



Australian Government

Australian Institute of
Health and Welfare

National Partnership on Essential Vaccines: performance report 2018–19



AIHW

National Partnership on Essential Vaccines

Performance report

2018–19

Australian Institute of Health and Welfare
Canberra

Cat. no. HPF 63

The Australian Institute of Health and Welfare is a major national agency whose purpose is to create authoritative and accessible information and statistics that inform decisions and improve the health and welfare of all Australians.

© Australian Institute of Health and Welfare 2020



This product, excluding the AIHW logo, Commonwealth Coat of Arms and any material owned by a third party or protected by a trademark, has been released under a Creative Commons BY 3.0 (CC-BY 3.0) licence. Excluded material owned by third parties may include, for example, design and layout, images obtained under licence from third parties and signatures. We have made all reasonable efforts to identify and label material owned by third parties.

You may distribute, remix and build upon this work. However, you must attribute the AIHW as the copyright holder of the work in compliance with our attribution policy available at www.aihw.gov.au/copyright/. The full terms and conditions of this licence are available at <http://creativecommons.org/licenses/by/3.0/au/>.

A complete list of the Institute's publications is available from the Institute's website www.aihw.gov.au.

ISBN 978-1-76054-715-8 (Online)

ISBN 978-1-76054-716-5 (Print)

Suggested citation

Australian Institute of Health and Welfare 2020. National Partnership on Essential Vaccines: performance report 2018–19. Cat. no. HPF 63. Canberra: AIHW.

Australian Institute of Health and Welfare

Board Chair
Mrs Louise Markus

Chief Executive Officer
Mr Barry Sandison

Any enquiries relating to copyright or comments on this publication should be directed to:
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Tel: (02) 6244 1000
Email: info@aihw.gov.au

Published by the Australian Institute of Health and Welfare

This publication is printed in accordance with ISO 14001 (Environmental Management Systems) and ISO 9001 (Quality Management Systems). The paper is sourced from sustainably managed certified forests.



**Please note that there is the potential for minor revisions of data in this report.
Please check the online version at <www.aihw.gov.au> for any amendments.**

Contents

Summary	iv
1 Introduction	1
The National Partnership on Essential Vaccines	1
The performance benchmarks	2
2 Assessment against the benchmarks	5
New South Wales	5
Victoria	6
Queensland	9
Western Australia	11
South Australia	13
Tasmania	15
Northern Territory	17
Australian Capital Territory	19
Appendix A: Detailed benchmark specifications	21
Appendix B: Summary of performance assessment data, by benchmark	26
Abbreviations	30
List of tables	31
Related publications	33

Summary

This report provides an assessment of state and territory performance against the performance benchmarks outlined in the National Partnership on Essential Vaccines (NPEV), for the second year of the agreement, covering the assessment period 1 April 2018 to 31 March 2019.

The NPEV is an agreement between the Commonwealth of Australia and the states and territories, which aims “to protect the Australian public from the spread of vaccine preventable diseases through the cost-effective and efficient delivery of immunisation programs under the National Immunisation Program”.

The performance benchmarks assessed in this report are:

1. an increase in vaccination coverage rates for 60–<63 month olds relative to the baseline
2. an increase in the vaccination coverage rates for Aboriginal and Torres Strait Islander people in at least two of the following three age cohorts: 12–<15 months; 24–<27 months; and 60–<63 months, relative to the baseline
3. an increase in the vaccination coverage rate for both adolescent boys and adolescent girls for HPV, relative to the baseline
5. an annual decrease in the wastage and leakage rate for agreed vaccines, relative to the baseline.

Performance Benchmark 4 (an increase in vaccination coverage rates for 60–<63 month olds in four of the ten lowest vaccination coverage SA3 geographical areas in each jurisdiction, relative to the baseline) is not assessed in this report. In August 2018, SA3 coverage reports were provided to jurisdictions by the Commonwealth that were later identified to contain geocoding errors. This may have led to states and territories having incorrect information in relation to selection of areas of low coverage for assessment. Subsequent delays in the provision of updated coverage reports may have also prevented jurisdictions from undertaking follow up prior to the end of the 2018–19 reference period. For these reasons, the Department of Health delegate agreed that all states be assessed as meeting Performance Benchmark 4 in full.

A performance milestone of “provision of annual schools HPV immunisation data for the previous school year by 30 April each year” is also specified in the Agreement. For the second year of the Agreement, all states and territories achieved this milestone.

In relation to the 5 benchmarks assessed for the period 1 April 2018 to 31 March 2019:

- New South Wales met 4 benchmarks, with benchmark 5 not being met
- Victoria met all 5 benchmarks
- Queensland met all 5 benchmarks
- Western Australia met all 5 benchmarks
- South Australia met 4 benchmarks, with benchmark 5 not being met
- Tasmania met 4 benchmarks, with benchmark 5 not being met
- The Northern Territory met 4 benchmarks, with benchmark 5 not being met
- The Australian Capital Territory met 4 benchmarks, with benchmark 5 not being met.

1 Introduction

This report assesses the performance of state and territory governments against the benchmarks set out in the National Partnership on Essential Vaccines (NPEV; the Agreement).

The National Partnership on Essential Vaccines

The NPEV is an agreement between the Commonwealth of Australia and the states and territories. The objective of the Agreement is “to protect the Australian public from the spread of vaccine preventable diseases through the cost-effective and efficient delivery of immunisation programs under the National Immunisation Program (NIP)”¹.

The NIP is a joint initiative of the Commonwealth and the states and territories, making free vaccines for several key diseases available to eligible individuals through a range of vaccination providers in accordance with the National Immunisation Schedule (available at www.health.gov.au/immunisation).

The NPEV is intended to facilitate achievement of 6 key outcomes, namely to:

- a) minimise the incidence of vaccine preventable diseases in the eligible Australian population for diseases with vaccines listed under the NIP
- b) minimise the incidence of vaccine preventable diseases in Aboriginal and Torres Strait Islander people for diseases with vaccines listed under the NIP
- c) minimise the incidence of human papillomavirus (HPV) in the eligible Australian population
- d) ensure that Australian HPV immunisation data is provided to the Commonwealth annually
- e) minimise the incidence of vaccine preventable diseases in the eligible Australian population in geographic areas of low coverage
- f) ensure that vaccines listed under the NIP are managed in a way that minimises wastage and leakage, with a target rate of wastage and leakage of 5 per cent or lower.

A set of 5 performance benchmarks and one milestone are specified in the Agreement to inform the assessment of progress contributing to the above outcomes. The Commonwealth makes a financial contribution to states and territories based on the cost of vaccine purchases by each state and territory following annual assessments against whether these benchmarks and milestone have been met.

The Australian Institute of Health and Welfare has been tasked with providing an independent assessment as to whether the benchmarks have been met for the second year of the agreement. That assessment is contained in this report.

¹ Australian Government 2017. National Partnership on Essential Vaccines. Accessed 17 October 2018, <http://www.federalfinancialrelations.gov.au/content/npa/health/national-partnership/Signed_NPA_-_essential_vaccines.pdf>

The performance benchmarks

The 5 performance benchmarks specified in the NPEV are:

1. an increase in vaccination coverage rates for 60–<63 month olds relative to the baseline
2. an increase in the vaccination coverage rates for Aboriginal and Torres Strait Islander people in at least two of the following three age cohorts: 12–<15 months; 24–<27 months; and 60–<63 months, relative to the baseline
3. an increase in the vaccination coverage rate for both adolescent boys and adolescent girls for HPV, relative to the baseline
4. an increase in vaccination coverage rates for 60–<63 month olds in four of the ten lowest vaccination coverage SA3 geographical areas, relative to the baseline
5. an annual decrease in the wastage and leakage rate for agreed vaccines, relative to the baseline.

More detailed specifications for each benchmark are provided at Appendix A.

A performance milestone of “provision of annual schools HPV immunisation data for the previous school year by 30 April each year” is also specified in the Agreement. For the 2018 school year, assessment of whether the states and territories achieved this milestone was undertaken by the Commonwealth Department of Health. Information on this milestone is also included in this report.

Assessing performance

Schedule C of the NPEV specifies how each performance benchmark is to be measured and assessed. Details are in Appendix A, and summarised below.

Note that coverage rates measured for these benchmarks are based on the proportion of children who are ‘fully immunised’ for their age, as defined by the Australian Immunisation Register. This definition may change over time along with changes to the NIP Schedule. For the reference period of the benchmarks assessed in this report (1 April 2018 to 31 March 2019) the definitions used were those specified in Table 1.

Benchmark 1: An increase in vaccination coverage for 60–<63 month olds

- Measured as percentage of children aged 60–<63 months reported as fully immunised, compared with the baseline.
- The baseline for each assessment period is the average coverage rate of the previous 3 years for that jurisdiction.
- Where a jurisdiction achieves a coverage rate for the reference period of 95 per cent or higher, it will be deemed to have met the benchmark.

Benchmark 2: An increase in vaccination coverage for Aboriginal and Torres Strait Islander people

- Measured as percentage of children aged 12–<15, 24–<27 and 60–<63 months reported as fully immunised, compared with the baseline for each cohort.
- The baseline for each assessment period is the lowest coverage rate from the previous 3 years for that jurisdiction, for each cohort.
- Where a jurisdiction achieves a coverage rate for the assessment period of 95 per cent or higher for a particular cohort, it will be deemed to have met the target for that cohort.

- This benchmark is deemed to have been met if an increase (or a 95% coverage rate) is achieved in at least 2 of the 3 cohorts.

Benchmark 3: An increase in vaccination coverage for HPV

- Measured as percentage of adolescents meeting a full-dose HPV (2-dose or 3-dose depending on age) immunisation by age 15, compared with the baseline.
- The baseline for each assessment period is the average coverage rate of the previous 3 years for that jurisdiction.

Benchmark 4: An increase in vaccination coverage in low coverage areas (not assessed in this report)

- Measured as percentage of children aged 60–<63 months in each nominated SA3 reported as fully immunised, compared with the baseline.
- The baseline for each assessment period is the previous year's coverage rate for the specified SA3.
- For the purposes of this benchmark, a geographical area of low coverage is included if it is in the 10 lowest areas in the jurisdiction with coverage below 95%. SA3 areas with fewer than 100 children aged 60–<63 months are excluded. States and territories will notify the Commonwealth by August of each year of the 4 nominated areas to be targeted that year.
- If all SA3 areas in a jurisdiction have coverage above 95%, this benchmark is deemed to have been met.

Benchmark 5: Decreasing wastage and leakage

- Measured as the percentage of NIP vaccines lost to wastage and leakage, compared with the baseline.
- The baseline for each assessment period is the previous year's wastage and leakage rate for that jurisdiction.
- For newly introduced vaccines, a baseline of 10% will be applied.
- All vaccines on the NIP provided to children are included. Those provided to other at-risk groups are excluded.
- The calculation includes an adjustment factor of 3% to account for under-reporting of immunisations to the Australian Immunisation Register.
- The calculation discounts vaccines lost to uncontrollable events such as natural disasters, power outages or refrigeration failures, as specified in reports by the relevant jurisdiction.
- Where a state or territory achieves a wastage and leakage rate of 5 per cent or lower, it will be deemed to have met the benchmark.
- A decrease in the wastage and leakage rate (or a result of less than 5%) must be achieved for both the previously assessed and newly introduced vaccine categories for this benchmark to be met.

Table 1: Definition of ‘fully immunised’ by age cohort, as at 1 April 2018

Age cohort	Vaccine
12 to <15 month age cohort	
DTP	Diphtheria dose 3 + Tetanus dose 3 + Pertussis dose 3
Polio	Polio dose 3
HIB	Haemophilus type B (Pathway B) dose 2 or Haemophilus type B (Pathway A) dose 3
HepB	Hepatitis dose 3
MMR	Not assessed
Pneumo	Pneumococcal dose 3
Fully Vaccinated	DTP + Polio + HIB + HepB + Pneumococcal (All previous doses are presumed as given)
Only those immunisation services a child has received up to 6 months of age are included in the report.	
24 to <27 month age cohort	
DTP	Diphtheria dose 4 + Tetanus dose 4 + Pertussis dose 4
Polio	Polio dose 3
HIB	Haemophilus type B (Pathway B) dose 3, or Haemophilus type B (Pathway B) dose 4, or Haemophilus type B (Pathway A) dose 4, or Haemophilus type B (Pathway A) dose 3 given greater than 11½ months of age
HepB	Hepatitis B dose 3
MMR	Measles dose 2 + Mumps dose 2 + Rubella dose 2
Varicella	Varicella dose 1
MenC	Meningococcal C dose 1 (given at 12 months in combination with Haemophilus influenzae type b (Hib-MenC))
Fully Vaccinated	DTP + Polio + HIB + HepB + MMR+ Varicella + MenC (All previous doses are presumed as given)
Only those immunisation services a child has received up to 24 months of age are included in the report.	
60 to <63 month age cohort	
DTP	Diphtheria dose 4 or 5 + Tetanus dose 4 or 5 + Pertussis dose 4 or 5
Polio	Polio dose 4
HIB	Not assessed
Hep B	Not assessed
MMR*	Not assessed
Fully Vaccinated	DTP + Polio
Only those immunisation services a child has received at the 4 year schedule point are included in the report.	
*From 31 December 2017, the definition of fully immunised changed for the 60-<63 month age cohort, with MMR no longer being assessed from this date.	

Source: Australian Immunisation Register.

2 Assessment against the benchmarks

This chapter presents the assessment of each state and territory's performance against the NPEV benchmarks included in this period, and achievement of the milestone requirement in the second year of the agreement. Summary tables containing data for each benchmark for all 8 jurisdictions are provided at Appendix B.

New South Wales

New South Wales met 4 of the 5 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 5 was not met, with an increase in the wastage and leakage rate for previously assessed vaccines.

Benchmark 1: Benchmark 1 was met, with a 0.84 percentage point increase in the vaccination coverage rate for 60–<63 month olds in NSW compared with the baseline (Table 2.1.1).

Table 2.1.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, New South Wales, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	93.63	94.47	0.84	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.1.2).

Table 2.1.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, New South Wales, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	12–<15 months	91.96	94.24	2.28	✓	YES
	24–<27 months	89.37	91.53	2.16	✓	
	60–<63 months	95.70	97.69	1.99	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.1.3).

Table 2.1.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, New South Wales, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	Boys	71.2	76.6	5.4	✓	YES
	Girls	77.9	80.6	2.7	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was not met, with an increase of 2.82 percentage points from baseline for previously assessed vaccines (Table 2.1.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.1.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, New South Wales, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
NSW	Previously assessed	6.30	9.12	2.82	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved, or if the wastage and leakage rate is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: NSW achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Victoria

Victoria met all 5 of the benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 1: Benchmark 1 was met, with an increase of 1.57 percentage points in the vaccination coverage rate for 60–<63 month olds in Victoria compared with the baseline (Table 2.2.1).

Table 2.2.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Victoria, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	93.94	95.51	1.57	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.2.2).

Table 2.2.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Victoria, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	12–<15 months	88.70	92.12	3.42	✓	YES
	24–<27 months	85.02	91.06	6.04	✓	
	60–<63 months	93.37	96.68	3.31	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.2.3).

Table 2.2.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Victoria, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	Boys	71.8	76.3	4.5	✓	YES
	Girls	75.9	79.6	3.7	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was met, with a wastage and leakage rate of less than 5% for previously assessed vaccines (Table 2.2.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.2.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Victoria, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
Vic.	Previously assessed	4.00	4.58	0.58	✓	✗	YES
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved, or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: Victoria achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Queensland

Queensland met all 5 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 1: Benchmark 1 was met, with an increase of 1.07 percentage points in the vaccination coverage rate for 60–<63 month olds in Queensland compared with the baseline (Table 2.3.1).

Table 2.3.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Queensland, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	93.40	94.47	1.07	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.3.2).

Table 2.3.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Queensland, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	12–<15 months	87.94	91.98	4.04	✓	YES
	24–<27 months	86.53	90.25	3.72	✓	
	60–<63 months	93.90	96.95	3.05	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.3.3).

Table 2.3.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Queensland, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	Boys	67.6	69.4	1.8	✓	YES
	Girls	72.9	73.5	0.6	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was met, with a wastage and leakage rate of less than 5% for previously assessed vaccines (Table 2.3.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.3.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Queensland, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
Qld	Previously assessed	4.69	3.21	–1.48	✓	✓	YES
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: Queensland achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Western Australia

Western Australia met all 5 benchmarks assessed in this reference period, and achieved the performance milestone.

Benchmark 1: Benchmark 1 was met, with an increase of 1.66 percentage points in the vaccination coverage rate for 60–<63 month olds in WA compared with the baseline (Table 2.4.1).

Table 2.4.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Western Australia, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	91.73	93.39	1.66	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.4.2).

Table 2.4.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Western Australia, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	12–<15 months	83.57	89.10	5.53	✓	YES
	24–<27 months	82.58	83.87	1.29	✓	
	60–<63 months	92.43	95.24	2.81	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.4.3).

Table 2.4.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Western Australia, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	Boys	69.4	74.4	5.0	✓	YES
	Girls	73.2	76.2	3.0	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was met, with a decrease of 2.79 percentage points from baseline for previously assessed vaccines (Table 2.4.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.4.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Western Australia, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
WA	Previously assessed	6.04	3.25	–2.79	✓	✓	YES
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: WA achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

South Australia

South Australia met 4 of the 5 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 5 was not met, with an increase in the wastage and leakage rate for previously assessed vaccines.

Benchmark 1: Benchmark 1 was met, with an increase of 1.52 percentage points in the vaccination coverage rate for 60–<63 month olds in SA compared with the baseline (Table 2.5.1).

Table 2.5.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, South Australia, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	93.06	94.58	1.52	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.5.2).

Table 2.5.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, South Australia, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	12–<15 months	89.57	89.98	0.41	✓	YES
	24–<27 months	84.96	87.29	2.33	✓	
	60–<63 months	92.83	95.65	2.82	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.5.3).

Table 2.5.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, South Australia, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	Boys	69.0	70.8	1.8	✓	YES
	Girls	73.8	74.6	0.8	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was not met, with an increase of 1.45 percentage points from baseline for previously assessed vaccines (Table 2.5.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.5.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, South Australia, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
SA	Previously assessed	4.22	5.67	1.45	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: SA achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Tasmania

Tasmania met 4 of the 5 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 5 was not met, with an increase in the wastage and leakage rate for previously assessed vaccines.

Benchmark 1: Benchmark 1 was met, with an increase of 1.04 percentage points in the vaccination coverage rate for 60–<63 month olds in Tasmania compared with the baseline (Table 2.6.1).

Table 2.6.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Tasmania, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	94.36	95.40	1.04	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.6.2).

Table 2.6.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Tasmania, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	12–<15 months	93.26	96.25	2.99	✓	YES
	24–<27 months	87.80	91.97	4.17	✓	
	60–<63 months	95.40	95.97	0.57	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.6.3).

Table 2.6.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Tasmania, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	Boys	64.4	73.4	9.0	✓	YES
	Girls	70.2	76.6	6.4	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was not met, with an increase of 2.87 percentage points from baseline for previously assessed vaccines (Table 2.6.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.6.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Tasmania, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
Tas.	Previously assessed	8.97	11.83	2.87	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: Tasmania achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Northern Territory

The Northern Territory met 4 of the 5 benchmarks assessed in this reference period, and achieved the performance milestone.

Benchmark 5 was not met, with an increase in the wastage and leakage rate for previously assessed vaccines.

Benchmark 1: Benchmark 1 was met, with an increase of 0.83 percentage points in the vaccination coverage rate for 60–<63 month olds in the NT compared with the baseline (Table 2.7.1).

Table 2.7.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Northern Territory, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	92.69	93.52	0.83	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.7.2).

Table 2.7.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Northern Territory, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	12–<15 months	91.76	93.54	1.78	✓	YES
	24–<27 months	85.40	87.94	2.54	✓	
	60–<63 months	94.12	94.17	0.05	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.7.3).

Table 2.7.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Northern Territory, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	Boys	65.4	68.0	2.6	✓	YES
	Girls	74.3	75.6	1.3	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was not met, with an increase of 7.34 percentage points from baseline for previously assessed vaccines (Table 2.7.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.7.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Northern Territory, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
NT	Previously assessed	6.46	13.79	7.34	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: NT achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Australian Capital Territory

The Australian Capital Territory met 4 of the 5 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 5 was not met, with an increase in the wastage and leakage rate for previously assessed vaccines.

Benchmark 1: Benchmark 1 was met, with an increase of 0.61 percentage points in the vaccination coverage rate for 60–<63 month olds in the ACT compared with the baseline (Table 2.8.1).

Table 2.8.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Australian Capital Territory, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	93.94	94.55	0.61	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 2: Benchmark 2 was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in all 3 age cohorts compared with the baseline (Table 2.8.2).

Table 2.8.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Australian Capital Territory, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	12–<15 months	92.86	96.79	3.93	✓	YES
	24–<27 months	83.45	90.80	7.35	✓	
	60–<63 months	92.04	98.62	6.58	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 3: Benchmark 3 was met, with increases in the HPV vaccination rate for both boys and girls compared with the baseline (Table 2.8.3).

Table 2.8.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Australian Capital Territory, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	Boys	69.1	76.1	7.0	✓	YES
	Girls	72.7	79.4	6.7	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both girls and boys.
2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Benchmark 4: The Department of Health delegate agreed that all jurisdictions be assessed as meeting Performance Benchmark 4 in full (see Summary for further information).

Benchmark 5: Benchmark 5 was not met, with an increase of 5.88 percentage points from baseline for previously assessed vaccines (Table 2.8.4). No new vaccines were included in the assessment for the 2018–19 reference period.

Table 2.8.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Australian Capital Territory, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	Result less than 5%	Decrease achieved	Benchmark met
ACT	Previously assessed	0.00*	5.88	5.88	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

* These results were less than zero when applying the methodology for calculation of performance against this Benchmark. Negative wastage and leakage results suggest that:

- (a) more vaccines were administered in the reference period than were sent to vaccination providers in the reference period (i.e. existing doses in vaccination provider fridges at the start of the period may have contributed to the number of vaccines administered in the period in addition to doses sent to vaccination providers in the period); and/or
- (b) the 3% adjustment factor applied in the methodology for calculation may overestimate the level of under-reporting of vaccinations to the AIR.

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Milestone: ACT achieved the milestone requirement, with annual schools HPV immunisation data for the 2018 school year being provided by 30 April 2019.

Appendix A: Detailed benchmark specifications

Table A1: Benchmark 1—An increase in vaccination coverage rates for 60–<63 month olds relative to the baseline

Measure	Change in the vaccination coverage rate for the 60–<63 month old cohort, calculated as the rate for the reference year minus the baseline rate.
Numerator	Number of children aged 60–<63 months in the reference period who are recorded as 'fully vaccinated' on the Australian Immunisation Register (AIR) in the reference period.
Denominator	Number of children aged 60–<63 months in the reference period who are registered on the AIR.
Calculation of assessment year rate	$100 \times (\text{numerator} \div \text{denominator})$
Calculation of baseline rate	For each reference period, the baseline is the average coverage rate for the previous 3 years, calculated as the sum of the coverage rates for the previous 3 years, divided by 3.
Reference period	12 months from 1 April to 31 March
Assessment criteria	<ul style="list-style-type: none"> • This benchmark will be deemed to have been met if there is an increase in the coverage rate compared with the baseline. • Where a state or territory has achieved a coverage rate of 95% or greater, they will only be required to maintain a coverage rate of at least 95%.
Data source and considerations	<ul style="list-style-type: none"> • Data are sourced from the AIR. • Baseline coverage is calculated using data for the period 1 April to 31 March and processed at 31 March. • A 3-month lag period is observed in the coverage assessment to allow for late notifications of immunisation to the AIR. • Data used for the coverage assessment are for the period 1 April to 31 March and processed at 30 June.
Other considerations	<ul style="list-style-type: none"> • Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. • As at 1 April 2018, 'fully immunised' at 60 months of age is defined as a child having a record on the AIR of dose 4 or 5 of a diphtheria (D), tetanus (T) and pertussis (P)-containing vaccine; and dose 4 of a polio containing vaccine. Note that from 31 December 2017, the definition of 'fully immunised' at 60–<63 months of age changed, with MMR no longer being assessed. • Where a new vaccine or program has been implemented within a reporting period, States may request a reanalysis of the data, further extending the allowable lag period by an additional three months.

Table A2: Benchmark 2—An increase in vaccination coverage rates for Aboriginal and Torres Strait Islander people in at least 2 of the following 3 cohorts, relative to the baseline: 12–<15 months; 24–<27 months; and 60–<63 months

Measure	Change in the vaccination coverage rate for each cohort, calculated as the rate for the reference year minus the baseline rate. Age cohorts for this benchmark are 12–<15 months, 24–<27 months and 60–<63 months.
Numerator	Number of children in the relevant age cohort in the reference period who are recorded as 'fully vaccinated' on the Australian Immunisation Register (AIR) in the reference period.
Denominator	Number of children in the relevant age cohort in the reference period who are registered on the AIR.
Calculation of assessment year rate	100 x (numerator ÷ denominator), for each age cohort
Calculation of baseline rate	For each reference period, the baseline is the lowest coverage rate from the previous 3 years, for the relevant age cohort.
Reference period	12 months from 1 April to 31 March
Assessment criteria	<ul style="list-style-type: none"> • This benchmark will be deemed to have been met if there is an increase in the coverage rate compared with the baseline for at least 2 of the 3 age cohorts. • Where a state or territory has achieved a coverage rate of 95% or greater for an age cohort, they will only be required to maintain a coverage rate of at least 95% for that cohort.
Data source and considerations	<ul style="list-style-type: none"> • Data are sourced from the AIR. • Baseline coverage is calculated using data for the period 1 April to 31 March and processed at 31 March. • A 3-month lag period is observed in the coverage assessment to allow for late notifications of immunisation to the AIR. • Data used for the coverage assessment are for the period 1 April to 31 March and processed at 30 June.
Other considerations	<ul style="list-style-type: none"> • Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. • As at 1 April 2018: <ul style="list-style-type: none"> ○ 'fully immunised' at 12 months of age is defined as a child having a record on the AIR of dose 3 of a DTP-containing vaccine; dose 3 of polio vaccine; dose 2 or 3 <i>Haemophilus influenzae</i> type b (Hib) containing vaccine depending on pathway; dose 3 of hepatitis B (hepB) vaccine; and dose 3 of 13-valent pneumococcal conjugate vaccine (13vPCV). ○ 'fully immunised' at 24 months of age is defined as a child having a record on the AIR of dose 4 of a DTP-containing vaccine; dose 3 of polio vaccine; dose 3 or 4 of Hib containing vaccine depending on pathway; dose 3 of hepatitis B vaccine; dose 2 of a measles, mumps and rubella-containing (MMR) vaccine; dose 1 of meningococcal C (MenC) vaccine; and dose 1 of varicella vaccine. ○ 'fully immunised' at 60 months of age is defined as a child having a record on the AIR of dose 4 or 5 of a DTP-containing vaccine; and dose 4 of a polio containing vaccine. Note that from 31 December 2017, the definition of 'fully immunised' at 60–<63 months of age changed, with MMR no longer being assessed. • Where a new vaccine or program has been implemented within a reporting period, States may request a reanalysis of the data, further extending the allowable lag period by an additional three months.

Table A3: Benchmark 3—An increase in the vaccination coverage rates for both adolescent boys and adolescent girls for HPV, relative to the baseline

Measure	<ul style="list-style-type: none"> Change in the HPV vaccination coverage rate for adolescent girls and for adolescent boys, calculated as the rate for the reference year minus the baseline rate.
Numerator	For boys and for girls, the number of adolescents aged 15 years in the reference period who are recorded as 'fully vaccinated' for HPV on the Australian Immunisation Register (AIR) in the reference period.
Denominator	For boys and for girls, the number of adolescents aged 15 years in the reference period who are registered on the AIR.
Calculation of assessment year rate	$100 \times (\text{numerator} \div \text{denominator})$, for boys and for girls.
Calculation of baseline rate	For each reference period, the baseline is the average coverage rate for the previous three years.
Reference period	12 months from 1 January to 31 December
Assessment criteria	<ul style="list-style-type: none"> This benchmark will be deemed to have been fully met if there is an increase in the coverage rate compared with the baseline for both boys and girls. The benchmark will be deemed to have been partly met if there is an increase in the coverage rate compared with the baseline for either boys or girls.
Data source and considerations	<ul style="list-style-type: none"> Data are sourced from the AIR. Baseline coverage is calculated using data for the period 1 January to 31 December and processed at 31 March. A 3-month lag period is observed in the coverage assessment to allow for late notifications of immunisation to the AIR. Data used for the coverage assessment are for the period 1 January to 31 December and processed at 31 March.
Other considerations	<ul style="list-style-type: none"> Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. As at 1 April 2018, 'fully immunised' for HPV is defined as a child having a record on the AIR of either 2 or 3 doses (depending on age) of HPV-containing vaccine. Where a new vaccine or program has been implemented within a reporting period, States may request a reanalysis of the data, further extending the allowable lag period by an additional three months.

Table A4: Benchmark 4—An increase in vaccination coverage rates for 60–<63 month olds in 4 of the 10 lowest vaccination coverage SA3 geographical areas, relative to the baseline

Measure	<ul style="list-style-type: none"> Change in the vaccination coverage rate for the 60–<63 month old cohort in each selected SA3 geographic area, calculated as the rate for the reference year minus the baseline rate. Jurisdictions will notify the Commonwealth by August of each reference year of the 4 nominated SA3 geographic areas to be targeted.
Numerator	For each SA3 geographic area, the number of resident children aged 60–<63 months in the reference period who are recorded as 'fully vaccinated' on the Australian Immunisation Register (AIR) in the reference period.
Denominator	For each geographic area, the number of resident children aged 60–<63 months in the reference period who are registered on the AIR.
Calculation of assessment year rate	100 x (numerator ÷ denominator), for each geographic area.
Calculation of baseline rate	For each reference period, the baseline is the coverage rate for the previous 12 month period.
Reference period	12 months from 1 April to 31 March
Assessment criteria	<ul style="list-style-type: none"> This benchmark will be deemed to have been fully met if there is an increase in the coverage rate compared with the baseline for all of the selected geographic areas. The benchmark will be deemed to have been partly met if there is an increase in the coverage rate compared with the baseline for some of the selected geographic areas. Where a state or territory has achieved a coverage rate of at least 95% in all SA3 geographical areas, this benchmark is deemed to have been met.
Data source and considerations	<ul style="list-style-type: none"> Data are sourced from the AIR. Baseline coverage is calculated using data for the period 1 April to 31 March and processed at 31 March. A 3-month lag period is observed in the coverage assessment to allow for late notifications of immunisation to the AIR. Data used for the coverage assessment are for the period 1 April to 31 March and processed at 30 June.
Other considerations	<ul style="list-style-type: none"> For the purposes of this benchmark, a geographic area of low coverage is included if it is in the 10 lowest SA3 geographic areas with coverage below 95% in the relevant jurisdiction. Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. As at 1 April 2018, 'fully immunised' at 60 months of age is defined as a child having a record on the AIR of dose 4 or 5 of a DTP-containing vaccine; and dose 4 of a polio containing vaccine. Note that from 31 December 2017, the definition of 'fully immunised' at 60–<63 months of age changed, with MMR no longer being assessed. Where a new vaccine or program has been implemented within a reporting period, States may request a reanalysis of the data, further extending the allowable lag period by an additional three months.

Table A5: Benchmark 5—An annual decrease in the wastage and leakage rate for agreed vaccines, relative to the baseline

Measure	Change in the wastage and leakage rate for NIP vaccines provided to children, calculated as the rate for the reference year minus the baseline rate.
Numerator	<p>Number of NIP vaccines lost to wastage and leakage in the reference period, calculated as $A - (B \times 1.03) - C$ where:</p> <p>A = number of vaccines distributed to providers in the reference period</p> <p>B = number of vaccines reported as given to children under 10 years of age during the reference period</p> <p>C = number of vaccines reported as wasted due to unavoidable circumstances during the reference period</p>
Denominator	Number of vaccines distributed to providers in the reference period.
Calculation of assessment year rate	$100 \times (\text{numerator} \div \text{denominator})$
Calculation of baseline rate	<p>For each reference period, the baseline is the wastage and leakage rate for the previous 12 month period.</p> <p>For newly introduced vaccines, a baseline of 10% will be applied.</p>
Reference period	12 months from 1 April to 31 March
Assessment criteria	<p>This benchmark will be deemed to have been met if there is a decrease in the wastage and leakage rate compared with the baseline.</p> <p>Where a state or territory has achieved a wastage and leakage rate of 5% or lower, this benchmark will be deemed to have been met.</p>
Data source and considerations	<p>Data are sourced from States and Territories and from the Australian Immunisation Register (AIR).</p> <ul style="list-style-type: none"> • Baseline coverage is calculated using data for the period 1 April to 31 March and processed at 31 March. • A 3-month lag period is observed in the assessment to allow for late notifications of immunisation to the AIR. • Data used for the coverage assessment are for the period 1 April to 31 March and processed at 30 June.
Other considerations	<ul style="list-style-type: none"> • The wastage and leakage calculation includes an adjustment factor of 3% to account for under-reporting of immunisations to the AIR. • The wastage and leakage calculation discounts vaccines lost due to uncontrollable events such as natural disasters, power outages or refrigeration failures. States must provide reports that outline any known wastage that has occurred due to such events. • Where a new vaccine is added to the NIP for children only, a baseline of 10% wastage and leakage will be applied. • Where a new vaccine or program has been implemented within a reporting period, States may request a reanalysis of the data, further extending the allowable lag period by an additional three months. • The following vaccines are in scope of the second year of assessment: <ul style="list-style-type: none"> ○ Infanrix Hexa (DTPa-hepB-IPV-Hib) – previously assessed ○ Infanrix (DTPa) – previously assessed ○ Tripacel (DTPa) – previously assessed ○ ProQuad (MMRV) – previously assessed ○ Priorix-Tetra (MMRV) – previously assessed ○ Infanrix IPV (DTPa-IPV) – previously assessed ○ Quadracel (DTPa-IPV) – previously assessed ○ Rotarix (Rotavirus) – previously assessed ○ Prevenar 13 (Pneumococcal) – previously assessed ○ Vaxta Paediatric (HepA) – previously assessed (NT, Qld, SA, WA only)

Appendix B: Summary of performance assessment data, by benchmark

Table B1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, by state and territory, 2018–19

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	93.63	94.47	0.84	✓	YES
Vic.	93.94	95.51	1.57	✓	YES
Qld	93.40	94.47	1.07	✓	YES
WA	91.73	93.39	1.66	✓	YES
SA	93.06	94.58	1.52	✓	YES
Tas.	94.36	95.40	1.04	✓	YES
NT	92.69	93.52	0.83	✓	YES
ACT	93.94	94.55	0.61	✓	YES

Notes

1. This benchmark is deemed to have been met if an increase in the coverage rate is achieved.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Table B2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, by state and territory, 2018–19

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	12–<15 months	91.96	94.24	2.28	✓	YES
	24–<27 months	89.37	91.53	2.16	✓	
	60–<63 months	95.70	97.69	1.99	✓	
Vic.	12–<15 months	88.70	92.12	3.42	✓	YES
	24–<27 months	85.02	91.06	6.04	✓	
	60–<63 months	93.37	96.68	3.31	✓	
Qld	12–<15 months	87.94	91.98	4.04	✓	YES
	24–<27 months	86.53	90.25	3.72	✓	
	60–<63 months	93.90	96.95	3.05	✓	
WA	12–<15 months	83.57	89.10	5.53	✓	YES
	24–<27 months	82.58	83.87	1.29	✓	
	60–<63 months	92.43	95.24	2.81	✓	
SA	12–<15 months	89.57	89.98	0.41	✓	YES
	24–<27 months	84.96	87.29	2.33	✓	
	60–<63 months	92.83	95.65	2.82	✓	
Tas.	12–<15 months	93.26	96.25	2.99	✓	YES
	24–<27 months	87.80	91.97	4.17	✓	
	60–<63 months	95.40	95.97	0.57	✓	
NT	12–<15 months	91.76	93.54	1.78	✓	YES
	24–<27 months	85.40	87.94	2.54	✓	
	60–<63 months	94.12	94.17	0.05	✓	
ACT	12–<15 months	92.86	96.79	3.93	✓	YES
	24–<27 months	83.45	90.80	7.35	✓	
	60–<63 months	92.04	98.62	6.58	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in at least 2 of the 3 age cohorts.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with data processed at 30 June 2019.

Source: AIHW analysis of AIR data supplied by the Department of Health.

Table B3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, by state and territory, 2018

Jurisdiction	Sex	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	Boys	71.2	76.6	5.4	✓	YES
	Girls	77.9	80.6	2.7	✓	
Vic.	Boys	71.8	76.3	4.5	✓	YES
	Girls	75.9	79.6	3.7	✓	
Qld	Boys	67.6	69.4	1.8	✓	YES
	Girls	72.9	73.5	0.6	✓	
WA	Boys	69.4	74.4	5.0	✓	YES
	Girls	73.2	76.2	3.0	✓	
SA	Boys	69.0	70.8	1.8	✓	YES
	Girls	73.8	74.6	0.8	✓	
Tas.	Boys	64.4	73.4	9.0	✓	YES
	Girls	70.2	76.6	6.4	✓	
NT	Boys	65.4	68.0	2.6	✓	YES
	Girls	74.3	75.6	1.3	✓	
ACT	Boys	69.1	76.1	7.0	✓	YES
	Girls	72.7	79.4	6.7	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved for both boys and girls.
 2. The reference period for this benchmark is 1 January 2018 to 31 December 2018, with data processed at 31 March 2019.
- Source:* AIHW analysis of AIR data supplied by the Department of Health.

Table B4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, by state and territory, 2018–19

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2018–19 result less than 5%	Decrease achieved	Benchmark met
NSW	Previously assessed	6.30	9.12	2.82	✗	✗	NO
	Newly assessed	10.00	..	..	..	..
Vic.	Previously assessed	4.00	4.58	0.58	✓	✗	YES
	Newly assessed	10.00	..	..	..	..
Qld	Previously assessed	4.69	3.21	–1.48	✓	✓	YES
	Newly assessed	10.00	..	..	..	..
WA	Previously assessed	6.04	3.25	–2.79	✓	✓	YES
	Newly assessed	10.00	..	..	..	..
SA	Previously assessed	4.22	5.67	1.45	✗	✗	NO
	Newly assessed	10.00	..	..	..	..
Tas.	Previously assessed	8.97	11.83	2.87	✗	✗	NO
	Newly assessed	10.00	..	..	..	..
NT	Previously assessed	6.46	13.79	7.34	✗	✗	NO
	Newly assessed	10.00	..	..	..	..
ACT	Previously assessed	0.00*	5.88	5.88	✗	✗	NO
	Newly assessed	10.00	..	..	..	..

* The baseline results were less than zero when applying the methodology for calculation of performance against this Benchmark. Negative wastage and leakage results suggest that:

(a) more vaccines were administered in the reference period than were sent to vaccination providers in the reference period (i.e. existing doses in vaccination provider fridges at the start of the period may have contributed to the number of vaccines administered in the period in addition to doses sent to vaccination providers in the period); and/or

(b) the 3% adjustment factor applied in the methodology for calculation may overestimate the level of under-reporting of vaccinations to the AIR.

Notes

1. This benchmark is deemed to have been met if, for both vaccine status categories, a decrease in the wastage and leakage rate is achieved or if the wastage and leakage rates is less than 5%. No newly assessed vaccines were included in the assessment for the 2018–19 reference period.
2. The reference period for this benchmark is 1 April 2018 to 31 March 2019, with AIR data processed at 30 June 2019.

Source: AIHW analysis of wastage and leakage data supplied by the states and territories, and AIR data supplied by the Department of Health.

Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
AIR	Australian Immunisation Register
DTP	diphtheria—tetanus—pertussis
HepB	hepatitis B
HIB	<i>haemophilus influenzae</i> type b
HPV	human papillomavirus
MenC	meningococcal serogroup C
MMR	measles—mumps—rubella
NIP	National Immunisation Program
NPEV	National Partnership on Essential Vaccines
NSW	New South Wales
NT	Northern Territory
Pneumo	pneumococcal
Qld	Queensland
SA	South Australia
SA3	Statistical Area 3 as per Australian Statistical Geography Standard 2011
Tas.	Tasmania
Vic.	Victoria
WA	Western Australia

List of tables

Table 1: Definition of 'fully immunised' by age cohort, as at 1 April 2018	4
Table 2.1.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, New South Wales, 2018–19	5
Table 2.1.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, New South Wales, 2018–19	5
Table 2.1.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, New South Wales, 2018	6
Table 2.1.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, New South Wales, 2018–19	6
Table 2.2.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Victoria, 2018–19	7
Table 2.2.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Victoria, 2018–19	7
Table 2.2.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Victoria, 2018	8
Table 2.2.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Victoria, 2018–19	8
Table 2.3.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Queensland, 2018–19	9
Table 2.3.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Queensland, 2018–19	9
Table 2.3.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Queensland, 2018	10
Table 2.3.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Queensland, 2018–19	10
Table 2.4.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Western Australia, 2018–19	11
Table 2.4.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Western Australia, 2018–19	11
Table 2.4.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Western Australia, 2018	12
Table 2.4.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Western Australia, 2018–19	12
Table 2.5.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, South Australia, 2018–19	13
Table 2.5.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, South Australia, 2018–19	13
Table 2.5.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, South Australia, 2018	14
Table 2.5.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, South Australia, 2018–19	14

Table 2.6.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Tasmania, 2018–19	15
Table 2.6.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Tasmania, 2018–19	15
Table 2.6.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Tasmania, 2018	16
Table 2.6.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Tasmania, 2018–19	16
Table 2.7.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Northern Territory, 2018–19.....	17
Table 2.7.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Northern Territory, 2018–19.....	17
Table 2.7.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Northern Territory, 2018.....	18
Table 2.7.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Northern Territory, 2018–19.....	18
Table 2.8.1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, Australian Capital Territory, 2018–19	19
Table 2.8.2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, Australian Capital Territory, 2018–19	19
Table 2.8.3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, Australian Capital Territory, 2018	20
Table 2.8.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Australian Capital Territory, 2018–19	20
Table A1: Benchmark 1—An increase in vaccination coverage rates for 60–<63 month olds relative to the baseline	21
Table A2: Benchmark 2—An increase in vaccination coverage rates for Aboriginal and Torres Strait Islander people in at least 2 of the following 3 cohorts, relative to the baseline: 12–<15 months; 24–<27 months; and 60–<63 months	22
Table A3: Benchmark 3—An increase in the vaccination coverage rates for both adolescent boys and adolescent girls for HPV, relative to the baseline	23
Table A4: Benchmark 4—An increase in vaccination coverage rates for 60–<63 month olds in 4 of the 10 lowest vaccination coverage SA3 geographical areas, relative to the baseline	24
Table A5: Benchmark 5—An annual decrease in the wastage and leakage rate for agreed vaccines, relative to the baseline	25
Table B1: Assessment against NPEV Benchmark 1—increasing vaccination coverage for 60–<63 month olds, by state and territory, 2018–19	26
Table B2: Assessment against NPEV Benchmark 2—increasing vaccination coverage for Aboriginal and Torres Strait Islander people, by state and territory, 2018–19	27
Table B3: Assessment against NPEV Benchmark 3—increasing HPV vaccination coverage for adolescent boys and girls, by state and territory, 2018	28
Table B4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, by state and territory, 2018–19	29

Related publications

This report, *National Partnership Agreement on Essential Vaccines: performance report 2018–19*, is part of an annual series. The earlier edition and any published subsequently can be downloaded for free from the AIHW website <https://www.aihw.gov.au/reports-data/health-welfare-services/immunisation/reports>. The website also includes information on ordering printed copies.

The following AIHW publications relating to immunisation might also be of interest:

- AIHW 2018. Immunisation rates for children in 2016–17. Cat. no. HPF 16. Canberra: AIHW.
- AIHW 2018. HPV immunisation rates in 2015–16. Cat. no. HPF 17. Canberra: AIHW.
- AIHW 2018. Vaccine-preventable diseases (fact sheet set). Cat. no. PHE 236. Canberra: AIHW.
- AIHW 2019. The burden of vaccine preventable diseases in Australia. Cat. no. PHE 263. Canberra: AIHW.



This report provides an assessment of state and territory performance against the performance benchmarks outlined in the National Partnership on Essential Vaccines, for the assessment period 1 April 2018 to 31 March 2019. The report shows that 3 jurisdictions met all 5 benchmarks, with the other jurisdictions each meeting 4 of the 5 benchmarks.

aihw.gov.au



Stronger evidence,
better decisions,
improved health and welfare

