculizumab, ravulizumab or pegcetacoplan)
    - Defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
    - Haematological malignancies
    - HIV infection
    - Immunosuppressive therapy (current or anticipated)
    - Non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)
    - Primary or secondary immunodeficiencies (complete or partial deficiencies of B-lymphocyte antibody or T-lymphocytes)
- Low birth weight babies (<2000g)
    - Low birth weight <1500g
    - Low birth weight >1500g and <2000g
- Obesity (Body mass index ≥30 kg per m2)
- Preterm infants
    - <28 weeks gestation
    - <32 weeks gestation
    - <37 weeks gestation
- Previous episode of invasive pneumococcal disease (IPD)

- Proven or presumptive CSF leak (cochlear implants, Intracranial shunts)
- Smoking (current or in the immediate past)
- Solid organ transplant (SOT)
  - Heart transplant
  - Intestinal transplant
  - Kidney transplant
  - Liver transplant
  - Lung transplant
  - Pancreas transplant
- Trisomy 21 or another chromosomal abnormality that increases the risk of severe disease

The NICC does not support immunocompromise due to medical therapy, due to the variation in level of immunosuppression by drug class and dose. If a person is flagged for 'immunosuppressive therapy (current or anticipated)', no additional vaccines will be recommended, however the NICC will provide the live vaccine indicator on the catch-up schedule page.

4.4 Entering historical doses

Vaccination history can be provided using two ways.

- 'Antigens' pathway, where antigens are sorted by the NIP schedule order.
- 'Vaccines' pathway, where the vaccines are sorted in alphabetical order.

Each vaccination history record must include the date of vaccination and one or more vaccines/antigens given on that date.

Duplicate antigen/vaccine entries will be automatically removed.

The default setting displays age-appropriate Australian NIP vaccines/antigens.

To enter non-NIP doses, the 'Only show vaccines applicable for this person' toggle switch (which is 'on' by default) must be switched off.

Antigens are ordered by the NIP schedule order. (In the future an alphabetical list will also be provided).

Vaccines are ordered by the NIP schedule order. (In the future an alphabetical list will also be provided).

4.5 Entering overseas doses

The default setting for both the 'Antigens' or 'Vaccines' pathways display age-appropriate Australian NIP vaccines/antigens.

To enter non-NIP doses, the 'Only show vaccines applicable for this person' toggle switch (which is 'on' by default) must be switched off.

To enter overseas doses (added as 'Generic/Other' variants), the 'Only show Australian NIP vaccines' toggle switch (which is 'on' by default) must be switched off.

5 Diphtheria-tetanus-acellular pertussis (DTPa)

5.1 Recommended schedule

5.1.1 All children and adolescents

- 3 primary doses of DTPa at 2, 4 and 6 months of age.
- Booster dose of DTPa at 18 months and 4 years of age
- Booster dose of dTpa from 11–14 years of age.

Note: To avoid confusion, the doses for DTPa should be labelled as Dose 1 of 5, Dose 2 of 5, Dose 3 of 5, Dose 4 of 5, and Dose 5 of 5.

5.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations.

5.1.3 People with specified medical conditions

People who have completed cancer therapy

- An additional booster dose of DTPa (if <10 years of age) or dTpa (≥10 years of age) after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy.
- If not fully vaccinated prior to cancer therapy, commence catch up as for healthy children and adolescents (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is more recent).

People who have had a haematopoietic stem cell transplant

- If <10 years of age, 3 doses of DTPa commencing 6 months post-transplant, with a minimum interval of 4 weeks between doses, and age dependent booster dose/s.
- If ≥10 years of age, 3 doses of dTpa commencing 6 months post-transplant, with a minimum interval of 4 weeks between doses.
- If any doses from the primary schedule were not received prior to transplant, these do not need to be given. However, for people <10 years of age, booster doses should be given, as per the routine schedule and catch-up for all children and adolescents.

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 3 months after transplant, as per the routine schedule and catch-up for all children and adolescents

5.2 Catch up dose parameters

5.2.1 All children and adolescents

Valid doses

If ≥10 years of age, only 1 dose of dTpa is required for a primary course, instead of any DTPa doses, followed by 2 doses of dT (any DTPa doses previously given should be deducted).

Minimum age

<10 years of age

- Minimum age dose 1 is 29 days.
- If dose 4 is administered at ≥3 years 6 months of age dose 5 is not required.
- If dose 5 is administered prior to 3 years 6 months of age it should not be repeated provided minimum intervals have been met.

≥10 years of age

- Minimum accepted age dTpa dose already given is 10 years
- Minimum age for future dTpa dose is 11 years

Maximum age

- Maximum age is 19 years (immediately prior to 20th birthday)

Minimum intervals

<10 years of age

- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks
- Minimum interval dose 3 - dose 4 for future recommendations is 6 calendar months.
- Minimum accepted interval dose 3 - dose 4 for doses already given is 181 days.
- Minimum interval dose 4 - dose 5 for future recommendations is 6 calendar months.
- Minimum accepted interval dose 4 - dose 5 for doses already given is 181 days.

NB: Apply the Infanrix hexa rule when appropriate.

≥10 years of age

- Minimum interval dose 1 dTpa - dose 2 dT is 4 weeks
- Minimum interval dose 2 dT - dose 3 dT is 4 weeks

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

5.2.2 People with specified medical conditions

People who have completed cancer therapy

- If the routine childhood schedule has not been completed, refer to the catch-up parameters for all children and adolescents, commencing vaccination from 3 months after remission/end of treatment

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, minimum interval from remission/end of treatment - booster dose is 3 months

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

<10 years of age

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks
- Minimum interval dose 3 - dose 4 is 6 months
- Minimum interval dose 4 - dose 5 is 6 months

NB: Dose 5 not required if dose 4 given at ≥3.5 year of age

≥10 years of age

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- At 3 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <3 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

5.3 NIP funding

The following doses are funded for all children and adolescents <20 years of age, where required:

- 5 DTPa doses
- 1 dTpa dose
- 2 dT doses

6 Haemophilus Influenzae Type b (Hib)

6.1 Recommended schedule

6.1.1 All children and adolescents

- 3 primary doses of Hib vaccine at 2, 4 and 6 months of age.
- Booster dose of Hib vaccine at 18 months of age

6.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations

6.1.3 People with specified medical conditions

People who have functional or anatomical asplenia (including sickle cell disease or other haemoglobinopathies)

- 1 dose of Hib vaccine at ≥5 years of age only if unvaccinated (have not had Hib vaccine before)
- For people having an elective splenectomy, where possible, they should receive all scheduled doses at least 2 weeks before surgery

People who have had a haematopoietic stem cell transplant

- 3 doses of Hib vaccine at commencing 6 months post-transplant, with a minimum interval of 4 weeks between doses If any doses from the primary schedule have not been received prior to transplant, these do not need to be given

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 3 months after transplant, as per the routine schedule and catch-up for all children and adolescents

Children who have completed cancer therapy

- An additional booster dose of Hib vaccine (if <5 years of age) after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy.
- If not fully vaccinated prior to cancer therapy, commence catch up as for healthy children (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is more recent).

6.2 Catch up dose parameters

6.2.1 All children

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- Minimum accepted age dose 4 for a dose already given is 11 months
- Minimum age dose 4 for future recommendations is 18 months

Maximum age

- Maximum age is 4 years (immediately prior to the 5th birthday)

Minimum intervals

- Minimum interval between primary doses at age <12 months is 4 weeks
- Minimum interval between last primary dose and booster dose is 8 weeks

NB: Apply the Infanrix hexa rule when appropriate.

Number of doses

The number of doses required depends on current age and previous doses received, see Catch-up schedule for Haemophilus influenzae type b (Hib) vaccination for children <5 years of age below

Invalid doses

1st dose administered at ≤28 days of age OR

4th dose administered at <11 months of age

Message - Dose given at < minimum age

4th dose administered at ≥11 months age but <18 months age

Message – No message to be displayed.

NB: This dose is not repeated at ≥18 months of age provided the minimum interval from the last primary dose has been met.

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

Catch-up schedule for Haemophilus influenzae type b (Hib) vaccination for children <5 years of age

Number of Hib doses received previously	Current age	Age at 1st dose of Hib vaccine	Age at 2nd dose of Hib vaccine	Age at 3rd dose of Hib vaccine	Number of further primary dose(s) needed	Number of booster doses needed at age ≥18 months, or 2 months after the last dose (whichever is later)
None	<7 months	N/A	N/A	N/A	3	1
	7–11 months	N/A	N/A	N/A	2	1
	12–17 months	N/A	N/A	N/A	1	1
	18–59 months	N/A	N/A	N/A	1	N/A
1	<12 months	<7 Months	N/A	N/A	2	1
	<12 months	7–11 months	N/A	N/A	1	1
	12–17 months	<12 months	N/A	N/A	1	1
	12–17 months	≥12 months	N/A	N/A	N/A	1
	18–59 months	<12 months	N/A	N/A	N/A	1
	18–59 months	12–17 months	N/A	N/A	N/A	1
	18–59 months	≥18 months	N/A	N/A	N/A	N/A
2	<12 months	<7 months	<12 months	N/A	1	1
	<12 months	7-11 months	7–11 months	N/A	N/A	1
	12–17 months	<12 months	Any age	N/A	N/A	1
	12–17 months	≥12 months	≥12 months	N/A	N/A	N/A
	18-59 months	<12 months	<12 months	N/A	N/A	1
	18–59 months	<12 months	12-17 months	N/A	N/A	1
	18–59 months	<12 months	12-17 months	N/A	N/A	N/A
	18–59 months	Any age	18-59 months	N/A	N/A	N/A
3	<17 months	<12 months	<12 months	<12 months	N/A	1
	12–17 months	At least 1 dose (most likely 3rd dose) at 12–17 months	At least 1 dose (most likely 3rd dose) at 12–17 months	At least 1 dose (most likely 3rd dose) at 12–17 months	N/A	N/A
	18–59 months	<12 months	<12 months	<12 months	N/A	1
	18–59 months	At least 1 dose at ≥12 months	At least 1 dose at ≥12 months	At least 1 dose at ≥12 months	N/A	N/A

N/A = Not Applicable

6.2.2 People with specified medical conditions

People who have functional or anatomical asplenia (including sickle cell disease or other haemoglobinopathies)

Before splenectomy, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 2 weeks of surgery.

After surgery, and for all other conditions, follow the guidance below:

Valid doses

Minimum age

- Minimum age dose 1 is 5 years if unvaccinated (not had any doses of this antigen)

Maximum age

- No maximum age limit

People who have had a haematopoietic stem cell transplant

Valid doses

Maximum age

- No maximum age limit

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children aged <5 years. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- At 6 months follow the catch-up schedule for all children aged <5 years

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

Children who have completed cancer therapy

- If the routine childhood schedule has not been completed, refer to the catch-up parameters for all children, commencing vaccination from 3 months after remission/end of treatment

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, minimum interval from remission/end of treatment - booster dose is 3 months

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

6.3 NIP funding

The 4 childhood doses are funded for all children.

The single dose of Hib vaccine for unvaccinated children who have functional or anatomical asplenia (including sickle cell disease or other haemoglobinopathies) aged ≥5 years of age is funded.

7 Hepatitis A

7.1 Recommended schedule

7.1.1 Non-Aboriginal and Torres Strait Islander children in all states and Aboriginal and Torres Strait Islander children in ACT, NSW, TAS & VIC

No recommendations

7.1.2 Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA

- 2 doses of Hep A vaccine at 18 months and 4 years of age

7.1.3 People with specified medical conditions in all states and territories

People who have a developmental disability

- 2 doses of Hep A vaccine with a 6-month interval, if not previously vaccinated

People who have chronic liver disease (including chronic hepatitis, cirrhosis or biliary atresia) or who have had a liver transplant

- 2 doses of Hep A vaccine with a 6-month interval, if not previously vaccinated
- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 6 months after transplant, with an interval of 6-months between doses

7.2 Catch up dose parameters

7.2.1 Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA

Valid doses

Minimum age

- Minimum age dose 1 is 12 months
- Minimum age dose 2 for doses already given is 18 months
- Minimum age for dose 2 for future recommendations is 4 years

Maximum age

- Maximum age is 9 years (immediately prior to the 10th birthday)

Minimum intervals

- Minimum interval dose 1 - dose 2 for future recommendations is 6 calendar months.

- Minimum accepted interval dose 1 – dose 2 for doses already given is 181 days

Invalid doses

1st dose administered at < 12 months of age:

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose.

7.2.2 People with specified medical conditions in all states and territories

People who have a developmental disability

Valid doses

Minimum age

- Minimum age dose 1 is 12 months

Maximum age

- No maximum age limit

Minimum intervals

- Minimum interval dose 1 - dose 2 for future recommendations is 6 calendar months.
- Minimum accepted interval dose 1 – dose 2 for doses already given is 181 days
- The minimum interval for people with specified medical conditions should over-ride the dose 2 minimum age and interval for Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA

Invalid doses

1st dose administered at < 12 months of age:

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose.

People who have chronic liver disease (including chronic hepatitis, cirrhosis or biliary atresia) or who have had a liver transplant

Before transplant, follow the catch-up schedule for Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Maximum age

- No maximum age limit

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- Minimum accepted interval dose 1 – dose 2 for doses already given is 181 days
- Minimum accepted interval dose 1 – dose 2 for future doses is 6 months
- The minimum interval for people with specified medical conditions should over-ride the dose 2 minimum age and interval for Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

7.3 NIP funding

All scheduled childhood doses are funded under the NIP for Aboriginal and Torres Strait Islander children.

8 Hepatitis B

8.1 Recommended schedule

8.1.1 All children and adolescents

- Birth dose of paediatric formulation Hep B vaccine between 0 and 7 days
- 3 primary doses of paediatric formulation Hep B vaccine at 2, 4 and 6 months of age.

8.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations

8.1.3 People with specified medical conditions

People who have completed cancer therapy

- An additional booster dose of paediatric formulation Hep B vaccine after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is most recent)

People who have had a haematopoietic stem cell transplant

- 3 doses of adult formulation Hep B vaccine at 6, 8, 10 months post-transplant
- If any doses from the primary schedule have not been received prior to transplant, these do not need to be given

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 3 months after transplant, as per the routine schedule and catch-up for all children

People who have a HIV infection

- Follow the recommended schedule for all children and adolescents
- Any doses given after diagnosis should be using the adult formulation Hep B vaccine

People who have chronic liver disease

- Follow the recommended schedule for all children and adolescents
- Any doses given after diagnosis should be using the adult formulation Hep B vaccine

Children who were premature (<32 weeks gestation)/low birth weight infants (<2000g)

- An additional booster dose of paediatric formulation Hep B vaccine at 12 months of age

8.2 Catch up dose parameters

8.2.1 All children and adolescents

Valid doses

Birth Dose

- Catch-up of the birth dose is not required, however this dose (if given) may be assessed as the first dose (often for children vaccinated overseas) and a child can be considered fully vaccinated, if they have already received 3 doses at birth, 1-2 months of age and ≥6 months of age (a final dose given after 16 weeks can be accepted as valid)
- Minimum age birth dose is 0 days
- Maximum age birth dose is 7 days

Minimum age

- Minimum age dose 1 is 29 days
- Minimum accepted age dose 3 for doses already given is 16 weeks

Number of doses

- Healthy adolescents 11–15 years of age requiring catch-up can have a 2-dose schedule using adult formulation Hep B vaccine, as an alternative to a 3-dose schedule using paediatric formulation Hep b vaccine

Minimum intervals

3-dose schedule

- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 8 weeks
- Minimum interval dose 1 - dose 3 is 16 weeks

2-dose schedule

- Minimum interval dose 1 - dose 2 is 16 weeks

Catch-up of the birth dose is not required

NB: Apply the Infanrix hexa rule when appropriate.

Invalid doses

Birth dose administered at >7 days and ≤28 days of age OR

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

8.2.2 People with specified medical conditions

People who have completed cancer therapy

- If the routine childhood schedule has not been completed, refer to the catch-up parameters for all children and adolescents

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, minimum interval from remission/end of treatment - booster dose is 6 months

Invalid doses

Booster dose administered at <6 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 8 weeks
- Minimum interval dose 2 - dose 3 is 8 weeks

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 3 months
- At 6 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have a HIV infection

Refer to the catch-up parameters for all children and adolescents, using the adult formulation Hep B vaccine

People who have chronic liver disease

Refer to the catch-up parameters for all children and adolescents, using the adult formulation Hep B vaccine

People who were premature (<32 weeks gestation)/low birth weight infants (<2000g)

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, the minimum interval from dose 3 to the booster dose is 6 months

Invalid doses

Minimal interval between dose 3 and booster dose not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

8.3 NIP funding

The birth dose and 3 further doses are funded under the NIP for all people <20 years of age.

9 Human Papillomavirus (HPV)

9.1 Recommended schedule

9.1.1 All adolescents

- 1 dose of HPV vaccine is routinely recommended at 12–13 years of age

9.1.2 Aboriginal and Torres Strait Islander people

No additional recommendations

9.1.3 Adolescents with specified medical conditions

Adolescents who have a significant immunocompromising condition

- Those who have not previously been vaccinated should receive 3 doses with an interval of 2 months between dose 1 and 2, and an interval of 4 months between dose 2 and 3
- Those who have already received 1 dose should have 2 additional doses of HPV vaccine, at a 2-month interval following dose 1, and 4-month interval following dose 2

Specified medical conditions for which an additional dose of HPV vaccine is scheduled
Inborn errors of immunity, including primary immunodeficiency disorders
haematological malignancies
non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)
previous solid organ transplant
HIV infection
significant immunosuppressive therapy (current or anticipated)

Adolescents who have had a haematopoietic stem cell transplant

- 3 doses of HPV vaccine commencing at 6 months post-transplant, with a minimum interval of 4 weeks between doses 1 and 2, and 16 weeks between doses 2 and 3.If any doses from the primary schedule have not been received prior to transplant, these do not need to be repeated (i.e. only 3 doses total after transplant)

9.2 Catch up dose parameters

9.2.1 All adolescents

Valid doses

Minimum age

- Minimum age dose 1 is 9 years

Maximum age

- Maximum age is 19 years (immediately prior to the 20th birthday)

Invalid doses

Dose administered at <9 years of age:

Message - Dose given at < minimum age

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose.

9.2.2 Adolescents with specified medical conditions

Adolescents who have a significant immunocompromising condition

Valid doses

Minimum age

- Minimum age dose 1 is 9 years

Maximum age

- Maximum age is 19 years (immediately prior to the 20th birthday)

Number of doses

- If an adolescent had received 1 dose of HPV vaccine prior to onset of their immunocompromising condition, no further doses are necessary.

Minimum intervals

- For those receiving HPV after transplant, the minimum interval from transplant - dose 1 is 3 months
- Minimum interval dose 1 - dose 2 for future recommendations is 4 weeks
- Minimum interval dose 1 - dose 2 for doses already given is 28 days
- Minimum interval dose 2 - dose 3 for future recommendations is 12 weeks
- Minimum interval dose 2 - dose 3 for doses already given is 84 days
- Minimum interval dose 1 - dose 3 for future recommendations is 5 calendar months
- Minimum interval dose 2 - dose 3 for doses already given is 151 days

Invalid doses

1st dose administered at <9 years of age:

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Dose administered at <3 months from transplant

Message - Dose given at < minimum interval from transplant

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose.

Adolescents who have had a haematopoietic stem cell transplant

Valid doses

Minimum age

- Minimum age dose 1 is 9 years

Maximum age

- Maximum age is 19 years (immediately prior to the 20th birthday)

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 16 weeks

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

9.3 NIP funding

One dose is funded under the NIP for all adolescents aged <20 years. Three doses are funded under the NIP for adolescents who have a significant immunocompromising condition.

10 Inactivated poliomyelitis vaccine (IPV)

10.1 Recommended schedule

10.1.1 All children and adolescents

- 3 primary doses of IPV at 2, 4 and 6 months of age.
- Booster dose of IPV at 4 years of age

10.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations

10.1.3 People with specified medical conditions

People who have had a haematopoietic stem cell transplant

- 3 doses of IPV commencing 6 months post-transplant with a minimum interval of 4 weeks between doses.
- If any doses from the primary schedule have not been received prior to transplant, these do not need to be given

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 6 months after transplant, as per the routine schedule and catch-up for all children and adolescents

People who have completed cancer therapy

- An additional booster dose of IPV after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy.
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is most recent)

10.2 Catch up dose parameters

10.2.1 All children and adolescents

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- Minimum age dose 4 is 3 years 6 months
- If dose 3 is administered at ≥4 years of age dose 4 is not required.

Minimum intervals

- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks
- Minimum interval dose 3 - dose 4 is 4 weeks

NB: Apply the Infanrix hexa rule when appropriate.

Invalid doses

1st dose administered at ≤28 days of age

4th dose administered at <4 years of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

10.2.2 People with specified medical conditions

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval between doses is 4 weeks

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- At 6 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <3 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

10.3 NIP funding

All doses are funded under the NIP for people <20 years of age

11 Influenza

11.1 Recommended schedule

11.1.1 All people

- 1 dose of influenza vaccine each year if ≥6 months of age
- If <9 years of age and receiving influenza vaccine for the first time, 2 doses of influenza vaccine

11.1.2 Aboriginal and Torres Strait Islander people

No additional recommendations

11.1.3 People with specified medical conditions

People who have specified medical conditions listed in the table below

No additional recommendations

Specified medical conditions associated with increased risk of severe influenza disease	
Haematological disorder	Sickle cell disease or other haemoglobinopathies
Immunocompromising conditions	Immunocompromise due to disease or treatment
	Malignancy
	HIV infection
	Asplenia or splenic disfunction
Chronic respiratory disease	suppurative lung disease, bronchiectasis and cystic fibrosis
	chronic obstructive pulmonary disease (COPD) or chronic emphysema
	severe asthma (defined as requiring requiring frequent medical consultations or the use of multiple medications)
Chronic kidney disease	Chronic renal impairment – eGFR <30 mL/min (stage 4 or 5 disease)
Cardiac disease	congenital heart disease
	coronary artery disease
	heart failure
	long-term aspirin therapy in children aged 6 months to 10 years
Chromosomal abnormality	Trisomy 21 or another chromosomal abnormality that increases the risk of severe disease

Chronic liver disease	Conditions with progressive deterioration of liver function for more than 6 months including cirrhosis and other advanced liver diseases
Chronic metabolic disorder	Type 1 or 2 diabetes
	Amino acid disorders
	Carbohydrate disorders
	Cholesterol biosynthesis disorders
	Fatty acid oxidation defects
	Lactic acidosis
	Mitochondrial disorders
	Organic acid disorders
	Urea cycle disorders
	Vitamin/cofactor disorders
	Porphyrias
Chronic neurological condition	Hereditary and degenerative CNS diseases
	Seizure disorders
	Spinal cord injuries
	Neuromuscular disorders
	Conditions which impair respiratory or airway function
Obesity	Body mass index ≥30 kg per m2
Smoking (current or in the immediate past)	
Harmful use of alcohol (consuming on average ≥60 g of alcohol/day for males and ≥40 g of alcohol/day for females)	

People who have had a solid organ transplant

- 2 doses of influenza vaccine in the first year post-transplant

People who have had a haematopoietic stem cell transplant

- 2 doses of influenza vaccine in the first year post-transplant, commencing at least 6 months post-transplant

11.2 Catch up schedule output statements

The following text is to be displayed on every catch-up schedule:

Annual influenza vaccination is recommended for people over 6 months of age, before the influenza season starts, between 1st April and 31st May. Although influenza can occur year-round, influenza infections peak between 1 June to 30 September in most parts of Australia.

Additional information boxes

The hierarchy for choosing which information box to use, where someone meets the criteria for more than one is as follows:

1. People who have had a haematopoietic stem cell transplant
2. People who have had a solid organ transplant
3. Age based (<9 year or ≥9 years)

Children aged <9 years

For optimal protection, a person receiving the flu vaccine for the first time in their life is recommended to get two doses, 4 weeks apart. Children can receive either standard influenza vaccine or cell-based influenza vaccine.

The annual Influenza vaccine is free under the National Immunisation Program for children aged up to 5 years and with certain at-risk conditions and may be funded for others through state or territory-based programs. People who are not eligible for a free vaccine can purchase the vaccine from their vaccination provider.

People aged ≥9 years

A single annual dose of influenza vaccine is recommended for most people. Children can receive either standard influenza vaccine or cell-based influenza vaccine.

The annual Influenza vaccine is free under the National Immunisation Program for people with certain at-risk conditions and may be funded for others through state or territory-based programs. People who are not eligible for a free vaccine can purchase the vaccine from their vaccination provider. See the Australian Immunisation Handbook for more details.

People who have had a solid organ transplant

Two doses of influenza vaccine are recommended for people who have had a solid organ transplant in the first year post-transplant. Either the standard influenza vaccine or cell-based influenza vaccine can be given.

The annual Influenza vaccine is free under the National Immunisation Program for people who have had a solid organ transplant.

People who have had a haematopoietic stem cell transplant

Two doses of influenza vaccine are recommended for people who have had a haematopoietic stem cell transplant in the first year post-transplant, commencing at least 6 months post-transplant. Either the standard influenza vaccine or cell-based influenza vaccine can be given.

The annual Influenza vaccine is free under the National Immunisation Program for people who have had a haematopoietic stem cell transplant.

11.3 NIP funding

Influenza doses are funded for all children <5 years of age and all Aboriginal and Torres Strait Islander children. The following children with specified medical conditions are eligible for funded doses regardless of age:

- Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
- Immunocompromising conditions
- Chronic respiratory disease
- Cardiac disease
- Chronic kidney disease
- Long-term aspirin therapy in children aged 6 months to 10 years
- Chronic neurological conditions
- Chronic metabolic disorders

12 Measles-Mumps-Rubella (MMR)

12.1 Recommended schedule

NB: Please read MMR rules in conjunction with Varicella rules.

Some children may receive a dose of MMR between 6 and 12 months of age if travelling to an area of high measles prevalence. This dose does not count toward the recommended doses below.

12.1.1 All children and adolescents

- 2 doses of MMR containing vaccine at 12 and 18 months of age

12.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations

12.1.3 People with specified medical conditions

People who have completed cancer therapy

- A booster dose of MMR after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy
- Serological immunity reviewed 6 weeks later, administer a second booster dose of MMR at 8 months if required
- If 1 dose previously given, 1 dose as per the schedule for healthy children, after 3 months in remission or the completion of treatment (whichever is more recent)
- If previously unvaccinated, 2 doses as per the schedule for healthy children, after 3 months in remission or the completion of treatment (whichever is more recent)

People who have had a haematopoietic stem cell transplant

- 2 doses of MMR at 24 months post-transplant, with a 4 week interval between doses
- Serological immunity reviewed 4 weeks after dose 2, to confirm seroconversion
- If any doses from the schedule have not been received prior to transplant, these do not need to be given

People who are having a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 12 months after transplant, as per the routine schedule and catch-up for all children and adolescents

People who are severely immunocompromised

- Vaccination is contraindicated for children and adolescents with the following conditions: congenital or acquired immune deficiency, haematological malignancies, receiving chemotherapy or radiotherapy (currently or anticipated), HIV infection with an age-specific CD4+ count <15% of total lymphocytes, immunosuppressive therapy (current or anticipated)

12.2 Catch up dose parameters

12.2.1 All children and adolescents

Valid doses

Minimum age

- Minimum age dose 1 for future recommendations is 12 months
- Minimum accepted age dose 1 for dose already given is 11 months
- Minimum age dose 2 for future recommendations is 18 months
- Minimum accepted age dose 2 for dose already given is 12 months

Minimum intervals

- Minimum interval between any MMR or MMR-Varicella vaccine and another live vaccine is 4 weeks, unless the live vaccines are administered on the same day

MMR

- MMR only MUST be recommended as the first dose of MMR containing vaccine in any child ≥12 months <4 years of age followed by dose 2 as MMRV at 18 months age or 4 weeks after dose 1 if the dose is already overdue.

MMRV

- MMRV is recommended as the first dose of MMR containing vaccine in any child aged 4 to 13 years who also requires varicella vaccine, followed by dose 2 as MMR only vaccine 4 weeks after dose 1.
- MMRV should not be used for any dose in people ≥14 years of age

MMR and Varicella

- If a person has received dose 1 of MMR AND monovalent varicella at ≥12 months of age observing the 4-week minimum interval, MMR and monovalent varicella will be recommended as dose 2.
- If a person has received dose 1 and dose 2 of MMR at ≥12 months AND dose 1 and dose 2 of monovalent varicella observing 4-week minimum intervals, no further doses will be recommended.

Invalid doses

1st dose administered at <11 months of age:

Message - Dose given at < minimum age

1st dose administered at ≥11 - <12 months age

Message – No message to be displayed.

NB: This dose is not repeated at ≥12 months of age

Minimum interval between any dose MMR and / or Varicella containing vaccine not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

12.2.2 People with specified medical conditions

People who have completed cancer therapy

- If the routine childhood schedule has not been completed, refer to the catch-up parameters for all children

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, minimum interval from remission/end of treatment - booster dose is 3 months

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 24 months
- Minimum interval from dose 1 - dose 2 is 4 weeks

Invalid doses

Booster dose administered at <24 months from transplant

Message - Dose given at < minimum interval from transplant

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

People who are having a solid organ transplant

Prior to surgery, follow the catch-up schedule for all children and adolescents.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 12 months
- At 12 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <12 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

12.3 NIP funding

Two doses are funded under the NIP for all people <20 year of age

13 Meningococcal ACWY Conjugate (MenACWY)

13.1 Recommended schedule

13.1.1 All children and adolescents

- 3 doses of MenACWY vaccine at 2, 4 and 12 months of age
- 1 dose of MenACWY vaccine at 15–19 years of age

13.1.2 Aboriginal and Torres Strait Islander children

No additional recommendations

13.1.3 People with specified medical conditions

People who have specified medical conditions listed in the table below

- 4 doses of MenACWY vaccine at 2, 4, 6 and 12 months of age, instead of the usual 3 doses for all children and adolescents
- 2 doses of MenACWY vaccine, 8 weeks apart, instead of the usual 1 dose for all adolescents
- If ≤6 years of age, a first booster dose 3 years after completing the primary schedule, and a second booster dose 5 years later
- If ≥7 years of age, a booster dose 5 years after completing the primary schedule
- For people having an elective splenectomy, where possible, they should receive scheduled doses at least 2 weeks before surgery

People who have completed cancer therapy

- An additional booster dose of MenACWY vaccine after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children and adolescents (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is most recent)

People who have had a haematopoietic stem cell transplant

- If <12months of age, 3 primary doses of MenACWY vaccine from 6 months post-transplant, following schedule for people who have specified medical conditions and no previous doses
- If ≥12 months of age, 2 primary doses of MenACWY vaccine from 6 months post-transplant, following schedule for children who have specified medical conditions and no previous doses
- If ≤6 years of age, a first booster dose 3 years after completing the primary schedule, and a second booster dose 5 years after the first booster dose
- If ≥7 years of age, a booster dose 5 years after completing the primary schedule

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 3 months after transplant, as per the routine schedule and catch-up for all children and adolescents

Specified medical conditions for which additional doses of MenACWY vaccine are scheduled.
functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
current or planned future treatment with a complement inhibitor therapy (including but not limited to eculizumab, ravulizumab or pegcetacoplan)
HIV infection

13.2 Catch up dose parameters

13.2.1 All children and adolescents

Valid doses

Minimum age

If a valid MenC vaccine has already been given at ≥11 months age, MenACWY is not required unless the child is born on or after 1/7/2017, or is ≥15 years of age.

MenACWY

Children <10 years of age

- Minimum age dose 1 is 29 days
- Minimum accepted age for dose 3 already given is 11 months
- Minimum age dose 3 for future recommendations is 12 months

Adolescents aged 15–19 years

- Minimum accepted age for dose already given is 14 years
- Minimum age for future recommendations is 15 years

MenC

- Minimum accepted age for dose already given is 11 months

Minimum intervals

- Minimum interval between primary doses of MenACWY is 8 weeks
- Minimum interval between dose of MenC and MenACWY is 8 weeks

Number of doses

Children <10 years of age

- MenACWY vaccine should be used for catch-up

- The number of doses required depends on current age and previous doses received, see MenACWY vaccine catch-up for healthy children aged <10 years below

Children 10–14 years of age

- MenC vaccine should be used for catch-up
- 1 dose of MenC vaccine required if 0 doses of MenC/ACWY received at age >11 months

Adolescents aged 15–19 years

- MenACWY vaccine should be used for catch-up
- 1 dose of MenACWY vaccine required if 0 doses of MenACWY received since age 14 years

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

MenACWY vaccine catch-up for healthy children aged <10 years*

Number of doses given previously	Age at presentation	Age when previous dose of MenACWY was given			Recommendation
		1st dose	2nd dose	3rd dose	Number of further dose(s) required
No previous doses	<6 months	–	–	–	3
	6–<12 months	–	–	–	2
	≥12 months	–	–	–	1
1 previous dose	<12 months	<6 months	–	–	2
	6–<12 months	6–<12 months	–	–	1
	≥12 months	<12 months	–	–	1
	≥12 months	≥12 months	–	–	None
2 previous doses	<12 months	<12 months	<12 months	–	1
	≥12 months	<12 months	<12 months	–	1
	≥12 months	Any age	≥12 months	–	None
3 previous doses	<12 months	<12 months	<12 months	<12 months	1
	≥12 months	<12 months	<12 months	<12 months	1
	≥12 months	Any age	Any age	≥12 months	None

*No upper age limit for Aboriginal and Torres Strait Islander children

13.2.2 People with specified medical conditions

People who have specified medical conditions listed in the table above

Before splenectomy, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 2 weeks of surgery.

After surgery, and for all other conditions, follow the guidance below:

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- Minimum accepted age for dose 4 already given is 11 months
- Minimum age dose 4 for future recommendations is 12 months
- Minimum age for booster dose is 4 years

Minimum intervals

- Minimum interval between primary doses is 8 weeks
- If ≤6 years of age, minimum interval between last primary dose and first booster dose is 3 years
- If ≥7 years of age, minimum interval between last primary dose and first booster dose is 5 years
- Minimum interval between ongoing booster doses is 5 years
- Minimum interval between any previous dose of MenACWY polysaccharide vaccine and a MenACWY conjugate vaccine is 2 years

Number of doses

- The number of doses required depends on current age and previous doses received, see MenACWY vaccine primary catch-up for people with specified medical conditions below
- Booster doses in people with specified medical conditions should continue at 5-yearly intervals, there is no upper limit to the number of vaccine doses.

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue. Does not apply to booster doses.

People who have completed cancer therapy

- If the routine childhood schedule has not been completed, refer to the catch-up parameters for all children and adolescents

Valid doses

Minimum intervals

- If the routine childhood schedule has been completed, minimum interval from remission/end of treatment - booster dose is 3 months

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 8 weeks
- Minimum interval dose 2 - dose 3 is 8 weeks (only required if vaccination commenced at 6–11 months of age)
- If ≤6 years of age, minimum interval between last primary dose and booster dose is 3 years
- If ≥7 years of age, minimum interval between last primary dose and booster dose is 5 years
- Minimum interval between ongoing booster doses is 5 years

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue. Does not apply to booster doses.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- At 3 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <3 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue. Does not apply to booster doses.

MenACWY vaccine primary catch-up for people with specified medical conditions

Number of primary doses given previously	Age at presentation	Age when previous dose of MenACWY was given				Recommendation
		1st dose	2nd dose	3rd dose	4th dose	Number of further primary dose(s) required
No previous doses	<6 months	–	–	–	–	4
	6–<12 months	–	–	–	–	3
	≥12 months	–	–	–	–	2
1 previous dose	<12 months	<6 months	–	–	–	3
	6–<12 months	6–<12 months	–	–	–	2
	≥12 months	<12 months	–	–	–	2
	≥12 months	≥12 months	–	–	–	1
2 previous doses	<12 months	<6 months	<12 months	–	–	2
	<12 months	6–<12 months	6–<12 months			1
	≥12 months	<6 months	<12 months	–	–	2
	≥12 months	6–<12 months	6–<12 months			1
	≥12 months	Any age	≥12 months	–	–	1
3 previous doses	<12 months	<12 months	<12 months	<12 months	–	1
	≥12 months	<12 months	<12 months	<12 months	–	1
	≥12 months	<6 months	<12 months	≥12 months	–	1
	≥12 months	6–<12 months	<12 months	≥12 months	–	None
	≥12 months	Any age	≥12 months	≥12 months	–	None

13.3 NIP funding

One dose of MenACWY vaccine funded for all children at 12 months of age and another dose is funded for adolescents at 14–16 years of age.

People with the following specified medical conditions are eligible for all required doses to be funded under the NIP:

- Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
- defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
- current or future treatment with complement inhibitor therapy (e.g.eculizumab, ravulizumab or pegcetacoplan)

14 Meningococcal B (MenB)

14.1 Recommended schedule

14.1.1 All children and adolescents

- 3 doses of MenB vaccine at 2, 4 and 12 months of age
- 2 doses of MenB vaccine at 15–19 years of age

14.1.2 Aboriginal and Torres Strait Islander children

No additional recommendations

14.1.3 People with specified medical conditions

People who have specified medical conditions listed in the table below

- 4 doses of MenB vaccine at 2, 4, 6 and 12 months of age, instead of the usual 3 doses for all children and adolescents
- If ≤6 years of age, a booster dose 3 years after completing the primary schedule
- If ≥7 years of age, a booster dose 5 years after completing the primary schedule
- For people having an elective splenectomy, where possible, they should receive scheduled doses at least 2 weeks before surgery

People who have had a haematopoietic stem cell transplant

- If <12 months of age, 3 doses of MenB vaccine from 6 months post-transplant, following schedule for people who have specified medical conditions and no previous doses
- If ≥12 months of age 2 primary doses of MenB vaccine from 6 months post-transplant, 8 weeks apart
- If ≤6 years of age, a booster dose 3 years after completing the primary schedule
- If ≥7 years of age, a booster dose 5 years after completing the primary schedule

People who are having/have had a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If any scheduled doses were not received prior to transplant, vaccination should recommence at least 3 months after transplant, as per the routine schedule and catch-up for all children and adolescents

People who have completed cancer therapy

- An additional booster dose of MenB vaccine after 3 months in remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children and adolescents (instead of the booster dose), after 3 months in remission or the completion of treatment (whichever is most recent)

Specified medical conditions for which additional doses of MenB vaccine are scheduled.
functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
current or planned future treatment with a complement inhibitor therapy (including but not limited to eculizumab, ravulizumab or pegcetacoplan)
HIV infection

14.2 Catch up dose parameters

If a child between 2–14 years (at presentation) has not been vaccinated, they are not required to catch-up the childhood doses. They are only required to have the adolescent doses (after 15 years of age).

14.2.1 All children and adolescents

Valid doses

Minimum age

Children <2 years of age

- Minimum age dose 1 is 29 days
- Minimum accepted age for dose 3 already given is 11 months
- Minimum age dose 3 for future recommendations is 12 months

Adolescents 15–19 years

- Minimum accepted age for dose 1 already given is 14 years
- Minimum age dose 1 for future recommendations is 15 years

Minimum intervals

- Minimum interval between doses is 6 weeks if <6 months of age
- Minimum interval between doses is 8 weeks if 6–23 months of age
- Minimum interval between doses is 8 weeks if ≥2 years of age

Number of doses

Children <2 years of age

- The number of doses required depends on current age and previous doses received, see MenB vaccine catch-up for healthy children aged <2 years below

Adolescents 15–19 years

- 2 doses of MenB vaccine required if 0 previous doses of MenB ever received
- 1 dose of MenB vaccine required if 0 dose of MenB received since age 14 years, but MenB vaccine previously received at age <14 years
- If dose 1 of Trumenba has been received, give 2 doses of Bexsero, 8 weeks apart

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

MenB vaccine catch-up for healthy children aged <2 years*

Number of doses given previously	Age at presentation	Age when previous dose of MenB was given			Recommendation
		1st dose	2nd dose	3rd dose	Number of further dose(s) required
No previous doses	<12 months	–	–	–	3
	≥12 months	–	–	–	2
1 previous dose	<12 months	<12 months	–	–	2
	≥12 months	<12 months	–	–	2
	≥12 months	≥12 months	–	–	1
2 previous doses	<12 months	<12 months	<12 months	–	1
	≥12 months	<12 months	<12 months	–	1
	≥12 months	<12 months	≥12 months	–	1
	≥12 months	≥12 months	≥12 months	–	None
3 previous doses	<12 months	<12 months	<12 months	<12 months	1
	≥12 months	<12 months	<12 months	<12 months	1
	≥12 months	<12 months	<12 months	≥12 months	None
	≥12 months	<12 months	≥12 months	≥12 months	None

*No upper age limit for Aboriginal and Torres Strait Islander children

14.2.2 People with specified medical conditions

People who have specified medical conditions listed in the table above

Before splenectomy, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 2 weeks of surgery.

After surgery, and for all other conditions, follow the guidance below:

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- Minimum accepted age for dose 4 already given is 11 months
- Minimum age dose 4 for future recommendations is 12 months
- Minimum age for booster dose is 4 years

Minimum intervals

- Minimum interval between primary doses is 6 weeks if <6 months of age
- Minimum interval between primary doses is 8 weeks if 6–23 months of age
- Minimum interval between primary doses is 8 weeks if ≥2 years of age
- If ≤6 years of age, minimum interval between last primary dose and booster dose is 3 years
- If ≥7 years of age, minimum interval between last primary dose and booster dose is 5 years

Number of doses

- The number of doses required depends on current age and previous doses received and brand, see MenB vaccine (Bexsero) catch-up for people with specified medical conditions below
-
- For people ≥10 years of age who had received Trumenba, if <3 primary doses of Trumenba have already been received, give 2 doses of Bexsero, 8 weeks apart
- Trumenba and Bexsero are interchangeable for booster doses

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 6 months
- Minimum interval dose 1 - dose 2 is 8 weeks
- Minimum interval dose 2 - dose 3 is 8 weeks (only required if vaccination commenced at 6–11 months of age)
- If ≤6 years of age, minimum interval between last primary dose and booster dose is 3 years
- If ≥7 years of age, minimum interval between last primary dose and booster dose is 5 years

Number of doses

- For people 6–<12 months of age, a 3-dose primary schedule is required
- For people ≥12 months of age, a 2-dose primary schedule is required
- For people ≥10 years of age who had received Trumenba, if <3 primary doses of Trumenba have already been received, give 2 doses of Bexsero, 8 weeks apart
- Trumenba and Bexsero are interchangeable for booster doses

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who are having/have had a solid organ transplant

Before transplant, follow the catch-up schedule for all children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

After transplant, follow the guidance below:

Valid doses

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- At 3 months follow the catch-up schedule for all children and adolescents

Invalid doses

Dose administered at <3 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

Children and adolescents who have completed cancer therapy

- If the routine schedule has not been completed, refer to the catch-up parameters for all children and adolescents

Valid doses

Minimum intervals

- If the routine schedule has been completed, minimum interval from remission/end of treatment - booster dose is 3 months

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

MenB vaccine (Bexsero) primary catch-up for people with specified medical conditions

Number of primary doses given previously	Age at presentation	Age when previous dose of MenB was given				Recommendation
		1st dose	2nd dose	3rd dose	4th dose	Number of further primary dose(s) required
No previous doses	<6 months	–	–	–	–	4
	6–<12 months	–	–	–	–	3
	≥12 months	–	–	–	–	2
1 previous dose	<12 months	<6 months	–	–	–	3
	6–<12 months	6–<12 months	–	–	–	2
	≥12 months	<12 months	–	–	–	2
	≥12 months	≥12 months	–	–	–	1
2 previous doses	<12 months	<6 months	<12 months	–	–	2
	<12 months	6–<12 months	6–<12 months			1
	≥12 months	<6 months	<12 months	–	–	2
	≥12 months	6–<12 months	6–<12 months			1
	≥12 months	Any age	≥12 months	–	–	1
3 previous doses	<12 months	<12 months	<12 months	<12 months	–	1
	≥12 months	<12 months	<12 months	<12 months	–	1
	≥12 months	<6 months	<12 months	≥12 months	–	1
	≥12 months	6–<12 months	<12 months	≥12 months	–	None
	≥12 months	Any age	≥12 months	≥12 months	–	None

14.3 NIP funding

All MenB doses for Aboriginal and Torres Strait Islander children born after 1 July 2018, if given at ≤2 years of age are funded under the NIP.

All people with the following specified medical conditions are eligible for all required primary doses to be funded under the NIP:

- Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
- defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
- current or future treatment with complement inhibitor therapy (e.g.eculizumab, ravulizumab or pegcetacoplan)

In addition, Aboriginal and Torres Strait Islander people with the following specified medical conditions are eligible for all required primary doses to be funded under the NIP:

- HIV infection
- haematopoietic stem cell transplant

The booster dose of MenB vaccine for people with specified medical conditions is not funded.

15 Pneumococcal conjugate

15.1 Recommended schedule

15.1.1 Non-Aboriginal and Torres Strait Islander children in all states and Aboriginal and Torres Strait Islander children and adolescents in ACT, NSW, TAS & VIC

- 2 primary doses of PCV (pneumococcal conjugate vaccine) at 2 and 4 months of age.
- Booster dose of PCV (pneumococcal conjugate vaccine) at 12 months of age

Note: To avoid confusion, Pneumococcal Conjugate doses should be labelled as Dose 1 of 2, Dose 2 of 2, and Booster 1 of 1.

15.1.2 Aboriginal and Torres Strait Islander children and adolescents in NT, QLD, SA or WA

- 3 primary doses of PCV (pneumococcal conjugate vaccine) at 2, 4 and 6 months of age.
- Booster dose of PCV (pneumococcal conjugate vaccine) at 12 months of age

Note: To avoid confusion, Pneumococcal Conjugate doses should be labelled as Dose 1 of 3, Dose 2 of 3, Dose 3 of 3, and Booster 1 of 1.

15.1.3 People with specified medical conditions

People who have specified medical conditions listed in the table below

- 1 additional dose of PCV (pneumococcal conjugate vaccine) at diagnosis if >6 months OR
- 1 additional dose of PCV (pneumococcal conjugate vaccine) at 6 months of age if diagnosed at <6 months of age
- If a person is diagnosed with a second specified medical condition and they have received all recommended vaccines, they do not repeat these
- If the person is an Aboriginal or Torres Strait Islander child in NT, QLD, SA or WA, and has already received the additional dose as part of their schedule, no further doses are required
- For people having a solid organ transplant, where possible, they should receive all scheduled doses at least 4 weeks before transplantation
- For people having an elective splenectomy, where possible, they should receive all scheduled doses at least 2 weeks before surgery

People who have completed cancer therapy

- If not received during treatment, an additional dose of PCV, 3 months after remission or the completion of treatment (whichever is more recent), if previously fully vaccinated before commencing cancer therapy
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children and adolescents (instead of the booster dose), before giving the additional dose.

People who have had a haematopoietic stem cell transplant

- 3 doses of PCV (pneumococcal conjugate vaccine) from 3 months post-transplant
- If aged <12 months, interval between doses is 4 weeks
- If aged ≥12 months, interval between doses if 8 weeks
- If any doses from the primary and booster schedule have not been received prior to transplant, these do not need to be given

Specified medical conditions for which an additional dose of PCV is scheduled.	
Previous episode of invasive pneumococcal disease	
Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies	
Immunocompromising conditions	congenital or acquired immune deficiency
	haematological malignancies
	solid organ transplant
	HIV infection
	immunosuppressive therapy (current or anticipated)
	non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)
	Defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
	Current or future treatment with eculizumab
	Other immunocompromising condition
Proven or presumptive cerebrospinal fluid (CSF) leak	cochlear implants
	intracranial shunts
Chronic respiratory disease	suppurative lung disease, bronchiectasis and cystic fibrosis
	chronic lung disease in preterm infants
	chronic obstructive pulmonary disease (COPD) or chronic emphysema
	severe asthma (defined as requiring frequent hospital visits or the use of multiple medications)
	interstitial and fibrotic lung disease
	other chronic respiratory disease
Chronic renal disease	relapsing or persistent nephrotic syndrome
	Stage 4 chronic kidney disease – eGFR <30 mL/min
	Stage 5 chronic kidney disease (kidney failure) – eGFR <15 mL/min
Cardiac disease	congenital heart disease

	coronary artery disease
	heart failure
	long-term aspirin therapy in children aged 6 months to 10 years
	other cardiac disease
Pre-term infant or low-birth weight baby	children born less than 28 weeks gestation
	low-birth weight baby
Chromosomal abnormality	Trisomy 21 or another chromosomal abnormality that increases the risk of severe disease
Chronic liver disease	Conditions with progressive deterioration of liver function for more than 6 months including cirrhosis and other advanced liver diseases
Diabetes	
Smoking (current or in the immediate past)	
Harmful use of alcohol (consuming on average ≥60 g of alcohol/day for males and ≥40 g of alcohol/day for females)	

15.2 Catch up dose parameters

15.2.1 Non-Aboriginal and Torres Strait Islander children in all states and Aboriginal and Torres Strait Islander children and adolescents in ACT, NSW, TAS & VIC

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- Minimum accepted age for dose 3 already given is 11 months for children born on or after 1/7/2017.
- For children born on or before 30/6/2017, dose 3 already given at any age is accepted provided the minimum age for dose 1 and minimum intervals of at least 4 weeks between any doses given at <12 months and 8 weeks between any doses given at ≥12 months have been met.
- Minimum age dose 3 for future recommendations is 12 months for all children

Maximum age

- Maximum age is 4 years (immediately prior to the 5th birthday)

Minimum intervals

- Minimum interval between primary doses at age <12 months is 4 weeks (calculated from the age at which the previous dose was given – ie <12 months)
- Minimum interval between any 2 doses given at ≥12 months is 8 weeks (calculated from the age at which the previous dose was given – ie ≥12 months)

- Minimum interval between last primary dose and booster dose is 8 weeks

Number of doses

The number of doses required depends on current age and previous doses received, see *PCV catch-up for non-Aboriginal and Torres Strait Islander children aged < 5 years in all states and Aboriginal and Torres Strait Islander children aged <5 years in ACT, NSW, TAS & VIC*

Invalid doses

1st dose administered at ≤28 days of age

3rd dose administered at <11 months age for children born 1/7/2017 onwards

Message - Dose given at < minimum age

3rd dose administered at 11 - <12 months age for children born 1/7/2017 onwards

Message – No message to be displayed.

NB: This dose is not repeated at ≥12 months of age provided the minimum interval from the last primary dose has been met.

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

PCV catch-up for non-Aboriginal and Torres Strait Islander children aged < 5 years in all states and Aboriginal and Torres Strait Islander children aged <5 years in ACT, NSW, TAS & VIC.

Number of doses given previously	Age at presentation	Age when previous dose of PCV was given			Recommendation
		1st dose	2nd dose	3rd dose	Number of further dose(s) required
No previous doses	<12 months	–	–	–	3
	12–59 months	–	–	–	1
1 previous dose	<12 months	<12 months	–	–	2
	12–59 months	<12 months	–	–	1
		≥12 months	–	–	None
2 previous doses	<12 months	<12 months	<12 months	–	1
	12–59 months	<12 months	<12 months	–	1
			≥12 months	–	None
3 previous doses	<12 months	<12 months	<12 months	<12 months	1
	12–59 months	<12 months	<12 months	<12 months	None
	12–59 months	<12 months	<12 months	12–59 months	None
	12–59 months	<12 months	12–59 months	12–59 months	None
	12–59 months	12–59 months	12–59 months	12–59 months	None

15.2.2 Aboriginal and Torres Strait Islander children and adolescents in NT, QLD, SA or WA

Valid doses

Minimum age

- Minimum age dose 1 is 29 days
- The dose 3 minimum age rule does not apply to this group
- Minimum accepted age dose 4 for a dose already given is 11 months
- Minimum accepted age dose 4 for future recommendations is 12 months

Maximum age

- Maximum age is 4 years (immediately prior to the 5th birthday)

Minimum intervals

- Minimum interval between primary doses at age <12 months is 4 weeks (calculated from the age at which the previous dose was given – i.e. <12 months)
- Minimum interval between any 2 doses given at ≥12 months is 8 weeks (calculated from the age at which the previous dose was given – i.e. ≥12 months)
- Minimum interval between last primary dose and booster dose is 8 weeks
- Minimum interval between previous dose of 23vPPV and a dose of PCV is 12 months

Number of doses

The number of doses required depends on current age and previous doses received, see *PCV catch-up for Aboriginal and Torres Strait Islander children living in NT, QLD, SA or WA aged <5 years and children with specified medical conditions below*

Invalid doses

1st dose administered at ≤28 days age

4th dose administered at <11 months age

Message - Dose given at < minimum age

4th dose administered at 11 - <12 months age

Message – No message to be displayed.

NB: This dose is not repeated at ≥ 12 months of age provided the minimum interval from the last primary dose has been met.

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

PCV catch-up for Aboriginal and Torres Strait Islander children living in NT, QLD, SA or WA aged <5 years and children with specified medical conditions

Number of doses given previously	Age at presentation	Age when previous dose of PCV was given			Recommendation
		1st dose	2nd dose	3rd dose	Number of further dose(s) required
No previous doses	<12 months	–	–	–	4
	12–59 months	–	–	–	2
1 previous dose	<12 months	Any age	–	–	3
	12–59 months	<12 months	–	–	2
		≥12 months	–	–	1
2 previous doses	<12 months	Any age	Any age	–	2
	12–59 months	<12 months	<12 months	–	2
			≥12 months	–	1
3 previous doses	<12 months	≥12 months	≥12 months	–	None
	12–59 months	Any age	Any age	Any age	1
	12–59 months	<12 months	<12 months	Any age	1
	12–59 months	<12 months	<12 months	12–59 months	1
	12–59 months	<12 months	12–59 months	12–59 months	None

15.2.3 People with specified medical conditions

People who have specified medical conditions listed above

Before solid organ transplant, follow the relevant catch-up schedule for children and adolescents. No doses of vaccine should be given within 4 weeks of surgery.

Before splenectomy, follow the relevant catch-up schedule for children and adolescents. No doses of vaccine should be given within 2 weeks of surgery.

After surgery, and for all other conditions, follow the guidance below:

Valid doses

Minimum age

The dose 3 minimum age rule does not apply to this group

Maximum age

Maximum age of 4 years (immediately prior to the 5th birthday) does NOT apply for this cohort. Instead it should be 19 years (immediately prior to the 20th birthday).

Minimum intervals

- Minimum interval from transplant – next scheduled dose is 6 months
- Minimum interval is 8 weeks after any previous doses of PCV
- Minimum interval between previous dose of 23vPPV and a dose of PCV is 12 months

Number of doses

- The number of doses required depends on current age and previous doses received, see *PCV catch-up for Aboriginal and Torres Strait Islander children living in NT, QLD, SA or WA aged <5 years and children with specified medical conditions*
- For people ≥5 years of age a single dose of PCV is required

Invalid doses

Dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

People who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

<12 months of age

- Minimum interval from transplant - dose 1 is 3 months
- Minimum interval dose 1 - dose 2 is 4 weeks
- Minimum interval dose 2 - dose 3 is 4 weeks

≥12 months of age

- Minimum interval from transplant - dose 1 is 3 months
- Minimum interval dose 1 - dose 2 is 8 weeks
- Minimum interval dose 2 - dose 3 is 8 weeks

Maximum age

- Maximum age of 4 years (immediately prior to the 5th birthday) does NOT apply for this cohort.

Invalid doses

Booster dose administered at <6 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous valid dose if already overdue.

15.3 NIP funding

All scheduled childhood doses are funded using 13vPCV for non-Aboriginal and Torres Strait Islander children and Aboriginal and Torres Strait Islander children.

The following people with specified medical conditions are eligible for additional funded doses of 13vPCV under the NIP:

- Previous episode of invasive pneumococcal disease
- Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
- Congenital or acquired immune deficiency
- Haematological malignancies
- Solid organ transplant
- Haematopoietic stem cell transplant
- HIV infection
- Cochlear implants
- Intracranial shunts
- Suppurative lung disease, bronchiectasis and cystic fibrosis
- Chronic lung disease in preterm infants
- Relapsing or persistent nephrotic syndrome
- Stage 5 chronic kidney disease (kidney failure) – eGFR <15 mL/min

Children <5 years of age with the following specified medical conditions are eligible for one additional funded dose of 13vPCV:

- Congenital heart disease
- Coronary artery disease
- Heart failure
- Children born less than 28 weeks gestation
- Trisomy 21

15vPCV and 20vPCV are not funded on the NIP.

16 Pneumococcal polysaccharide

16.1 Recommended schedule

16.1.1 Non-Aboriginal and Torres Strait Islander children in all states and Aboriginal and Torres Strait Islander children in ACT, NSW, TAS & VIC

No additional recommendations

16.1.2 Aboriginal and Torres Strait Islander children and adolescents in NT, QLD, SA or WA

- 1 dose of 23vPPV (pneumococcal polysaccharide vaccine) 12 months after 13vPCV (2–12 months later is acceptable) or at 4 years of age whichever is later
- a 2nd dose of 23vPPV (pneumococcal polysaccharide vaccine) at least 5 years after the first dose of 23vPPV

Note: To avoid confusion, Pneumococcal Polysaccharide doses should be labelled as Dose 1 and Dose 2.

16.1.3 People with specified medical conditions

People who have specified medical conditions listed in the table below or who have had a haematopoietic stem cell transplant

- 1 dose of 23vPPV (pneumococcal polysaccharide vaccine) 12 months after 13vPCV (2–12 months later is acceptable) or at 4 years of age whichever is later
- a 2nd dose of 23vPPV (pneumococcal polysaccharide vaccine) at least 5 years after the first dose of 23vPPV
- If a person is diagnosed with a second specified medical condition and they have received all recommended vaccines, they do not repeat these

People who have completed cancer therapy

- If not received during treatment, the schedule of 23vPPV described above for people with a specified medical condition should be completed, commencing 3 months after remission or the completion of treatment (whichever is more recent), if previously fully vaccinated with 13vPCV before commencing cancer therapy.
- If not fully vaccinated prior to cancer therapy, commence catch-up as for healthy children and adolescents, before giving additional doses.

Specified medical conditions for which doses of 23vPPV are scheduled
Haematopoietic Stem Cell Transplant
Previous episode of invasive pneumococcal disease
Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies

Immunocompromising conditions	congenital or acquired immune deficiency
	haematological malignancies
	solid organ transplant
	HIV infection
	immunosuppressive therapy (current or anticipated)
	non-haematological malignancies receiving chemotherapy or radiotherapy (currently or anticipated)
	Defects in, or deficiency of, complement components, including factor H, factor D or properdin deficiency
	Current or future treatment with eculizumab
	Other immunocompromising condition
Proven or presumptive cerebrospinal fluid (CSF) leak	cochlear implants
	intracranial shunts
Chronic respiratory disease	suppurative lung disease, bronchiectasis and cystic fibrosis
	chronic lung disease in preterm infants
	chronic obstructive pulmonary disease (COPD) or chronic emphysema
	severe asthma (defined as requiring frequent hospital visits or the use of multiple medications)
	interstitial and fibrotic lung disease
	other chronic respiratory disease
Chronic renal disease	relapsing or persistent nephrotic syndrome
	Stage 4 kidney disease – eGFR <30 mL/min
	Stage 5 kidney disease (kidney failure) – eGFR <15 mL/min
Cardiac disease	congenital heart disease
	coronary artery disease
	heart failure
	long-term aspirin therapy in children aged 6 months to 10 years
	other cardiac disease
Pre-term infant	children born less than 28 weeks gestation
Chromosomal abnormality	Trisomy 21 or another chromosomal abnormality that increases the risk of severe disease
Chronic liver disease	Conditions with progressive deterioration of liver function for more than 6 months including cirrhosis and other advanced liver diseases
Diabetes	
Smoking (current or in the immediate past)	

Harmful use of alcohol (consuming on average ≥60 g of alcohol/day for males and ≥40 g of alcohol/day for females)

16.2 Catch up dose parameters

16.2.1 Aboriginal and Torres Strait Islander children and adolescents in NT, QLD, SA or WA

Valid doses

Minimum age

- Minimum age dose 1 already given is 18 months
- Minimum age dose 1 future recommendations is 4 years

Minimum intervals

- Minimum interval between dose of 13vPCV and 23vPPV where already given is 2 months
- Minimum interval for future dose 1 of 23vPPV after dose of 13vPCV is 12 months
- Minimum interval between 2 doses of 23vPPV is 5 years

Invalid doses

1st dose administered at <18 months of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

16.2.2 People with specified medical conditions

People who have specified medical conditions listed in the table above or who have had a haematopoietic stem cell transplant

Valid doses

Minimum age

- Minimum age dose 1 already given is 18 months
- Minimum age dose 1 future recommendations is 4 years

Minimum intervals

- Minimum interval between dose of 13vPCV and 23vPPV where already given is 2 months
- Minimum interval for future dose 1 of 23vPPV after dose of 13vPCV is 12 months
- Minimum interval between 2 doses of 23vPPV is 5 years

Invalid doses

1st dose administered at <18 months of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

16.3 NIP funding

Twp doses of 23vPPV are funded under the NIP for Aboriginal and Torres Strait Islander children in NT, QLD, SA or WA and the following people with specified medical conditions:

- Previous episode of invasive pneumococcal disease
- Functional or anatomical asplenia, including sickle cell disease or other haemoglobinopathies
- Congenital or acquired immune deficiency
- Haematological malignancies
- Solid organ transplant
- Haematopoietic stem cell transplant
- HIV infection
- Cochlear implants
- Intracranial shunts
- Suppurative lung disease, bronchiectasis and cystic fibrosis
- Chronic lung disease in preterm infants
- Relapsing or persistent nephrotic syndrome
- Stage 5 kidney disease (kidney failure) – eGFR <15 mL/min

Two doses of 23vPPV are funded for children <5 years of age with the following specified medical conditions:

- Congenital heart disease
- Coronary artery disease
- Heart failure
- Children born less than 28 weeks gestation
- Trisomy 21

17 Rotavirus

17.1 Recommended schedule

17.1.1 All children

- 2 primary doses of rotavirus vaccine at 2 and 4 months of age.

17.1.2 Aboriginal and Torres Strait Islander children

No additional recommendations

17.1.3 Children with specified medical conditions

People who are severely immunocompromised

- Vaccination is contraindicated for children with congenital or acquired immune deficiency, on immunosuppressive therapy (current or anticipated) or HIV infection with an age-specific CD4+ count <15% of total lymphocytes

17.2 Catch up dose parameters

Valid doses

Minimum age

- Minimum age dose 1 is 29 days

Maximum age

- Maximum age dose 1 is 14 weeks and 6 days (<15 weeks age)
- Maximum age dose 2 is 24 weeks and 6 days (<25 weeks age)
- If dose 1 is not administered by 14 weeks and 6 days of age, NO doses are to be given.
- If dose 1 has already been given at > the recommended age limit dose 2 is recommended as per the schedule provided the minimum dose intervals and upper age limits for subsequent doses can be met.

Minimum intervals

- Minimum interval between dose 1 and dose 2 is 4 weeks

Invalid doses

1st dose administered at ≤28 days of age

Message - Dose given at < minimum age

Minimum interval between any 2 doses not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue, as long as maximum age limits are not exceeded

17.3 Funding

Two doses of rotavirus vaccine are funded under the NIP for all children.

18 Varicella

NB: Please read Varicella rules in conjunction with MMR rules.

18.1 Recommended schedule

18.1.1 All children and adolescents

- Dose 1 of varicella containing vaccine (delivered as MMRV) at 18 months of age, provided a valid dose of MMR was delivered in the past.
- Dose 2 of varicella vaccine (delivered as varicella only vaccine) at least 4 weeks later

18.1.2 Aboriginal and Torres Strait Islander children and adolescents

No additional recommendations

18.1.3 People with specified medical conditions

People who have completed cancer therapy

- 2 booster doses of varicella vaccine, at least 4 weeks apart, after 3 months in remission or the completion of treatment(whichever is most recent), if seronegative
- These doses are given instead of those recommended for all children, not in addition to them.

People who have had a haematopoietic stem cell transplant

- 2 doses of varicella vaccine, at least 4 weeks apart, at 24 months post-transplant, if seronegative
- These doses are given instead of those recommended for all children, not in addition to them.

People who are having a solid organ transplant

- Where possible, children and adolescents should receive all routine scheduled doses at least 4 weeks before transplantation
- If seronegative, recommended to be vaccinated at least 12 months after transplant, and to receive 2 doses 4 weeks apart

People who are severely immunocompromised

- Vaccination is contraindicated for children and adolescents with the following conditions: congenital or acquired immune deficiency, haematological malignancies, receiving chemotherapy or radiotherapy (currently or anticipated), HIV infection with an age-specific CD4+ count <15% of total lymphocytes, immunosuppressive therapy (current or anticipated)

18.2 Catch up dose parameters

18.2.1 All children and adolescents

Valid doses

Minimum age

- Minimum age dose 1 for future recommendations is 18 months
- Minimum accepted age for dose already given is 12 months

Minimum intervals

- Minimum interval between any MMRV or Varicella only vaccine is 4 weeks
- Minimum interval between any MMRV or Varicella only vaccine and another live vaccine is 4 weeks

MMRV

- MMRV is recommended as the first dose of MMR containing vaccine in any child aged 4 to 13 years of age who also requires protection against varicella
- MMRV should not be used for any dose in people ≥14 years of age

Invalid doses

1st dose administered at <12 months of age.

Message - Dose given at < minimum age

Minimum interval between any dose of MMR and / or Varicella containing vaccine not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

18.2.2 People with specified medical conditions

People who have completed cancer therapy

Valid doses

Minimum intervals

- Minimum interval from remission/end of treatment - booster dose is 3 months
- Minimum interval between any MMRV or Varicella only vaccine is 4 weeks

Invalid doses

Booster dose administered at <3 months from remission or end of treatment

Message - Dose given at < minimum interval from remission or end of treatment

Minimum interval between any dose of MMR and / or Varicella containing vaccine not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

Children who have had a haematopoietic stem cell transplant

Valid doses

Minimum intervals

- Minimum interval from transplant - dose 1 is 24 months
- Minimum interval from dose 1 - dose 2 is 4 weeks

Invalid doses

Booster dose administered at <24 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any dose of MMR and / or Varicella containing vaccine not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

People who are having a solid organ transplant

Prior to surgery, follow the catch-up schedule for all children and adolescents.

Minimum intervals

- Minimum interval from treatment – dose 1 is 12 months
- Minimum interval between any MMRV or Varicella only vaccine is 4 weeks

Invalid doses

Booster dose administered at <12 months from transplant

Message - Dose given at < minimum interval from transplant

Minimum interval between any dose of MMR and / or Varicella containing vaccine not met

Message - Dose given at < minimum interval from previous dose

NB: An invalid dose is to be repeated at the correct schedule point or minimum interval from the previous invalid dose if already overdue.

18.3 NIP funding

Anyone younger than 14 years of age, who have never been immunised (i.e. have not received Varicella dose/s), is eligible for 1 funded dose under the NIP.

Anyone between 14 and 20 years of age, who have never been immunised (i.e. have not received Varicella dose/s), is eligible for 2 funded doses under the NIP.

Immunisationhandbook.health.gov.au

All information in this publication is correct as of September 2025