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National Partnership on Essential Vaccines: performance report

2017–18

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National Partnership on Essential Vaccines

Performance report

2017–18

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Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Tel: (02) 6244 1000
Email: info@aihw.gov.au

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Summary

This report provides an assessment of state and territory performance against 4 of the 5 performance benchmarks outlined in the National Partnership on Essential Vaccines (NPEV), for the first year of the agreement covering the assessment period 1 April 2017 to 31 March 2018.

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
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.

The remaining benchmark, an increase in the vaccination coverage rate for both adolescent boys and adolescent girls for human papillomavirus relative to the baseline, was not assessed in this period due to the ongoing transition of data from the HPV Register into the Australian Immunisation Register. This benchmark will first be assessed in the second year of the agreement.

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 NPEV Agreement. For the first year of the Agreement, all states and territories achieved this milestone.

In relation to the 4 benchmarks assessed for the period 1 April 2017 to 31 March 2018:

- New South Wales met all 4 benchmarks
- Victoria met all 4 benchmarks
- Queensland met all 4 benchmarks
- Western Australia met all 4 benchmarks
- South Australia met 3 of the 4 benchmarks (with benchmark 4 being partly met)
- Tasmania met 3 of the 4 benchmarks (with benchmark 5 not being met)
- The Northern Territory met all 4 benchmarks
- The Australian Capital Territory met all 4 benchmarks.

1 Introduction

This report assesses the performance of state and territory governments against the benchmarks set out in the National Partnership on Essential Vaccines (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)' (the full Agreement is available at http://www.federalfinancialrelations.gov.au/content/npa/health/national-partnership/Signed_NPA_-_essential_vaccines.pdf).

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:

1. minimise the incidence of vaccine preventable diseases in the eligible Australian population for diseases with vaccines listed under the NIP
2. minimise the incidence of vaccine preventable diseases in Aboriginal and Torres Strait Islander people for diseases with vaccines listed under the NIP
3. minimise the incidence of human papillomavirus (HPV) in the eligible Australian population
4. ensure that Australian HPV immunisation data is provided to the Commonwealth annually
5. minimise the incidence of vaccine preventable diseases in the eligible Australian population in geographic areas of low coverage
6. 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 first year of the Agreement. That assessment is contained in this report.

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 2017 school year, assessment of whether the states and territories achieved this milestone was undertaken by the Department of Health. Information on this milestone is also included in this report.

Assessing performance

Schedule C of the Agreement 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 2017 to 31 March 2018) 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.

At the time of preparing this report, baseline and assessment data for Benchmark 3 were not available, due to the ongoing transition of HPV data from the HPV Register into the Australian Immunisation Register. Consequently, this benchmark was not assessed in the first year of the agreement. No data for Benchmark 3 are included in this report.

Benchmark 4: An increase in vaccination coverage in low coverage areas

- 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 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 2017

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	Measles dose 2 + Mumps dose 2 + Rubella dose 2*
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 NPEV Benchmarks 1, 2, 4 and 5, and achievement of the milestone requirement in the first 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 all 4 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 1: Was met, with a 1.08 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	93.08	94.16	1.08	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	12–<15 months	89.41	94.67	5.26	✓	
	24–<27 months	89.37	90.97	1.60	✓	YES
	60–<63 months	95.13	97.11	1.98	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in each of the 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.1.3).

Table 2.1.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, New South Wales, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	Eastern Suburbs - North	84.80	87.63	2.83	✓	YES
	Sydney Inner City	87.15	89.72	2.57	✓	
	North Sydney – Mosman	87.92	89.30	1.38	✓	
	Manly	88.78	90.15	1.37	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with decreases from baseline achieved for both previously assessed and newly assessed vaccines (Table 2.1.4).

Table 2.1.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, New South Wales, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
NSW	Previously assessed	5.52	5.51	–0.01	×	✓	YES
	Newly assessed	10.00	6.69	–3.31	×	✓	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

Victoria

Victoria met all 4 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 1: Was met, with an increase of 1.71 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	93.11	94.82	1.71	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	12–<15 months	86.19	92.43	6.24	✓	
	24–<27 months	85.02	86.77	1.75	✓	YES
	60–<63 months	91.04	96.28	5.24	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.2.3).

Table 2.2.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Victoria, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Vic.	Melbourne City	83.43	88.51	5.08	✓	YES
	Stonnington – West	86.99	89.85	2.86	✓	
	Port Phillip	88.26	91.13	2.87	✓	
	Maribyrnong	92.14	94.55	2.41	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with decreases from baseline achieved for both previously assessed and newly assessed vaccines (Table 2.2.4).

Table 2.2.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Victoria, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
Vic.	Previously assessed	4.19	3.34	–0.85	✓	✓	YES
	Newly assessed	10.00	4.30	–5.70	✓	✓	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

Queensland

Queensland met all 4 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 1: Was met, with an increase of 1.33 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	92.77	94.10	1.33	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	12–<15 months	86.28	92.07	5.79	✓	
	24–<27 months	86.53	88.73	2.20	✓	YES
	60–<63 months	93.23	97.00	3.77	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.3.3).

Table 2.3.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Queensland, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Qld	Beaudesert	79.37	89.70	10.33	✓	YES
	Gold Coast Hinterland	83.49	89.85	6.36	✓	
	Bribie – Beachmere	90.03	95.44	5.41	✓	
	Southport	90.38	92.09	1.71	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with a wastage and leakage rate of less than 5% for previously assessed vaccines, and a decrease from baseline for newly assessed vaccines (Table 2.3.4).

Table 2.3.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Queensland, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
Qld	Previously assessed	1.31	3.71	2.40	✓	×	YES
	Newly assessed	10.00	5.14	–4.86	×	✓	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

Western Australia

Western Australia met all 4 benchmarks assessed in this reference period, and achieved the performance milestone.

Benchmark 1: Was met, with an increase of 1.40 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	91.06	92.46	1.40	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 2: Was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in the 12–<15 month and 60–<63 month old 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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	12–<15 months	83.57	87.70	4.13	✓	YES
	24–<27 months	83.76	82.98	–0.78	×	
	60–<63 months	92.33	95.86	3.53	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.4.3).

Table 2.4.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Western Australia, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
WA	Fremantle	84.01	89.22	5.21	✓	YES
	Cottesloe – Claremont	87.22	90.78	3.56	✓	
	Manjimup	89.76	93.93	4.17	✓	
	Melville	90.20	91.13	0.93	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with decreases from baseline achieved for both previously assessed and newly assessed vaccines (Table 2.4.4).

Table 2.4.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Western Australia, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
WA	Previously assessed	4.36	3.64	–0.72	✓	✓	YES
	Newly assessed	10.00	7.08	–2.92	×	✓	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

South Australia

South Australia met 3 of the 4 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 4 was met for 3 of the 4 selected geographic areas.

Benchmark 1: Was met, with an increase of 1.95 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	91.98	93.93	1.95	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	12–<15 months	86.89	89.64	2.75	✓	
	24–<27 months	84.10	87.12	3.02	✓	YES
	60–<63 months	88.90	95.94	7.04	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was partly met, with increases in 3 of the 4 nominated low coverage SA3 geographic areas compared with the baseline, and a decrease of 0.31 percentage points in the remaining SA3 (Table 2.5.3).

Table 2.5.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, South Australia, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
SA	West Torrens	90.95	92.39	1.44	✓	PARTLY (3 of 4 areas)
	Unley	91.12	93.20	2.08	✓	
	Norwood – Payneham – St Peters	91.82	92.58	0.76	✓	
	Campbelltown (SA)	92.62	92.32	–0.30	×	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with a wastage and leakage rate of less than 5% for previously assessed vaccines, and a decrease from baseline for newly assessed vaccines (Table 2.5.4).

Table 2.5.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, South Australia, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
SA	Previously assessed	2.80	3.41	0.61	✓	×	YES
	Newly assessed	10.00	4.59	–5.41	✓	✓	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

Tasmania

Tasmania met 3 of the 4 benchmarks assessed in this reference period, and achieved the milestone requirement.

Benchmark 5 was not met, with increases in the wastage and leakage rate for both of the 2 vaccine status categories.

Benchmark 1: Was met, with an increase of 1.89 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	93.31	95.20	1.89	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	12–<15 months	86.67	93.64	6.97	✓	
	24–<27 months	86.61	89.66	3.05	✓	YES
	60–<63 months	90.95	97.15	6.20	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.6.3).

Table 2.6.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Tasmania, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
Tas.	Huon – Bruny Island	88.89	94.30	5.41	✓	YES
	Central Highlands (Tas)	90.00	97.58	7.58	✓	
	North East	93.78	96.53	2.75	✓	
	Hobart – North West	94.59	95.65	1.06	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was not met, with a wastage and leakage rate for newly assessed vaccines of more than 13%, and an increase to just over 7% for previously assessed vaccines (Table 2.6.4).

Table 2.6.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Tasmania, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
Tas.	Previously assessed	4.74	7.27	2.53	×	×	NO
	Newly assessed	10.00	13.53	3.53	×	×	

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

Northern Territory

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

Benchmark 1: Was met, with an increase of 1.05 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	92.25	93.30	1.05	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 2: Was met, with increases in the vaccination coverage rates for Aboriginal and Torres Strait Islander children in the 12–<15 month and 60–<63 month 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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	12–<15 months	87.24	92.33	5.09	✓	YES
	24–<27 months	86.51	84.82	–1.69	×	
	60–<63 months	94.17	94.54	0.37	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.7.3).

Table 2.7.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Northern Territory, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NT	Litchfield	92.07	97.50	5.43	✓	YES
	Darwin Suburbs	92.33	92.53	0.20	✓	
	Palmerston	92.44	93.83	1.39	✓	
	Katherine	92.96	96.23	3.27	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with decreases from baseline achieved for both previously assessed and newly assessed vaccines (Table 2.7.4).

Table 2.7.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Northern Territory, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
NT	Previously assessed*	7.42	4.81	–2.61	✓	✓	YES
	Newly assessed	10.00	9.32	–0.68	×	✓	

* Due to a change in the Northern Territory's immunisation program schedule during the 2017-18 assessment period, the Northern Territory has not been assessed against Menitorix in 2017–18.

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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 requirements, with annual schools HPV immunisation data for the 2017 school year being provided by 30 April 2018.

Australian Capital Territory

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

Benchmark 1: Was met, with an increase of 1.16 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	93.57	94.73	1.16	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	12–<15 months	92.86	93.68	0.82	✓	
	24–<27 months	83.45	91.78	8.33	✓	YES
	60–<63 months	92.04	95.83	3.79	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Benchmark 4: Was met, with increases in all 4 of the nominated low coverage SA3 geographic areas compared with the baseline (Table 2.8.3).

Table 2.8.3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, Australian Capital Territory, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
ACT	South Canberra	88.89	92.05	3.16	✓	YES
	Belconnen	93.54	95.10	1.56	✓	
	Weston Creek	94.23	96.35	2.12	✓	
	Tuggeranong	94.30	96.78	2.48	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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

Benchmark 5: Was met, with decreases from baseline achieved for both previously assessed and newly assessed vaccines (Table 2.8.4).

Table 2.8.4: Assessment against NPEV Benchmark 5—decreasing wastage and leakage rates, Australian Capital Territory, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	Result less than 5%	Decrease achieved	Benchmark met
ACT	Previously assessed	2.67	0.00*	–2.67	✓	✓	YES
	Newly assessed	10.00	0.00*	–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:

- 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
- 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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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 2017 school year being provided by 30 April 2018.

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 x (numerator ÷ 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	• 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	• 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	• Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. • As at 1 April 2017, '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; dose 4 of a polio containing vaccine; and dose 2 of a measles (M), mumps (M) and rubella (R)-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	• 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	• 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	• Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. • As at 1 April 2017: o '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 *Haemophilus influenzae* 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). o '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. o '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; dose 4 of a polio containing vaccine; and dose 2 of a measles (M), mumps (M) and rubella (R)-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 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	• 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	• 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	• 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	• 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%. • Should the definition of 'fully immunised' change, the baseline may be reset following an independent review by an external body. • As at 1 April 2017, '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; dose 4 of a polio containing vaccine; and dose 2 of a measles (M), mumps (M) and rubella (R)-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 A4: 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	Number of NIP vaccines lost to wastage and leakage in the reference period, calculated as A – (B x 1.03) – C where: A = number of vaccines distributed to providers in the reference period B = number of vaccines reported as given to children under 10 years of age during the reference period C = number of vaccines reported as wasted due to unavoidable circumstances during the reference period
Denominator	Number of vaccines distributed to providers in the reference period.
Calculation of assessment year rate	100 x (numerator ÷ denominator)
Calculation of baseline rate	For each reference period, the baseline is the wastage and leakage rate for the previous 12 month period. For newly introduced vaccines, a baseline of 10% will be applied.
Reference period	12 months from 1 April to 31 March
Assessment criteria	This benchmark will be deemed to have been met if there is a decrease in the wastage and leakage rate compared with the baseline. 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.
Data source and considerations	Data are sourced from States and Territories and from the Australian Immunisation Register (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 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	• 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 first year of assessment: o Infanrix Hexa (DTPa-hepB-IPV-Hib) – previously assessed o Menitorix (Hib-MenC) – previously assessed (excluding NT) o Infanrix (DTPa) – newly assessed o Tripacel (DTPa) – newly assessed o ProQuad (MMRV) – newly assessed o Priorix-Tetra (MMRV) – newly assessed o Infanrix IPV (DTPa-IPV) – newly assessed o Quadracel (DTPa-IPV) – newly assessed o Rotarix (Rotavirus) – newly assessed o Rotateq (Rotavirus) – newly assessed (Qld, SA, Vic, WA only) o Prevenar 13 (Pneumococcal) – newly assessed o Vaqta Paediatric (HepA) – newly 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, 2017–18

Jurisdiction	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	93.08	94.16	1.08	✓	YES
Vic.	93.11	94.82	1.71	✓	YES
Qld	92.77	94.10	1.33	✓	YES
WA	91.06	92.46	1.40	✓	YES
SA	91.98	93.93	1.95	✓	YES
Tas.	93.31	95.20	1.89	✓	YES
NT	92.25	93.30	1.05	✓	YES
ACT	93.57	94.73	1.16	✓	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 2017 to 31 March 2018, with data processed at 30 June 2018.

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, 2017–18

Jurisdiction	Cohort	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	12–<15 months	89.41	94.67	5.26	✓	
	24–<27 months	89.37	90.97	1.60	✓	YES
	60–<63 months	95.13	97.11	1.98	✓	
Vic.	12–<15 months	86.19	92.43	6.24	✓	
	24–<27 months	85.02	86.77	1.75	✓	YES
	60–<63 months	91.04	96.28	5.24	✓	
Qld	12–<15 months	86.28	92.07	5.79	✓	
	24–<27 months	86.53	88.73	2.20	✓	YES
	60–<63 months	93.23	97.00	3.77	✓	
WA	12–<15 months	83.57	87.70	4.13	✓	
	24–<27 months	83.76	82.98	–0.78	×	YES
	60–<63 months	92.33	95.86	3.53	✓	
SA	12–<15 months	86.89	89.64	2.75	✓	
	24–<27 months	84.10	87.12	3.02	✓	YES
	60–<63 months	88.90	95.94	7.04	✓	
Tas.	12–<15 months	86.67	93.64	6.97	✓	
	24–<27 months	86.61	89.66	3.05	✓	YES
	60–<63 months	90.95	97.15	6.20	✓	
NT	12–<15 months	87.24	92.33	5.09	✓	
	24–<27 months	86.51	84.82	–1.69	×	YES
	60–<63 months	94.17	94.54	0.37	✓	
ACT	12–<15 months	92.86	93.68	0.82	✓	
	24–<27 months	83.45	91.78	8.33	✓	YES
	60–<63 months	92.04	95.83	3.79	✓	

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 2017 to 31 March 2018, with data processed at 30 June 2018.

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

Table B3: Assessment against NPEV Benchmark 4—increasing vaccination coverage for 60–<63 month olds in low coverage areas, by state and territory, 2017–18

Jurisdiction	SA3	Baseline (%)	Result (%)	Change (percentage points)	Increase achieved	Benchmark met
NSW	Eastern Suburbs - North	84.80	87.63	2.83	✓	YES
	Sydney Inner City	87.15	89.72	2.57	✓	
	North Sydney – Mosman	87.92	89.30	1.38	✓	
	Manly	88.78	90.15	1.37	✓	
Vic.	Melbourne City	83.43	88.51	5.08	✓	YES
	Stonnington – West	86.99	89.85	2.86	✓	
	Port Phillip	88.26	91.13	2.87	✓	
	Maribyrnong	92.14	94.55	2.41	✓	
Qld	Beaudesert	79.37	89.70	10.33	✓	YES
	Gold Coast Hinterland	83.49	89.85	6.36	✓	
	Bribie – Beachmere	90.03	95.44	5.41	✓	
	Southport	90.38	92.09	1.71	✓	
WA	Fremantle	84.01	89.22	5.21	✓	YES
	Cottesloe – Claremont	87.22	90.78	3.56	✓	
	Manjimup	89.76	93.93	4.17	✓	
	Melville	90.20	91.13	0.93	✓	
SA	West Torrens	90.95	92.39	1.44	✓	PARTIALLY
	Unley	91.12	93.20	2.08	✓	
	Norwood – Payneham – St Peters	91.82	92.58	0.76	✓	
	Campbelltown (SA)	92.62	92.32	–0.30	×	
Tas.	Huon – Bruny Island	88.89	94.30	5.41	✓	YES
	Central Highlands (Tas)	90.00	97.58	7.58	✓	
	North East	93.78	96.53	2.75	✓	
	Hobart – North West	94.59	95.65	1.06	✓	
NT	Litchfield	92.07	97.50	5.43	✓	YES
	Darwin Suburbs	92.33	92.53	0.20	✓	
	Palmerston	92.44	93.83	1.39	✓	
	Katherine	92.96	96.23	3.27	✓	
ACT	South Canberra	88.89	92.05	3.16	✓	YES
	Belconnen	93.54	95.10	1.56	✓	
	Weston Creek	94.23	96.35	2.12	✓	
	Tuggeranong	94.30	96.78	2.48	✓	

Notes

1. This benchmark is deemed to have been met if increases in coverage are achieved in all 4 selected SA3s.
2. The reference period for this benchmark is 1 April 2017 to 31 March 2018, with data processed at 30 June 2018.
3. When assessing coverage of geographic areas with low numbers of children, small changes in the number of children being counted can impact coverage rates.

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, 2017–18

Jurisdiction	Vaccine status	Baseline (%)	Result (%)	Change (percentage points)	2017–18 result less than 5%	Decrease achieved	Benchmark met
NSW	Previously assessed	5.52	5.51	–0.01	×	✓	YES
	Newly assessed	10.00	6.69	–3.31	×	✓	
Vic.	Previously assessed	4.19	3.34	–0.85	✓	✓	YES
	Newly assessed	10.00	4.30	–5.70	✓	✓	
Qld	Previously assessed	1.31	3.71	2.40	✓	×	YES
	Newly assessed	10.00	5.14	–4.86	×	✓	
WA	Previously assessed	4.36	3.64	–0.72	✓	✓	YES
	Newly assessed	10.00	7.08	–2.92	×	✓	
SA	Previously assessed	2.80	3.41	0.61	✓	×	YES
	Newly assessed	10.00	4.59	–5.41	✓	✓	
Tas.	Previously assessed	4.74	7.27	2.53	×	×	NO
	Newly assessed	10.00	13.53	3.53	×	×	
NT	Previously assessed*	7.42	4.81	–2.61	✓	✓	YES
	Newly assessed	10.00	9.32	–0.68	×	✓	
ACT	Previously assessed	2.67	0.00**	–2.67	✓	✓	YES
	Newly assessed	10.00	0.00**	–10.00	✓	✓	

* Due to a change in the Northern Territory's immunisation program schedule during the 2017-18 assessment period, the Northern Territory has not been assessed against Menitorix in 2017–18.

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

- more vaccines were administered in the reference period than were sent to vaccination providers in the reference period (that is, 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
- 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 2017 to 31 March 2018, with AIR data processed at 30 June 2018.

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	*haemophilus influenzae* 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

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This report provides an assessment of state and territory performance against 4 of the 5 performance benchmarks outlined in the National Partnership on Essential Vaccines, for the assessment period 1 April 2017 to 31 March 2018. The fifth benchmark was not assessed in this period. The report shows that 6 jurisdictions met all 4 benchmarks, with one benchmark being either partly met or not met in each of the other 2 jurisdictions.

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