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# 11 Ambulance services

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### Data tables

Data tables are identified in references throughout this section by an '11A' prefix (for example, table 11A.1) and are available from the website [www.pc.gov.au/research/ongoing/report-on-government-services](http://www.pc.gov.au/research/ongoing/report-on-government-services).

This section reports performance information for ambulance services.

Further information on the Report on Government Services including other reported service areas, the glossary and list of abbreviations is available at <https://www.pc.gov.au/research/ongoing/report-on-government-services>.

## 11.1 Profile of ambulance services

### 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.

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## 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, 2018). 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).

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**Table 11.1 Revenue of ambulance service organisations (2018-19 dollars) (\$ million)<sup>a</sup>**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
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
2016-17	969.0	988.6	707.1	282.0	294.6	66.5	46.5	33.9	3 388.1
2015-16	921.4	846.5	678.1	272.2	273.0	60.0	45.3	29.8	3 126.8
2014-15	885.9	770.3	629.7	265.8	250.6	60.6	45.7	28.9	2 937.4

<sup>a</sup> See table 11A.1 for detailed footnotes and caveats.

Source: State and Territory governments (unpublished); table 11A.1

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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).

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## 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

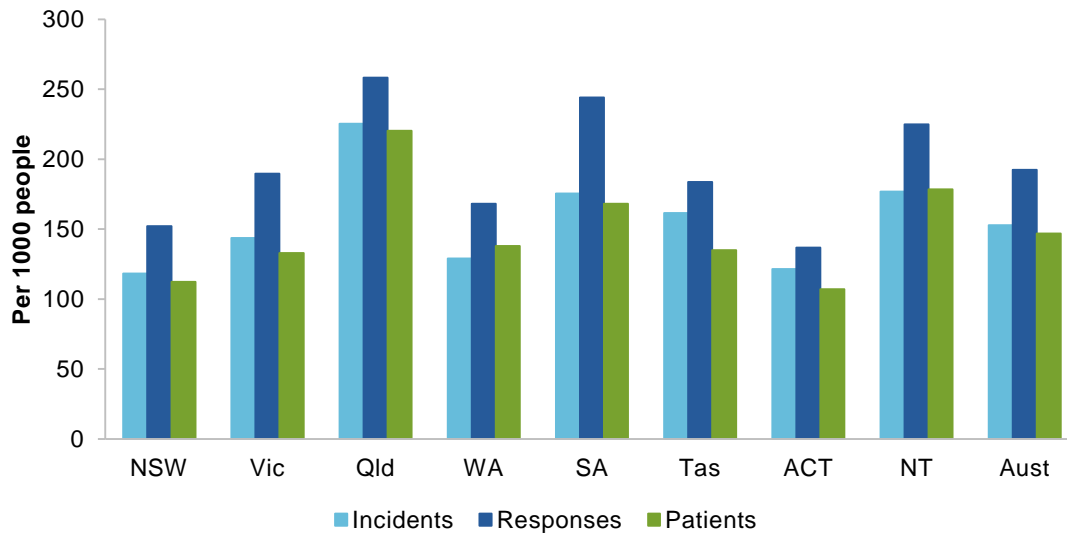
Nationally in 2018-19, there were:

- 3.8 million incidents reported to ambulance service organisations<sup>1</sup> (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).

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

Figure 11.1 **Reported ambulance incidents, responses and patients, per 1000 people, 2018-19<sup>a</sup>**



<sup>a</sup> See table 11A.2 for detailed footnotes and caveats.

Source: State and Territory governments (unpublished); table 11A.2.

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).

## 11.2 Framework of performance indicators

The performance indicator framework is based on governments' common objectives for ambulance services (box 11.1).

## Box 11.1 Objectives for ambulance services

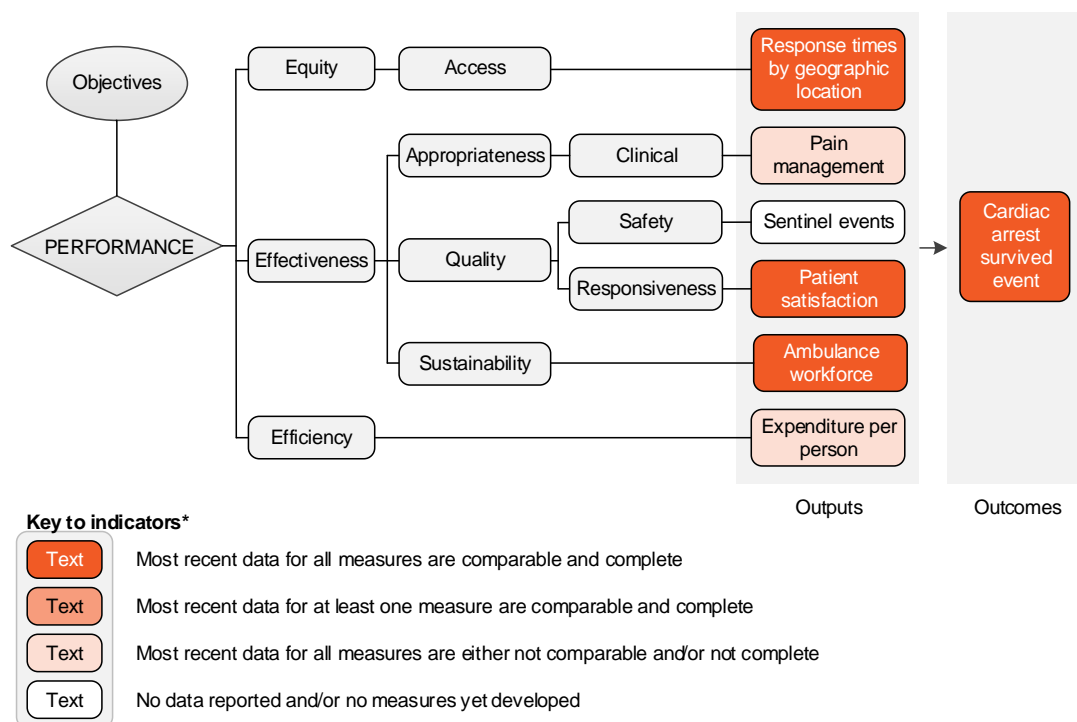
Ambulance services aim to promote health and reduce the adverse effects of emergency events on the community. Governments' involvement in ambulance services is aimed at providing emergency medical care, pre-hospital and out-of-hospital care, and transport services that are:

- 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.

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of ambulance services (figure 11.2).

Figure 11.2 Ambulance services performance indicator framework



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

The performance indicator framework shows which data are complete and comparable in the 2020 Report. For data that are not considered directly comparable, text includes relevant caveats and supporting commentary. Section 1 discusses data comparability, data

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completeness and information on data quality from a Report-wide perspective. In addition to sub-section 11.1, the Report's statistical context section contains data that may assist in interpreting the performance indicators presented in this section (section 2). Sections 1 and 2 are available from the website at [www.pc.gov.au/research/ongoing/report-on-government-services](http://www.pc.gov.au/research/ongoing/report-on-government-services).

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.

### 11.3 Key performance indicator results

Different delivery contexts, locations and types of clients can affect the equity, effectiveness and efficiency of ambulance services.

The comparability of performance indicator results are shaded in indicator interpretation boxes, figures and section and data tables as follows:



Data are comparable (subject to caveats) across jurisdictions and over time.

Data are either not comparable (subject to caveats) within jurisdictions over time or are not comparable across jurisdictions or both.

The completeness of performance indicator results are shaded in indicator interpretation boxes, figures and section and data tables as follows:



Data are complete (subject to caveats) for the current reporting period. All required data are available for all jurisdictions

Data are incomplete for the current reporting period. At least some data were not available.

### 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.

### Equity

Equity indicators measure how well a service is meeting the needs of particular groups that have special needs or difficulties in accessing government services. Data on ambulance services provided to special needs groups are not available. However, indicators presented do provide information on whether ambulance services are equally accessible to everyone in the community with a similar level of need.

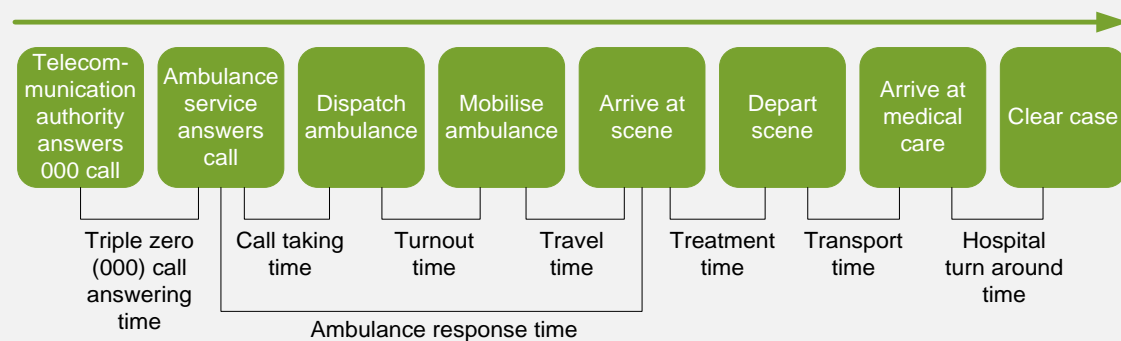
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## Access — Response times by geographic location

‘Response times by geographic location’ is an indicator of governments’ objective to provide ambulance services in an accessible manner (box 11.2).

### Box 11.2 Response times by geographic location

‘Response times by geographical area’ is defined as 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 (illustrated below).



Response times are calculated for the 50th and 90th percentile — the time (in minutes) within which 50 per cent and 90 per cent of the first responding ambulance resources arrive at the scene of an emergency code 1 incident. Differences across jurisdictions in the geography, personnel mix, and system type for capturing data, affect response times.

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 reported for this indicator are:


- comparable (subject to caveats) across jurisdictions and over time
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

In 2018-19, the time within which 90 per cent of first responding ambulance resources arrived at the scene of an emergency in code 1 situations:

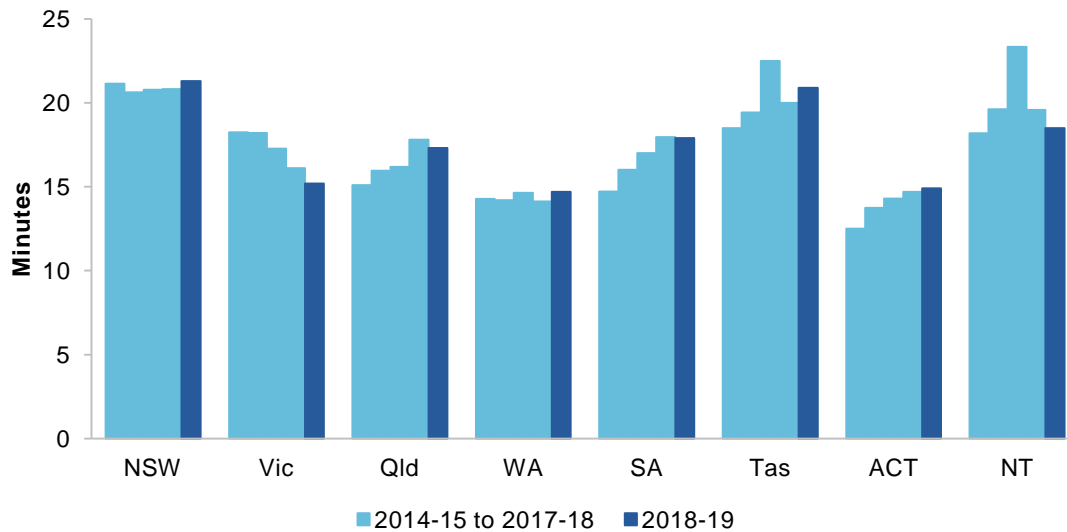
- in *capital cities* ranged from 14.7 minutes (WA) to 21.3 minutes (NSW)
- *state-wide* ranged from 14.9 minutes (ACT) to 29.2 minutes (Tas) (figure 11.3).

**Figure 11.3 Ambulance response times, 90th percentile<sup>a</sup>**

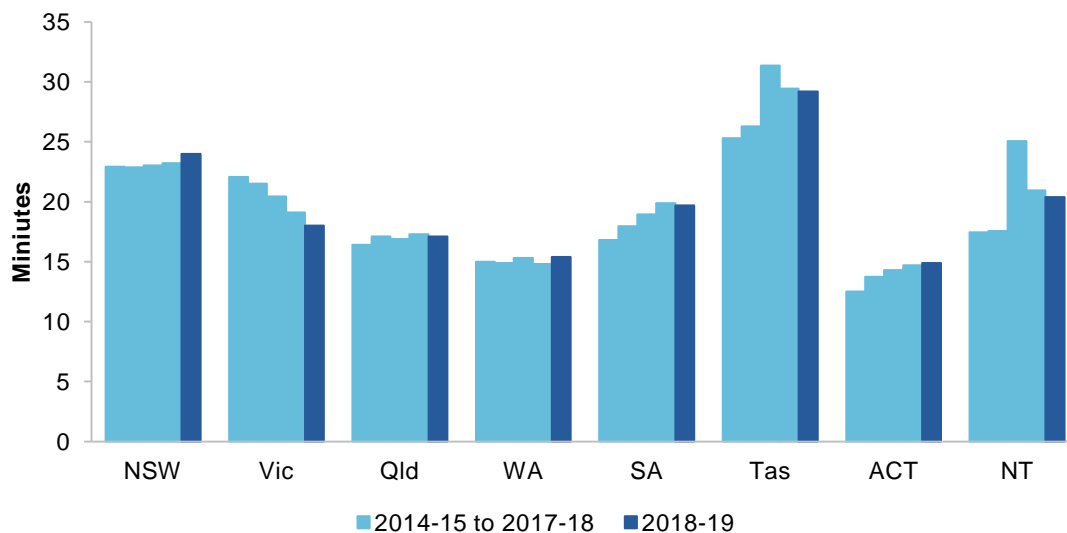
 Data are comparable (subject to caveats) across jurisdictions.

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

**(a) Capital cities**



**(b) Statewide**



<sup>a</sup> See box 11.2 and table 11A.3 for detailed definitions, footnotes and caveats.

Source: State and Territory governments (unpublished); ABS (2016) *Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016*, Cat. no. 1270.0.55.001, Canberra; table 11A.3.



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## Appropriateness — Clinical — Pain management

‘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 (box 11.3).

### Box 11.3 Pain management

Pain management’ is defined as the percentage of patients who report a clinically meaningful reduction in pain severity. Clinically meaningful pain reduction is defined as a minimum 2 point reduction in pain score from first to final recorded measurement (based on a 1–10 numeric rating scale of pain intensity).

Includes patients who:

- are aged 16 years or over and received care from the ambulance service, which included the administration of pain medication (analgesia)
- recorded at least 2 pain scores (pre- and post-treatment)
- recorded an initial pain score of 7 or above (referred to as severe pain).

Patients who refuse pain medication for whatever reason are excluded.

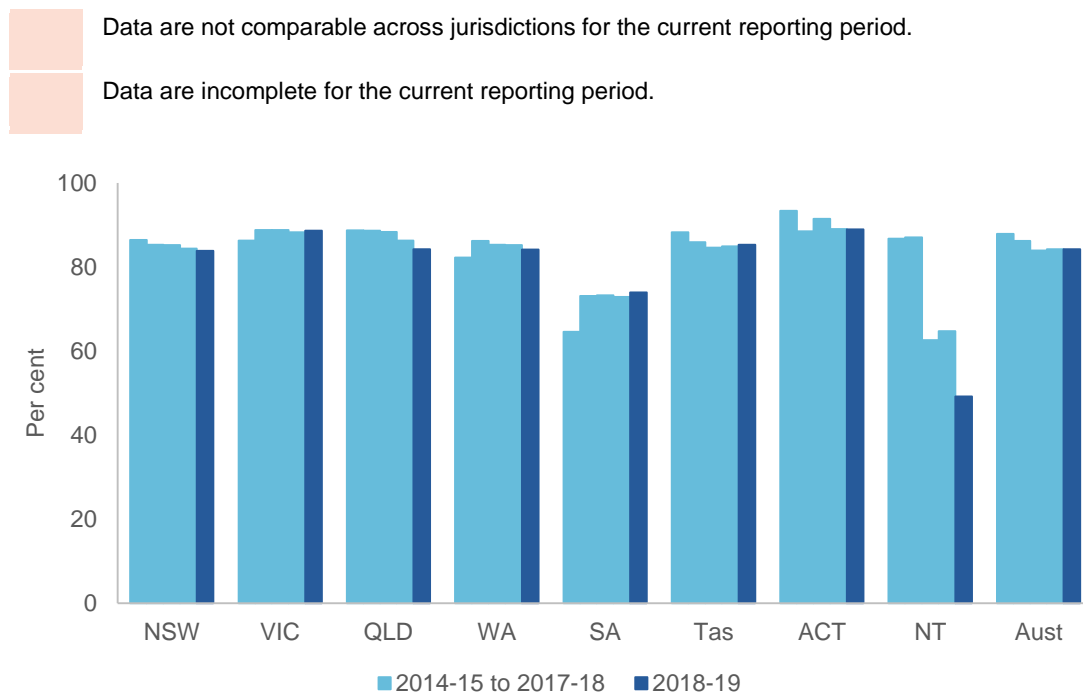
A higher or increasing percentage of patients who report a clinically meaningful reduction in pain severity at the end of ambulance service treatment suggests appropriate care meeting patient needs.

Data reported for this measure are:

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

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 (figure 11.4 and table 11A.5).

**Figure 11.4 Patients who report a clinically meaningful pain reduction<sup>a, b</sup>**



<sup>a</sup> See box 11.3 and table 11A.5 for detailed definitions, footnotes and caveats. <sup>b</sup> Full year data for SA for 2018-19 were not available in time for inclusion in this Report. Data only cover the period July 2018 to February 2019.

Source: State and Territory governments (unpublished); table 11A.5.

## Quality — Safety — Sentinel events

‘Sentinel events’ is an indicator of governments’ objective to deliver ambulance services that are high quality and safe (box 11.4).

### Box 11.4 Sentinel events

‘Sentinel events’ is defined as 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.

Sentinel events occur relatively infrequently and are independent of a patient’s condition.

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.

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## Quality — Responsiveness — Patient satisfaction

‘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 (box 11.5).

### Box 11.5 Patient satisfaction

‘Patient satisfaction’ is defined as the quality of ambulance services, as perceived by the patient. It is measured as patient experience of aspects of response and treatment that are key factors in patient outcomes.

Patients are defined as people who were transported under an emergency event classified as code 1 (an emergency event requiring one or more immediate ambulance responses under lights and sirens where the incident is potentially life threatening) or code 2 (urgent incidents requiring an undelayed response by one or more ambulances without warning devices, with arrival desirable within 30 minutes).

The following measures of patient experience of ambulance services are reported:

- 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
- 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
- proportion of patients who felt that the level of care provided to them by paramedics was very good or good
- 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
- proportion of patients who were very satisfied or satisfied with the ambulance services they received in the previous 12 months.

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

Data reported for these measures are:

- comparable (subject to caveats) across jurisdictions from 2016-17 onwards.
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

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 (table 11A.6). This was also the case for particular aspects of their experience (table 11.2).

**Table 11.2 Patient satisfaction<sup>a</sup>**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Data are comparable (subject to caveats) across jurisdictions.									
Data are complete (subject to caveats) for the current reporting period.									
Proportion of patients who felt that the length of time they waited to be connected to ambulance service call taker was much quicker or a little quicker than they thought it would be									
2018-19	65	67	61	70	68	64	60	58	65
2017-18	62	64	62	69	66	65	62	59	64
2016-17	64	66	65	65	68	60	62	64	65
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									
2018-19	58	65	52	66	63	56	58	56	60
2017-18	59	65	57	68	64	60	64	55	61
2016-17	56	62	63	63	67	50	61	57	61
Proportion of patients who felt that the level of care provided to them by paramedics was very good or good									
2018-19	98	97	96	99	99	98	97	94	97
2017-18	98	98	98	98	98	97	97	95	98
2016-17	96	98	98	98	98	98	97	95	97
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									
2018-19	94	93	90	94	95	94	93	91	93
2017-18	94	92	93	94	93	94	94	89	93
2016-17	91	91	93	94	92	93	92	89	92
Proportion of patients who were very satisfied or satisfied with the ambulance services they received in the previous 12 months									
2018-19	98	97	96	99	100	98	97	95	98
Confidence interval	± 2.7	± 2.5	± 3.3	± 3.4	± 3.1	± 2.6	± 3.0	± 4.6	± 1.1
2017-18	98	98	98	98	98	98	97	92	98
Confidence interval	± 5.0	± 4.2	± 5.1	± 6.2	± 6.1	± 4.6	± 5.0	± 7.8	± 1.9
2016-17	97	97	98	99	98	97	97	97	97
Confidence interval	± 4.9	± 4.9	± 5.0	± 5.9	± 5.2	± 4.7	± 5.4	± 7.6	± 1.8

<sup>a</sup> See box 11.5 and table 11A.6 for detailed definitions, footnotes and caveats.

Source: Council of Ambulance Authorities Patient Experience Survey 2019; table 11A.6.

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## Sustainability — Ambulance workforce

Sustainability is the capacity to provide infrastructure (that is, workforce, facilities, and equipment) into the future, be innovative and respond to emerging needs of the community.

‘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 (box 11.6).

### Box 11.6 Ambulance workforce

‘Ambulance workforce’ is defined by two measures:

- ‘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)
- ‘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.

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 reported for these measures are:


- comparable (subject to caveats) across jurisdictions and over time
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.


The workforce by age group and staff attrition measures should be considered together. Each provides a different aspect of the changing profile and sustainability of ambulance service organisations’ workforce and should also be considered in conjunction with data on the:

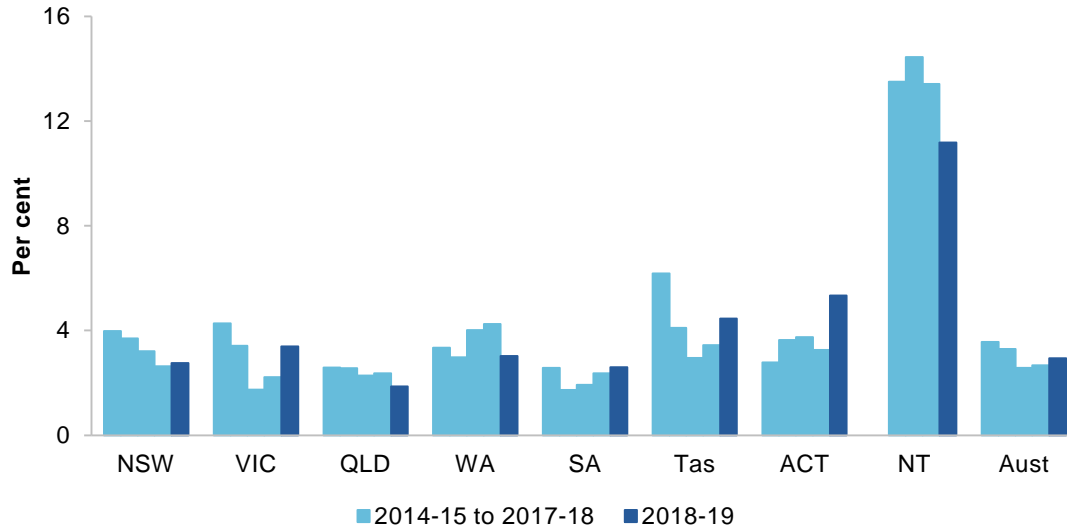
- number of students enrolled in accredited paramedic training courses (table 11A.9)
- availability of paramedics and response locations, which show for some jurisdictions there can be a large proportion of volunteers or volunteer ambulance locations (tables 11A.2 and 11A.8).

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 (figure 11.5). In 2018-19, 76.7 per cent of the ambulance workforce was aged under 50 years, continuing the annual decrease from 79.1 per cent in 2012-13 (table 11A.7).

**Figure 11.5 Attrition in the operational workforce<sup>a, b</sup>**

 Data are comparable (subject to caveats) across jurisdictions and over time.

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



<sup>a</sup> See box 11.6 and table 11A.7 for detailed footnotes and caveats. <sup>b</sup> Attrition data were not available for the NT for 2014-15.

Source: State and Territory governments (unpublished); table 11A.7.

## Efficiency

### Ambulance services expenditure per person

‘Ambulance service 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 (box 11.7).

#### Box 11.7 Ambulance services expenditure per person

‘Ambulance service organisations’ expenditure per person’ is defined as total ambulance service organisation expenditure per person in the population.

Both the total cost of ambulance service organisations and the cost to government of funding ambulance service organisations are reported, because revenue from transport fees is significant for a number of jurisdictions.

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

(continued next page)

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**Box 11.7** (continued)

- High or increasing expenditure per person may reflect deteriorating efficiency. Alternatively, it may reflect changes in: aspects of the service (such as improved response); resourcing for first aid and community safety; or the characteristics of events requiring ambulance service response (such as more serious para-medical challenges)
- Differences in geographic size, terrain, climate, and population dispersal may affect costs of infrastructure and numbers of service delivery locations per person.

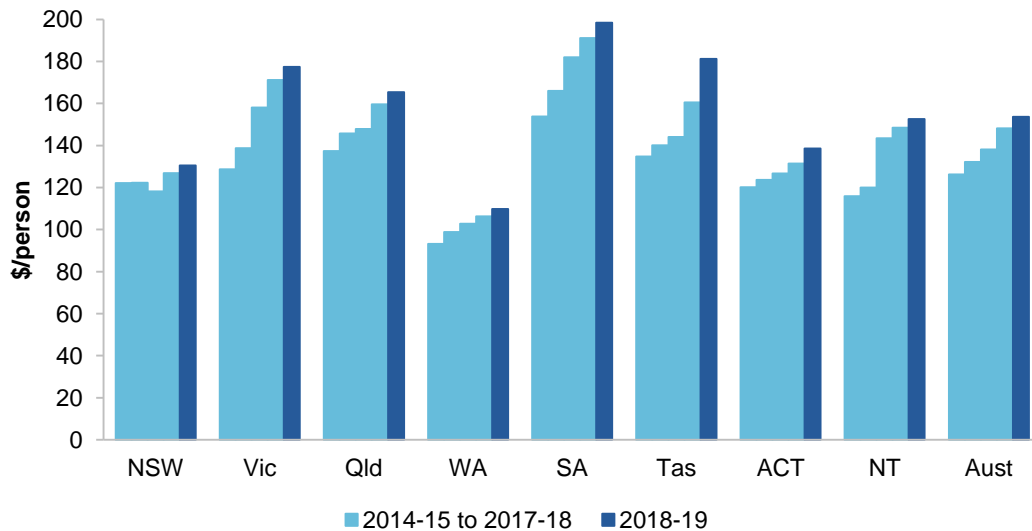
Data reported for this measure are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

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 (table 11A.10 and figure 11.6). Data are available back to 2009-10 in table 11A.10.

**Figure 11.6 Expenditure per person (2018-19 dollars)<sup>a</sup>**

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



<sup>a</sup> See box 11.7 and table 11A.10 for detailed definitions, footnotes and caveats.

Source: State and Territory governments (unpublished); ABS (unpublished), Australian Demographic Statistics, Cat. no. 3101.0.

## Outcomes

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

### Cardiac arrest survived event rate

‘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 (box 11.8).



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### Box 11.8 Cardiac arrest survived event rate

'Cardiac arrest survived event rate' is defined as the proportion of patients aged 16 years and over who were in out-of-hospital cardiac arrest and had a return to spontaneous circulation (that is, the patient having a pulse) until administration and transfer of care to the medical staff at the receiving hospital (Jacobs et al. 2004).

Three separate measures are reported:

- Adult cardiac arrest 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.
- Adult Ventricular Fibrillation (VF) or Ventricular Tachycardia (VT) cardiac arrests<sup>2</sup> 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
- Paramedic witnessed cardiac arrest — where a person was in out-of-hospital cardiac arrest that occurred in the presence of an ambulance paramedic or officer.

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

Data reported for these measures 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)
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

Nationally in 2018-19, the survival rate for patients in VF or VT cardiac arrest are higher than for other adult cardiac arrests (figure 11.7 and table 11A.11). VF or VT are electrical rhythms of the heart but are not associated with effective beating of the heart to produce a pulse. Patients who suffer a VF/VT cardiac arrest are more likely to have better outcomes compared with other causes of cardiac arrest as these conditions are primarily correctable through defibrillation, and the earlier this intervention is applied (either by ambulance or by a member of the community through the use of Automated External Defibrillators), the greater the chance of survival.

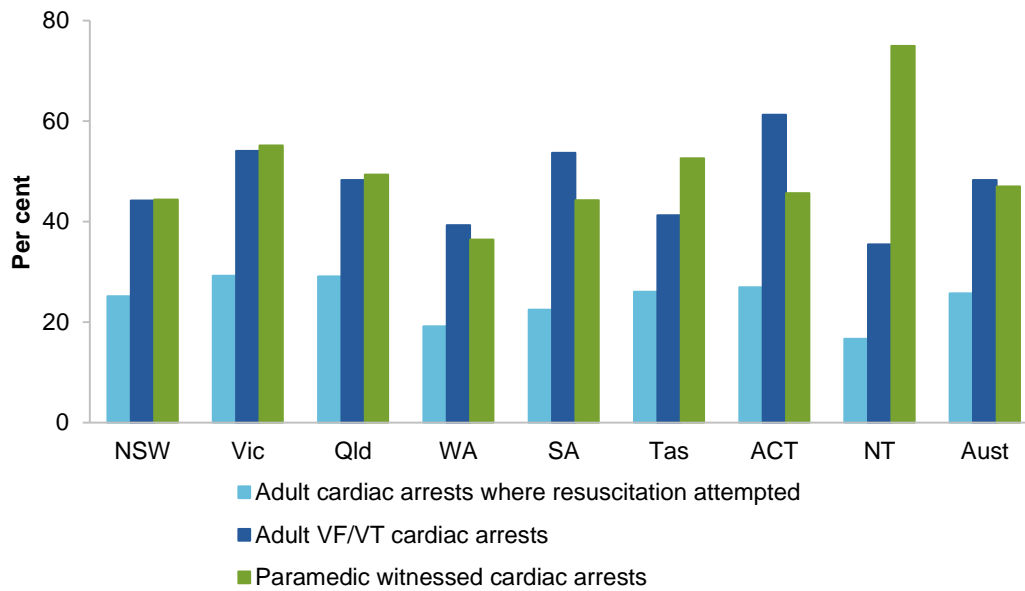
Nationally, the survival rate from paramedic witnessed out-of-hospital cardiac arrests is higher than for other adult out-of-hospital cardiac arrests (figure 11.7). Cardiac arrests that are treated immediately by the paramedic have a better likelihood of survival due to immediate and rapid intervention.

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<sup>2</sup> Ventricular Fibrillation (VF) is a heart rhythm problem that occurs when the heart beats with rapid, erratic electrical impulses. Ventricular Tachycardia (VT) is a type of regular and fast heart beat that arises from improper electrical activity in the ventricles of the heart.

**Figure 11.7 Cardiac arrest survived event rate, 2018-19<sup>a</sup>**

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



<sup>a</sup> See box 11.8 and table 11A.11 for detailed definitions, footnotes and caveats.

Source: State and Territory governments (unpublished); table 11A.11.

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## 11.4 Definitions of key terms

<b>Estimated resident population (ERP)</b>	The official Australian Bureau of Statistics estimate of the Australian population. The ERP is derived from the 5-yearly Census counts, and is updated quarterly between censuses. It is based on the usual residence of the person.
<b>Expenditure</b>	Includes: <ul style="list-style-type: none"><li>• salaries and payments in the nature of salaries to ambulance personnel</li><li>• capital expenditure (such as the user cost of capital)</li><li>• other operating expenditure (such as running expenditure, contract expenditure, training expenditure, maintenance expenditure, communications expenditure, provision for losses and other recurrent expenditure).</li></ul> Excludes interest on borrowings.
User cost of capital	The opportunity cost of funds tied up in the capital used to deliver services. Calculated as 8 per cent of the current value of non-current physical assets (including land, plant and equipment).
<b>Human resources</b>	Human resources refers to any person delivering a service, or managing the delivery of this service, including: <ul style="list-style-type: none"><li>• salaried ambulance personnel, remunerated volunteer and non-remunerated volunteer ambulance personnel</li><li>• support personnel (any paid person or volunteer directly supporting operational providers, including administrative, technical and communications personnel).</li></ul>
<b>Revenue</b>	Revenue received directly or indirectly by ambulance service organisations on an accrual accounting basis, including:
Government grant funding	Grant funding, as established in legislation, from the Australian, State/Territory and Local governments.
Levies	Revenue from levies, as established in enabling legislation, raised on insurance companies and property owners.
User/transport charges	User/transport charges
Subscriptions and other income	Other revenue, including: <ul style="list-style-type: none"><li>• subscriptions and benefit funds received from the community</li><li>• donations, industry contributions and fundraising received</li><li>• other income.</li></ul>
Indirect revenue	All revenue or funding received indirectly by the agency (for example, directly to Treasury or other such entity) that arises from the agency's actions.
<b>Volunteer personnel</b>	
Volunteer ambulance operatives	All personnel engaged on an unpaid casual basis who are principally involved in the delivery of ambulance services, generally on an on-call basis. These staff may include categories on the same basis as permanent ambulance operatives (with transport capability).
Remunerated volunteer ambulance operatives	All personnel who volunteer their availability, however, are remunerated in part for provision of an ambulance response (with transport capability).
Volunteer support staff	All personnel engaged on an unpaid casual basis that are not remunerated and are principally involved in the provision of support services. These can be people in operational support roles provided they do not receive payment for their services other than reimbursement of 'out of pocket expenses'.

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## 11.5 References

Paramedics Australasia, 2018, *Australasian Journal of Paramedicine*, Volume 15, Issue 4, November 2018, viewed 22 October 2019, <<https://www.paramedics.org/wp-content/uploads/2018/11/AJP-November-2018-merged-files.pdf>>.

Paramedicine Board of Australia, 2018, Registration standards, viewed 22 October 2019, <https://www.paramedicineboard.gov.au/Registration.aspx>.

Jacobs I, Nadkarni V, Bahr J, Berg RA, Billi JE, Bossaert L, Cassan P, Coovadia A, D'Este K, Finn J, Halperin H, Handley A, Herlitz J, Hickey R, Idris A, Kloeck W, Larkin GL, Mancini ME, Mason P, Mears G, Monsieurs K, Montgomery W, Morley P, Nichol G, Nolan J, Okada K, Perlman J, Shuster M, Steen PA, Sterz F, Tibballs J, Timerman S, Truitt T, Zideman D, 2004, AHA Scientific Statement, *Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports*, Update of the Utstein Templates for Resuscitation Registries, A Statement for Healthcare Professionals from a Task Force of the International Liaison Committee on Resuscitation (American Heart Association, European Resuscitation Council, Australian Resuscitation Council, New Zealand Resuscitation Council, Heart and Stroke Foundation of Canada, Inter American Heart Foundation, Resuscitation Councils of South Africa), *circulation* 23 November 2004, 110(21)c pp. 3385–97.