Report on Government Services 2020

PART E, SECTION 11: PRESENTATION REVISED ON 25 JUNE 2020, RELEASED ON 31 JANUARY 2020

11 Ambulance services

The focus of performance reporting in this section is on ambulance service organisations, which are the primary agencies involved in providing emergency medical care, pre-hospital and out-of-hospital care, and transport services.

The **Indicator Results** tab uses data from the data tables to provide information on the performance for each indicator in the **Indicator Framework**. The same data in the data tables are also available in CSV format.

Context

Objectives for ambulance services

Ambulance services aim to promote health and reduce the adverse effects of emergency events on the community. Governments' involvement in ambulance services is aimed at providing emergency medical care, pre-hospital and out-of-hospital care, and transport services that are:

- accessible and timely
- meet patients' needs through delivery of appropriate health care
- high quality — safe, co-ordinated and responsive health care
- sustainable.

Governments aim for ambulance services to meet these objectives in an equitable and efficient manner.

Service overview

Ambulance services include preparing for, providing and enhancing:

- emergency and non-emergency pre-hospital and out-of-hospital patient care and transport
- inter-hospital patient transport including the movement of critical patients
- specialised rescue services
- the ambulance component of multi-casualty events
- the community's capacity to respond to emergencies.

Roles and responsibilities

Ambulance service organisations are the primary agencies involved in providing services for ambulance events. State and Territory governments provide ambulance services in most jurisdictions. In WA and the NT, St John Ambulance is under contract to the respective governments as the primary provider of ambulance services.

Across jurisdictions the role of ambulance service organisations serves as an integral part of the health system. The role of paramedics has expanded over the last decade to include the assessment and management of patients with minor illnesses and injuries to avoid transport to hospital.

On 1 December 2018, paramedicine became a nationally regulated profession with paramedics joining the National Registration and Accreditation Scheme (Paramedics Australasia, 2020). From this date, paramedics must be registered with the Paramedicine Board of Australia and meet the Board's registration standards in order to practise in Australia (Paramedicine Board of Australia, 2018).

Funding

Total expenditure on ambulance services was $3.9 billion in 2018-19 (table 11A.10), which was funded from a mix of revenue sources. Total revenue of ambulance service organisations was $3.8 billion in 2018-19, representing an annual average growth rate of 5.6 per cent since 2014-15 (table 11.1).

Select year(s):
Multiple values

Table 11.1 **Revenue of Ambulance service organisations, ($m) (2018-19 dollars)** by jurisdiction, by year

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
2018-19	1,082.0	1,144.3	810.7	303.9	314.7	87.8	59.7	36.5	3,839.4
2017-18	1,041.6	1,067.9	768.8	298.2	311.0	77.2	51.7	35.1	3,651.4
2014-15	885.9	770.3	629.7	265.8	250.6	60.6	45.7	28.9	2,937.4

Source: table 11A.1

Data tables are referenced above by an '11A' prefix and all data (footnotes and data sources) are available for download from the supporting material below (both in Excel and CSV format).

Jurisdictions have different funding models to provide resourcing to ambulance service organisations. Nationally in 2018-19, State and Territory government grants and indirect government funding formed the greatest source of ambulance service organisations funding (73.2 per cent of total funding), followed by transport fees (from public hospitals, private citizens and insurance (21.3 per cent of total funding)) and subscriptions and other income (5.5 per cent) (table 11A.1).

Size and scope

Human resources

Nationally in 2018-19, for ambulance services reported in this section there were:

- 18 445 FTE salaried personnel (81.5 per cent were ambulance operatives)
- 6681 volunteer personnel (89.9 per cent were ambulance operatives)
- 3144 paramedic community first responders. Community first responders are trained volunteers that provide an emergency response (with no transport capacity) and first aid care before ambulance arrival (table 11A.8).

Demand for ambulance services

Nationally in 2018-19, there were:

- 3.8 million incidents reported to ambulance service organisations[1] (152.9 incidents per 1000 people)
- 4.8 million responses where an ambulance was sent to an incident (192.3 responses per 1000 people). There can be multiple responses sent to a single incident. There can also be responses to incidents that do not have people requiring treatment and/or transport
- 1185 response locations (3712 first responder locations with an ambulance) and 3829 ambulance general transport and patient transport vehicles
- 3.7 million patients assessed, treated or transported by ambulance service organisations (146.8 patients per 1000 people) (figure 11.1)
- 96 air ambulance aircraft available. There are air ambulance (also called aero-medical) services in all jurisdictions, although arrangements vary across jurisdictions (table 11A.2).

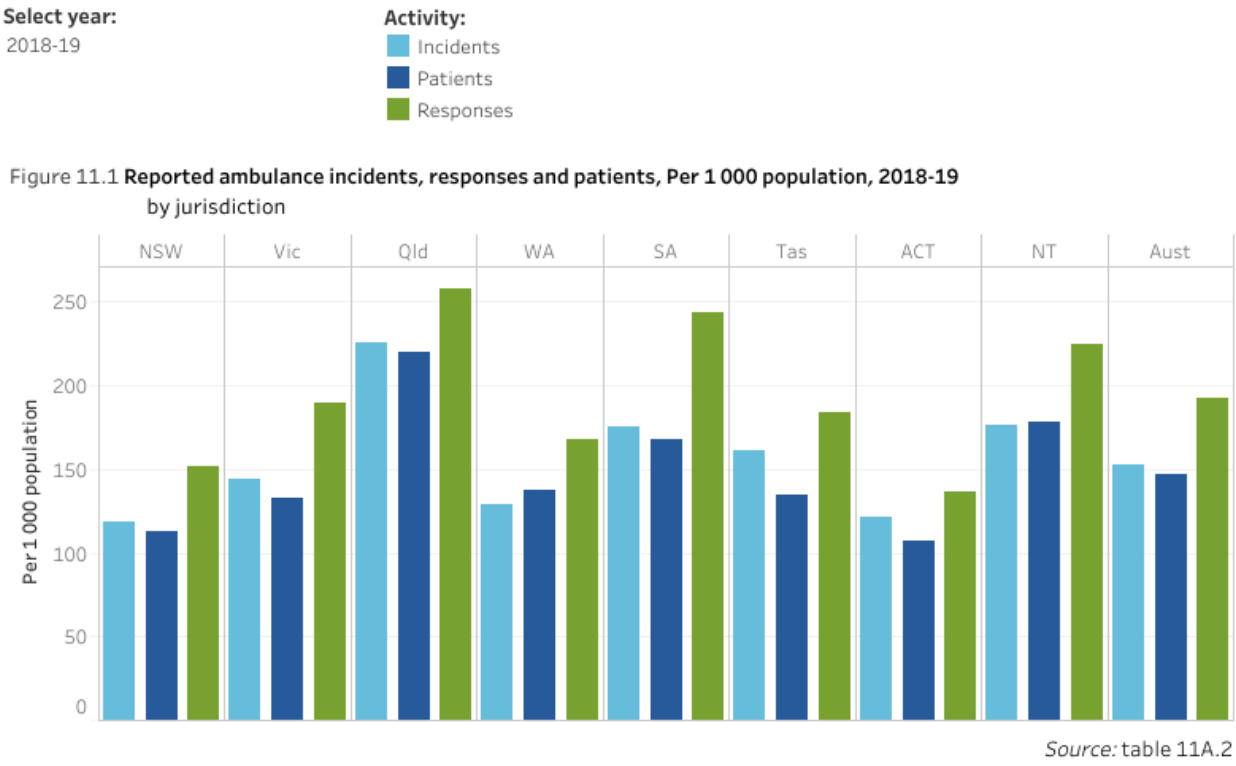


Figure 11.1 **Reported ambulance incidents, responses and patients, Per 1 000 population, 2018-19 by jurisdiction**

Source: table 11A.2

Data for incidents for the years 2009-10 to 2013-14 and for patients for 2013-14 were not available for the NT.

Data tables are referenced above by an '11A' prefix and all data (footnotes and data sources) are available for download from the supporting material below (both in Excel and CSV format).

Ambulance service organisations prioritise incidents as:

- emergency — immediate response under lights and sirens required (code 1)
- urgent — undelayed response required without lights and sirens (code 2)
- non emergency — non urgent response required (codes 3, 4)
- casualty room attendance.

Nationally in 2018-19, 37.5 per cent of the 3.8 million incidents ambulance service organisations attended were prioritised as emergency incidents, followed by 35.6 per cent prioritised as urgent and 26.9 per cent prioritised as non-emergency (table 11A.2). There were 209 casualty room attendance incidents (all of which occurred in Queensland).

1. An incident is an event that resulted in a demand for ambulance services to respond.

References

Paramedics Australasia, 2020, https://paramedics.org/professional-standards (accessed 4 May 2020).

Paramedicine Board of Australia, 2018, *Registration standards*, https://www.paramedicineboard.gov.au/Registration.aspx (accessed 22 October 2019).

Indicator Framework

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of ambulance services.

The performance indicator framework shows which data are complete and comparable in this Report. For data that are not considered directly comparable, text includes relevant caveats and supporting commentary. Section 1 discusses data comparability and completeness from a Report-wide perspective. In addition to the service area's Profile information, the Report's statistical context (section 2) contains data that may assist in interpreting the performance indicators presented in this section.

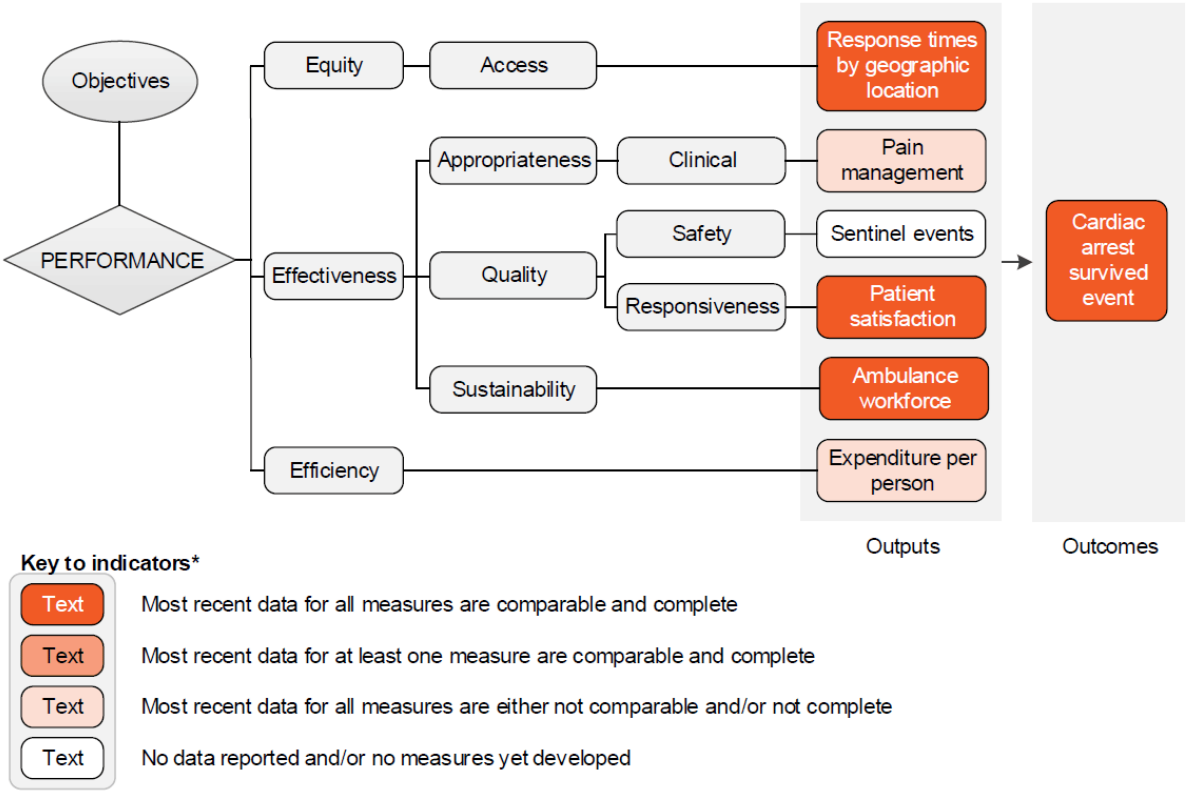
Improvements to performance reporting for ambulance services are ongoing and include identifying data sources to fill gaps in reporting for performance indicators and measures, and improving the comparability and completeness of data.

Outputs

Outputs are the services delivered (while outcomes are the impact of these services on the status of an individual or group) (see section 1). Output information is also critical for equitable, efficient and effective management of government services.

Outcomes

Outcomes are the impact of services on the status of an individual or group (see section 1).



* A description of the comparability and completeness of each measure is provided in indicator interpretation boxes within the section

Indicator Results

An overview of the Ambulance services indicator results is presented. Different delivery contexts, locations and types of clients can affect the equity, effectiveness and efficiency of ambulance services.

Information to assist the interpretation of these data can be found in the Ambulance services interpretative material and data tables. Data tables are identified by a ‘11A’ prefix (for example, table 11A.1).

All data are available for download as an excel spreadsheet and as a CSV dataset — refer to Download supporting material. Specific data used in figures can be downloaded by clicking in the figure area, navigating to the bottom of the visualisation to the grey toolbar, clicking on the 'Download' icon and selecting 'Data' from the menu. Selecting 'PDF' or 'Powerpoint' from the 'Download' menu will download a static view of the performance indicator results.

Response times by geographic location is an indicator of governments' objective to provide ambulance services in an accessible and equitable manner.

Measure: The time taken between the initial receipt of the call for an emergency at the communications centre, and the arrival of the first responding ambulance resource at the scene of an emergency code 1 incident, calculated for the 50th and 90th percentile.

Guidance: Short or decreasing response times suggest the adverse effects on patients and the community of emergencies requiring ambulance services are reduced. Similar response times across geographic areas indicates equity of access to ambulance services.

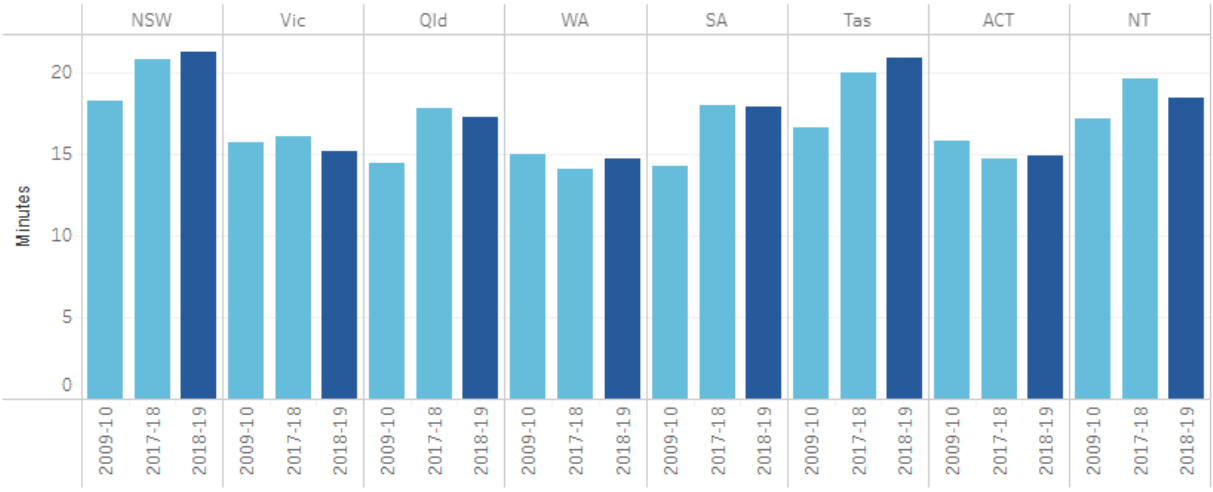
- Data are comparable (subject to caveats) across jurisdictions and over time.
- Data are complete (subject to caveats) for the current reporting period.

Select geographic area:
(•) Capital city
( ) Statewide

Select percentile:
(•) 90th percentile
( ) 50th percentile

Select year(s):
(Multiple values)

Figure 11.2 **Ambulance services Response times, by geographic location, 90th percentile Capital city (minutes)** by jurisdiction, by year



Source: table 11A.3

In 2018-19, the time within which 50 per cent of first responding ambulance resources arrived at the scene of an emergency in code 1 situations:
- in capital cities ranged from 8.5 to 11.7 minutes, increasing to between 14.7 to 21.3 minutes for 90 per cent to respond.
- state-wide ranged from 8.5 and 12.9 minutes, increasing to between 14.9 to 29.2 minutes for 90 per cent to respond.

Pain management is an indicator of governments' objective to provide pre-hospital and out-of-hospital care and patient transport services that meet patients' needs through delivery of appropriate health care.

Measure: The percentage of patients who report a clinically meaningful reduction in pain severity.

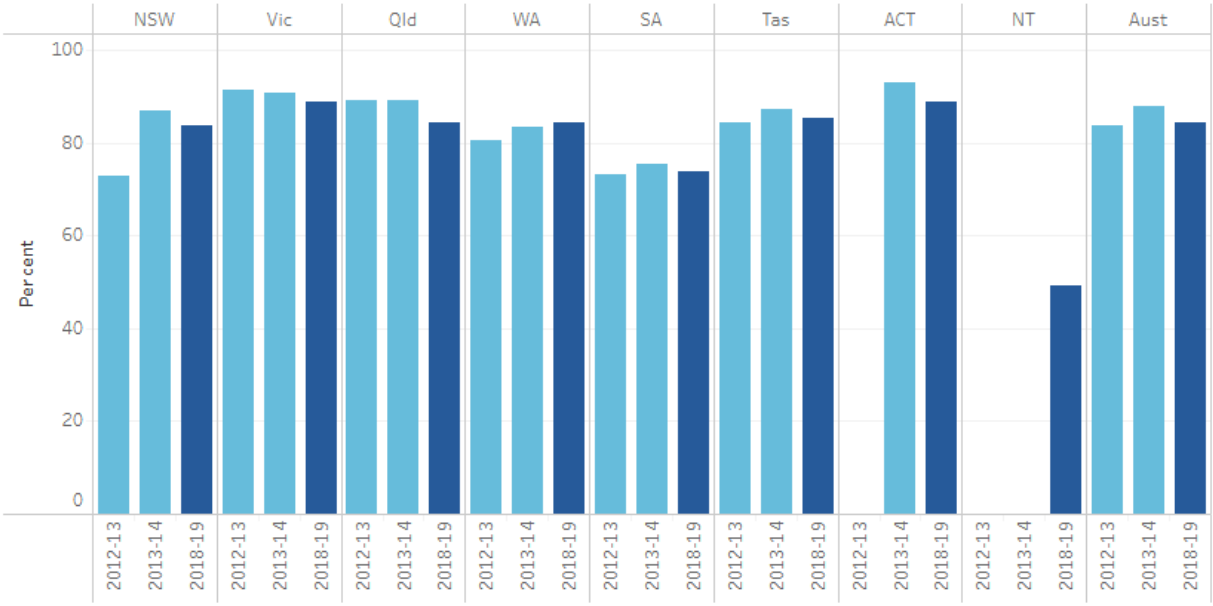
Guidance: A higher or increasing percentage of patients who report a clinically meaningful reduction in pain severity at the end of ambulance service treatment suggests appropriate care meeting patient needs.

- Data are not comparable across jurisdictions for the current reporting period.
- Data are incomplete for the current reporting period. All 2018-19 data were not available for South Australia.

Select year(s):

(Multiple values)

Figure 11.3 **Patients who reported a clinically meaningful pain reduction (a), (b)** by jurisdiction, by year



Source: table 11A.5

(a) Data for SA for 2018-19 only cover the period July 2018 to February 2019.
(b) Data were not available for the ACT for 2012-13 and for the NT for 2013-14 and 2012-13.

Nationally in 2018-19 (including part-year data for SA), the proportion of patients who reported clinically meaningful pain reduction at the end of ambulance service treatment was 84.2 per cent. For most jurisdictions the proportion was above 80 per cent.

Sentinel events is an indicator of governments' objective to deliver ambulance services that are high quality and safe.

***Measure*:** The number of reported adverse events that occur because of ambulance services system and process deficiencies, and which result in the death of, or serious harm to, a patient.

Guidance: A low or decreasing number of sentinel events is desirable.

Data are not yet available for reporting against this indicator. The Council of Ambulance Authorities is in the process of developing and trialling a national data collection.

Patient satisfaction is an indicator of governments' objective to provide emergency medical care, pre-hospital and out-of-hospital care, and transport services that are responsive to patients' needs.

Patient satisfaction is defined as the quality of ambulance services, as perceived by the patient, using the following measures:

Measure 1: The proportion of patients who felt that the length of time they waited to be connected to an ambulance service call taker was much quicker or a little quicker than they thought it would be.
Measure 2: The proportion of patients who felt that the length of time they waited for an ambulance was much quicker or a little quicker than they thought it would be.
Measure 3: The proportion of patients who felt that the level of care provided to them by paramedics was very good or good.
Measure 4: The proportion of patients whose level of trust and confidence in paramedics and their ability to provide quality care and treatment was very high or high.
Measure 5: The proportion of patients who were very satisfied or satisfied with the ambulance services they received in the previous 12 months.

Guidance: High or increasing proportions can indicate improved responsiveness to patient needs.

- Data are comparable (subject to caveats) across jurisdictions from 2016-17 onwards.
- Data are complete (subject to caveats) for the current reporting period.

Select year(s):
2018-19

Table 11.2 **Patient satisfaction**
by jurisdiction, by year

			NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Phone answer time	Much quicker or a little quicker than I thought it would be	2018-19	65	67	61	70	68	64	60	58	65
Ambulance arrival time	Much quicker or a little quicker than I thought it would be	2018-19	58	65	52	66	63	56	58	56	60
Level of care provided by paramedics	Very good or good	2018-19	98	97	96	99	99	98	97	94	97
Level of trust and confidence in paramedics and their ability to provide quality care and treatment	Very high or high	2018-19	94	93	90	94	95	94	93	91	93
Overall satisfaction	Very satisfied or satisfied	2018-19	98 ±2.7	97 ±2.5	96 ±3.3	99 ±3.4	100 ±3.1	98 ±2.6	97 ±3.0	95 ±4.6	98 ±1.1

Source: table 11A.6

Some percentages reported in these tables include 95 per cent confidence intervals (for example, 80 per cent ± 2.7 per cent).

Nationally in 2018-19, the majority of respondents (98.0 per cent) indicated they were satisfied or very satisfied with the ambulance services received in the previous 12 months. This was also the case for particular aspects of their experience

Ambulance workforce is an indicator of governments' objective to provide emergency medical care, pre-hospital and out-of-hospital care, and transport services that are sustainable. It is defined by two measures.

Measure 1: Workforce by age group — the age profile of the salaried workforce, measured by the proportion of the operational salaried workforce in 10 year age groups (under 30, 30–39, 40–49, 50–59 and 60 and over).
Measure 2: Operational workforce attrition — defined as the number of FTE salaried staff who exit the organisation as a proportion of the number of FTE salaried staff. Includes staff in operational positions where paramedic qualifications are either essential or desirable to the role.

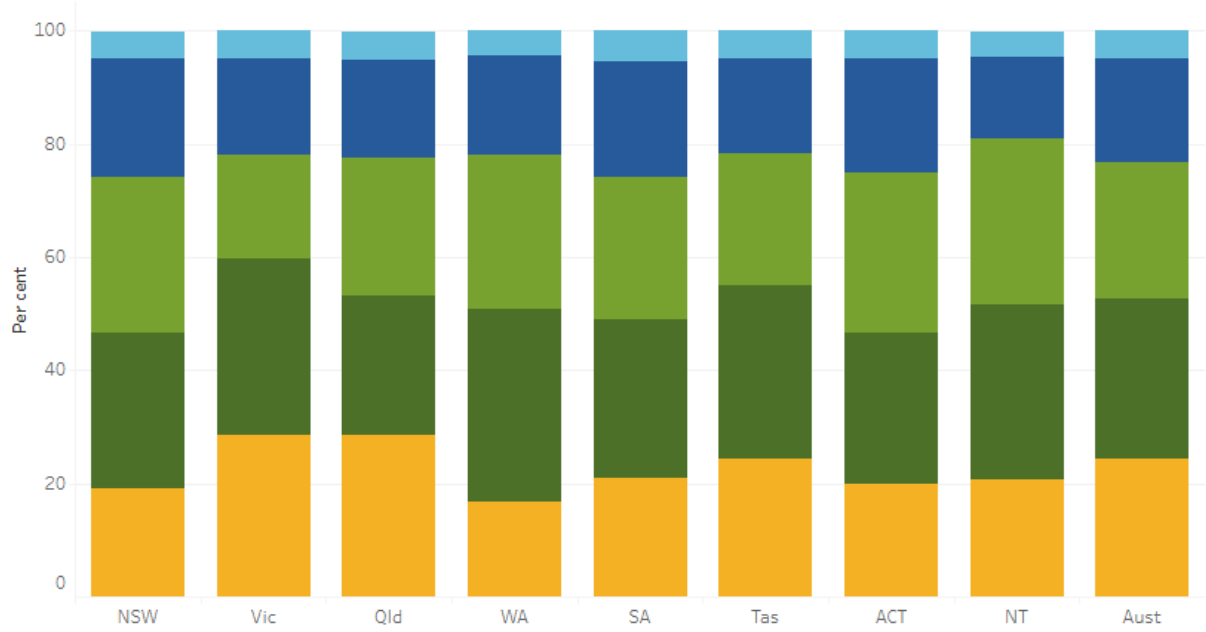
Guidance: A low or decreasing proportion of the workforce who are in the younger age groups and/or a high or increasing proportion who are closer to retirement suggests sustainability problems may arise in the coming decade as the older age group starts to retire. Low or decreasing levels of staff attrition are desirable.

- Data are comparable (subject to caveats) across jurisdictions and over time.
- Data are complete (subject to caveats) for the current reporting period.

Select year
(applies to figure 11.4 and table 11.3):
2018-19

60+ years old
50-59 years old
40-49 years old
30-39 years old
<30 years old

Figure 11.4 Measure 1: **Ambulance workforce, 2018-19**
by age group, by jurisdiction



Source: table 11A.7

Nationally in 2018-19, 76.7 per cent of the ambulance workforce were aged under 50 years, continuing the annual decrease from 79.1 per cent in 2012-13.

Table 11.3 Measure 2: **Ambulance workforce attrition, 2018-19**
by juridiction

Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
%	2.8	3.4	1.9	3.0	2.6	4.5	6.2	12.0	2.9

Source: table 11A.7

Data were not available for the NT for 2014-15 and 2010-11

Nationally in 2018-19, the attrition rate was 2.9 per cent, a decrease from 3.6 per cent in 2014-15 but up from 2.6 per cent in 2016-17.

Expenditure per person is a proxy indicator of governments' objective to provide emergency medical care, pre-hospital and out-of-hospital care, and transport services in an efficient manner.

Measure: Total ambulance service organisation expenditure per person in the population.

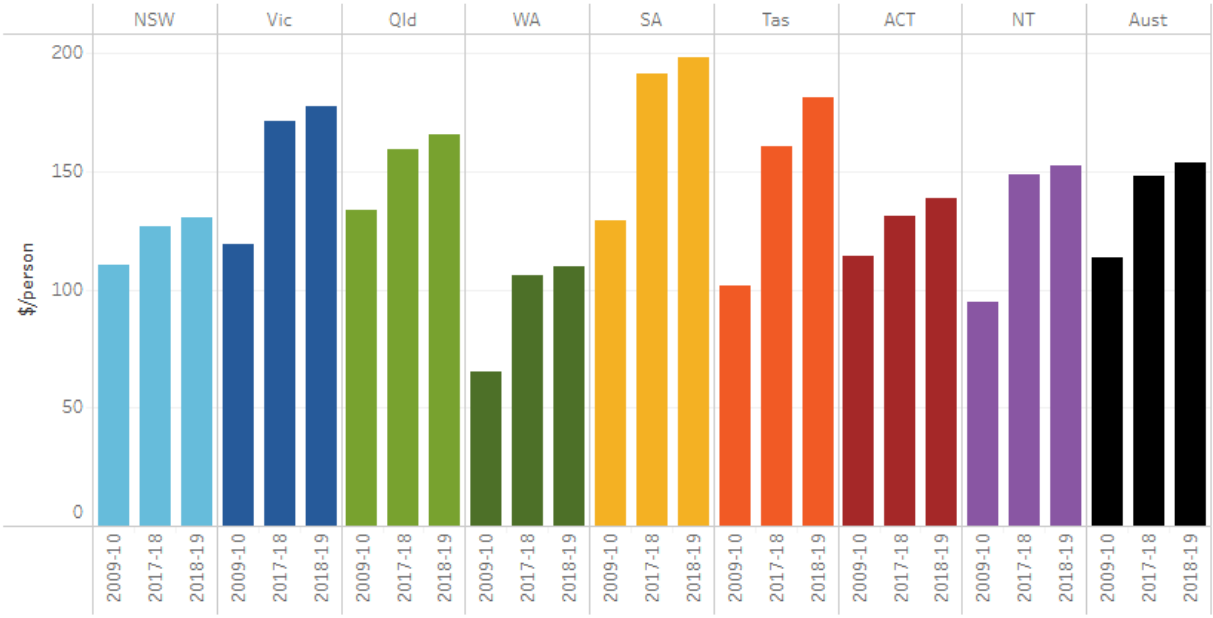
Guidance: All else being equal, lower expenditure per person represents greater efficiency. However, efficiency data should be interpreted with caution.

- Data are not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time.
- Data are complete (subject to caveats) for the current reporting period.

Select year(s):

(Multiple values)

Figure 11.5 **Expenditure per person (2018-19 dollars)** by jurisdiction, by year



Source: table 11A.10

Nationally, total expenditure on ambulance service organisations was $153.61 per person in 2018-19, an increase of 3.7 per cent from the previous year.

Cardiac arrest survived event rate is an indicator of governments' objective to provide emergency medical care, pre-hospital and out-of-hospital care, and transport services that reduce the adverse effects of emergency events on the community. It is defined by three measures.

Measure 1: Adult cardiac arrest survival rate where resuscitation attempted, where:
- a person was in out-of-hospital cardiac arrest (which was not witnessed by a paramedic)
- chest compressions and/or defibrillation was undertaken by ambulance or emergency medical services personnel.

Measure 2: Adult Ventricular Fibrillation (VF) or Ventricular Tachycardia (VT) cardiac arrest survival rate where:
- a person was in out-of-hospital cardiac arrest (which was not witnessed by a paramedic)
- the arrest rhythm on the first ECG assessment was either VF or VT.

Measure 3: Paramedic witnessed cardiac arrest survival rate where a person was in out-of-hospital cardiac arrest that occurred in the presence of an ambulance paramedic or officer.

Guidance: A high or increasing cardiac arrest survived event rate is desirable.

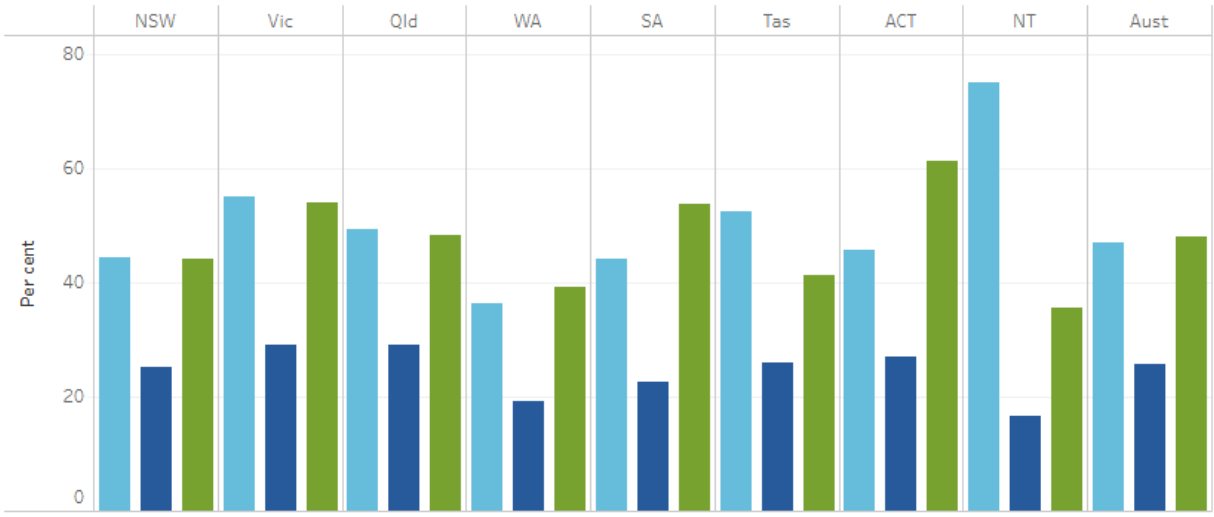
■ Data are comparable (subject to caveats) across jurisdictions from 2018-19 onwards and over time for all jurisdictions except NSW (NSW changed in 2018-19 bringing it in line with national counting rules but creating a break with its historical reporting).

■ Data are complete (subject to caveats) for the current reporting period.

Select year: 2018-19

Event type:
- Paramedic witnessed, Adult cardiac arrest survival rate
- Non-paramedic witnessed, Adult cardiac arrest survival rate where resuscitation attempted
- Non-paramedic witnessed, Adult VF/VT cardiac arrest survival rate

Figure 11.6 **Cardiac arrest survived event rate, 2018-19**
by jurisdiction



Source: table 11A.11

Data were not available for NSW for 2009-10, 2010-11 and 2011-12, and the NT for 2009-10 and 2010-11.

Nationally in 2018-19, the survival rates for patients in VF or VT cardiac arrest or paramedic witnessed cardiac arrest were higher than for non-paramedic witnessed cardiac arrest where resuscitation was attempted.

Refer to the interpretative material for detailed indicator interpretation, definitions and caveats. www.pc.gov.au/rogs

Data tables are referenced above by an '11A' prefix and all data (footnotes and data sources) are available for download from the supporting material below (both in Excel and CSV format).

Download supporting material

11 Ambulance services interpretative material (PDF - 188 Kb)

11 Ambulance services interpretative material (Word - 56 Kb)

11 Ambulance services data tables (XLSX - 481 Kb)

11 Ambulance services dataset (CSV - 240 Kb)

See the interpretative material and corresponding table number in the data tables for detailed definitions, caveats, footnotes and data source(s).

Note: an errata was released for section 11 Ambulance services.

Errata

The following data have changed for section 11 Ambulance services data tables:

- Table 11A.5: Amended data for Proportion of patients who reported a clinically meaningful pain reduction for 2014-15, 2016-17 and 2017-18 for Aust, 2015-16 for Vic, Qld, NT and Aust and 2012-13 for Vic. Amended data for Total number of pain management patients for 2015-16 and 2017-18 for Aust and 2012-13 for Vic and Aust.
- Table 11A.7: Amended data for Total operational workforce and Workforce attrition for 2016-17 for NSW.
- Table 11A.11: Amended data for Paramedic witnessed adult cardiac arrest survival rate for 2015-16 for Tas, 2013-14 for NSW and 2011-12 for NT. Amended data for Adult cardiac arrests where resuscitation attempted (excluding paramedic witnessed) survival rate for 2013-14 for NSW and 2011-12 for NT. Amended data for Adult VF/VT cardiac arrests (excluding paramedic witnessed) survival rate for 2011-12 for NT.