9 Fire and ambulance services

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| Attachment tables |
| Attachment tables are identified in references throughout this chapter by a ‘9A’ prefix (for example, table 9A.1). A full list of attachment tables is provided at the end of this chapter, and the attachment tables are available from the Review website at www.pc.gov.au/gsp. |
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Emergency management aims to reduce the level of risk to the community of emergencies occurring, reduce the adverse effects of emergency events, and improve the level and perception of safety in the community (sector overview D). This chapter reports on government services for fire events and emergency ambulance events (pre‑hospital care, treatment and transport). Information regarding the policy context, scope, profile, social and economic factors, and objectives of the emergency management sector (and related data) are included in the Emergency management sector overview (sector overview D).

Major improvements in reporting on fire and ambulance services in this edition include:

* data for two ambulance event indicators that have previously not had data reported, ‘triple zero (000) call answering time’ and ‘pain management’
* a new fire events measure, value of insurance claims from fire events (sourced from the insurance industry). The existing data source (maintained as a separate measure) is based on firefighter assessments
* data quality information (DQI) available for the first time for the fire events’ indicators ‘fire incidents’, ‘annual fire hospitalisation rate’, and ‘value of insurance claims from fire events’
* DQI available for the first time for the ambulance events’ indicators, ‘triple zero (000) call answer time’, ‘availability of ambulance officer paramedics’, ‘expenditure per person’, ‘pain management’, ‘state‑wide response time’, and ‘urban centre response time’.

## 9.1 Profile of emergency services for fire events

A fire event is an incident that is reported to a fire service organisation and requires a response. Fire events include (but are not limited to):

* structure fires (that is, fires inside a building or structure), regardless of whether there is damage to the structure
* landscape fires, including bushfires and grass fires, regardless of the size of the area burnt
* other fires, including vehicle and other mobile property fires, and outside rubbish fires.

### Fire service organisations

Fire service organisations are the primary agencies involved in providing emergency management services for fire events. The role of fire service organisations varies across jurisdictions but commonly includes prevention/mitigation, preparedness, response and recovery activities and services for each jurisdiction (table 9A.1). The full range of activities include:

* developing building fire safety codes and inspecting fire safety equipment and practices
* training and educating the community to achieve community awareness and behavioural change in relation to fire and road safety issues
* assisting individuals and communities to prepare for bushfires and other hazards
* responding to structure, bush, vehicle and other fires
* providing rural land management advice on the role and use of fire
* providing road crash rescue and other rescue services
* managing hazardous material incidents
* administering legislation relating to fire safety, hazardous materials facilities and hazard mitigation
* investigating fire cause and origin
* providing specialist rescue capabilities, including Urban Search and Rescue
* providing emergency medical services such as Community First Responder
* counter‑terrorist preparedness work with police agencies and consequence management relating to a terrorist attack.

While governance arrangements differ across jurisdictions, separate urban and rural fire service organisations deliver fire services in most jurisdictions (table 9A.2). Land management agencies typically also provide fire services within designated areas. However, currently the reporting of land management agencies’ fire event activities and financial information is limited to selected tables and jurisdictions (table 9A.3). Jurisdictions with more than one fire authority allocate responsibilities in different ways — for example, NSW separates fire services based on service function and geographic area, whereas Victoria separates fire services by geographic area only.

Fire service organisations work closely with other government departments and agencies which may also have responsibilities in the case of fire events. These include ambulance service organisations, State/Territory Emergency Services, police services, and community services (Emergency management sector overview — attachment, table DA.1).

Some jurisdictions have particular arrangements for the provision of fire services in Indigenous communities. (For more information on fire services in Indigenous communities see SCRGSP 2009, p. 11.35.)

### Revenue and funding

Total revenue of the fire service organisations covered in this chapter was nearly $3.4 billion in 2012‑13. Real revenue of fire service organisations grew, on average, 0.4 per cent annually over the period 2008‑09 to 2012‑13 (table 9.1). Within this period there are fluctuations for individual jurisdictions, which can result from expenditure related to specific major emergencies (see section 9.3).

Table 9.1 Real revenue of fire service organisations (2012‑13 dollars) ($ million)**a, b**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSWc | Vicc | Qld | WAc | SA | Tas | ACT | NT | Aust |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2008-09 | 988.0 | 1 333.7 | 444.2 | 256.9 | 193.4 | 66.8 | 56.1 | 26.6 | 3 365.7 | | 2009-10 | 989.4 | 1 024.5 | 482.7 | 268.3 | 185.3 | 74.0 | 56.5 | 27.9 | 3 108.6 | | 2010-11 | 992.0 | 1 037.1 | 507.0 | 409.9 | 172.2 | 67.2 | 51.2 | 30.5 | 3 267.1 | | 2011-12 | 970.3 | 1 185.7 | 511.8 | 416.6 | 181.9 | 69.5 | 65.5 | 36.9 | 3 438.1 | | 2012-13 | 1 014.8 | 1 147.8 | 504.5 | 363.0 | 178.5 | 83.4 | 61.2 | 48.9 | 3 402.1 | | | | | | | | | | |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. b Figures vary from year to year as a result of abnormal expenditure related to the response to specific major emergencies. (For jurisdiction examples see notes to attachment table 9A.4). c Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting.

*Source*: State and Territory governments (unpublished); table 9A.4.

Fire levies were the primary source of funding in most jurisdictions. Governments provide the legislative framework for the imposition of fire levies, which are raised from levies on property owners or, in some jurisdictions, from levies on both insurance companies and property owners (table 9A.4). The ACT and NT do not raise fire levies, relying on government grants as their largest revenue source. All states and territories also rely on volunteer firefighters.

Data on the resources allocated by all emergency service organisations to manage fire events is currently unavailable although, work is underway to improve data for future reports. The descriptive information provided below on funding, incidents and human resources relate to fire service organisations only. More information on fire service organisation funding and expenditure can be found in section 9.3.

### Human resources

Nationally, 18 208 full time equivalent (FTE) paid personnel were employed by fire service organisations in 2012‑13, of which 76.4 per cent were paid firefighters. A large number of volunteer firefighters (222 344 people) also participated in the delivery of fire services in 2012‑13 (table 9A.5).

### Fires incidents

Nationally, fire service organisations attended a total of 112 285 fire incidents in 2012‑13 (table 9A.14). Further information on the number of fire and non‑fire incidents is reported in section 9.3.

## 9.2 Framework of performance indicators for fire events

Figure 9.1 presents the performance indicator framework for fire events, based on the general framework for all emergency events (see the Emergency management sector overview box D.3) and governments’ objectives for emergency services for fire events (box 9.1).

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| Box 9.1 Objectives for emergency services for fire events |
| Emergency services for fire events aim to build fire resilient communities that work together to understand and manage the fire risks that they confront. Emergency management services provide highly effective, efficient and accessible services that:   * reduce the adverse effects of fire events on the community (including people, property, infrastructure, economy and environment) * contribute to the management of fire risks to the community * enhance public safety. |
|  |

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of emergency services for fire events (figure 9.1). To reflect the activities of the emergency management sector, performance reporting also reflects the prevention/mitigation, preparedness, response and recovery framework (sector overview D). The performance indicator framework shows which data are complete and comparable in the 2014 Report. For data that are not considered directly comparable, the text includes relevant caveats and supporting commentary. Chapter 1 discusses data comparability from a Report‑wide perspective (see section 1.6).

Figure 9.1 Fire events performance indicator framework

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| Figure 9.1 Fire events performance indicator framework  More details can be found within the text surrounding this image. |

The Report’s statistical context chapter contains data that may assist in interpreting the performance indicators presented in this chapter. These data cover a range of demographic and geographic characteristics, including age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (including Indigenous and ethnic status) (chapter 2).

Data quality information (DQI) is being progressively introduced for all indicators in the Report. The purpose of DQI is to provide structured and consistent information about quality aspects of data reporting on performance indicators, in addition to material in the chapter or sector overview and its associated attachment tables. DQI in this Report cover the seven dimensions in the ABS’ data quality framework (institutional environment, relevance, timeliness, accuracy, coherence, accessibility and interpretability) in addition to dimensions that define and describe performance indicators in a consistent manner, and key data gaps and issues identified by the Steering Committee. All DQI for the 2014 Report can be found at www.pc.gov.au/gsp/reports/rogs/2014.

Performance information is reported for a number of indicators. These results might have been influenced by factors such as differences in climatic and weather conditions, the socio‑demographic and topographic composition of jurisdictions, property values and dwelling construction types. Importantly, jurisdictions also have diverse legislative fire protection requirements.

Results need to be interpreted with care because data might have been derived from small samples (for example, jurisdictions’ fire safety measures surveys) or may be highly variable as a result of relatively small populations (as in Tasmania, the ACT and the NT).

The role of volunteers also needs to be considered when interpreting some indicators (such as fire service organisation expenditure per person). Volunteer personnel provide a substantial proportion of fire services (and emergency services more generally). While costs such as the training and equipment associated with volunteers are included in the cost of fire service provision, the labour costs of providing fire services would be greater without volunteers (assuming these functions were still performed).

Information has not been reported for all fire events in each jurisdiction consistently over time. Reported results sometimes exclude rural fire events, so performance data are not always directly comparable across jurisdictions.

## 9.3 Key performance indicator results for fire events

### Outputs

Outputs are the services delivered (while outcomes are the impact of these services on the status of an individual or group) (see chapter 1, section 1.5).

#### Equity and effectiveness

Equity and effectiveness indicators are linked for fire events.

* The equity dimension relates to whether specific parts of the community with special needs or difficulties in accessing government services benefit from fire services’ activities. This chapter currently provides data on services provided in remote locations, but not for other special needs groups.
* The effectiveness dimension relates to the fire service organisations’ ability to meet the objectives of prevention/mitigation, preparedness, response and recovery.

#### Equity and effectiveness — prevention/mitigation

Prevention/mitigation indicators relate to fire service organisations’ ability to prevent fires and mitigate fire damage.

##### Fire incidents

‘Fire incidents’ is an indicator of governments’ objective to manage the risk of fires by preventing/reducing the number of structure, landscape and other fires (box 9.2).

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| Box 9.2 Fire incidents |
| ‘Fire incidents’ is defined as the number of events that are reported to a fire service and require a response. Measures are reported for:   * fire incidents per 100 000 people * accidental residential structure fires per 100 000 households * total landscape (bush and grass) fire incidents.   Measures of ‘non‑fire’ incidents and false alarms incidents attended to by fire service organisations are provided as contextual information.  A low or decreasing number of fire incidents suggests the greater is the likelihood that the adverse effects of fire will be avoided or reduced.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Fire incidents — Incidents attended by fire service organisations per 100 000 people

Nationally, 490 fire incidents per 100 000 people were attended in 2012‑13, an increase from the rate of 447 in 2011‑12 (figure 9.2). Changes in the fire incident rate can be understood by analysing changes in the number of structure fires and landscape fires.

##### Fire incidents — Accidental residential structure fires reported to fire service organisations per 100 000 households

The national rate of accidental residential structure fires per household has been declining at a rate of 1.6 per cent annually over a ten year period, although rates for jurisdictions show some variability over the period (figure 9.3).

Figure 9.2 Fire incidents attended by fire service organisations per 100 000 people**a, b, c, d, e, f, g**

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| Figure 9.2 Fire incidents attended by the fire service organisations per 1000 000 people.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note c), NT. c Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population. d Tas: Due to industrial action 90 incident reports are incomplete in 2008‑09. e NT: The high number of incidents per 100 000 people can be attributed to deliberately lit fires and the large number of grass fires in northern Australia that are caused by the annual growth of vegetation following the wet season. f Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details.

*Source*: State and Territory governments (unpublished); table 9A.15.

The rate of accidental residential structure fires per 100 000 households should be interpreted with caution. In particular, rates are affected by differences in the practice of fire service personnel in each jurisdiction, who determine and classify accidental structure fires from structure fires resulting from other causes.

##### Fire incidents — Reported number of landscape fire incidents

Landscape fire incidents include all vegetation fires (such as bushfires or grassfires), irrespective of the size of the area burnt and can vary substantially in their impact on fire resources, the community and longer term consequences.

Figure 9.3 Accidental residential structure fires reported to fire service organisations**a, b, c, d, e, f**

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| Figure 9.3 Accidental residential structure fires reported to fire services organisations.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note d), NT. c Rates may not be entirely comparable. The numerator (the number of accidental residential structure fires) is affected by the number of fires where the cause has been determined and classified by fire service personnel. Data for the denominator are derived from ABS Australian Demographic Statistics Household projection series by averaging household data from the start and end of a financial year to derive the financial year midpoint estimate. For example, household data for the 2012‑13 financial year are the average of total households as at 30 June 2012 and as at 30 June 2013. d Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population. e Tas: Due to industrial action 90 incident reports are incomplete in 2008‑09. f NT: Data are for NT Fire and Rescue Service permanent fire stations only.

*Source*: ABS (2013) *Australian Demographic Statistics* table 20 Projected number of households, states and territories, Cat. no. 3101.0; State and Territory governments (unpublished); table 9A.16.

Increases in the rate of landscape fire incidents were recorded in eastern Australian jurisdictions from 2011‑12. Nationally, 48 756 landscape (bush and grass) fire incidents were reported by fire service organisations and land management agencies in 2012‑13, a rate of 213 fires per 100 000 people, or 6.3 per 100 000 hectares (figure 9.4 and table 9A.17).

The number and severity of landscape fires is influenced by many factors, including environmental factors such as weather and climate, with the majority of landscape fires triggered by human activity (AIC 2008). In 2012‑13 large parts of Australia recorded below average rainfall. Over this same period daytime temperatures were well above average across the majority of Australia. Of particular note was an extensive Australia‑wide heatwave lasting from late December through to mid/late January (CRC 2013).

Figure 9.4 Fire service organisations and land management agencies reported total landscape (bush and grass) fire incidents per 100 000 people**a, b, c, d, e, f**

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| Figure 9.4 Fire service organisations and land management agencies reported total landscape (bush and grass) fire incidients per 1000 000 people.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note d), NT. c Vic: Black Saturday (Victorian fires 2009) is treated as a single landscape fire event in 2008‑09. d Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population. e Tas: Due to industrial action 90 incident reports are incomplete in 2008‑09. f NT: Excludes data from Bushfires NT and some NT Fire and Rescue Service volunteer brigades. Includes 60 responses from NT Emergency Service who provide response in some remote communities across the Northern Territory.

*Source*: State and Territory governments (unpublished); table 9A.17.

##### Fire incidents — False alarms

A significant proportion of calls for assistance across all jurisdictions are found, upon investigation, to be false alarms. Fire service organisations are required by legislation to respond to all calls and investigate the site prior to determining a false alarm. In 2012‑13, system initiated and malicious false calls accounted for 118 133 incidents attended to by fire service organisations nationally, or 29.8 per cent of all incidents. Most incidents found to be false alarms are a result of system initiated false alarms (table 9A.14). On average each fire alarm system in Australia generates 2.8 false alarms per year (AFAC unpublished).

Contemporary fire alarm systems are an integral part of the built environment and have a significant role in the protection of life and property. However, attending unwanted false alarms has social and economic impacts (AFAC 2012):

* Repeated unwanted alarms can foster a culture of complacency from building occupants towards the operation of their fire alarm system, adversely affecting community fire safety.
* Community costs arise from lost working time and alarm attendance charges.
* Fire appliances can be delayed in responding to an emergency as a result of having to deal with unwanted fire alarms.

##### Non‑fire incidents

Fire service organisations provide services for a range of non‑fire emergency events (figure 9.5). In 2012‑13, attendance at other emergencies and incidents accounted for 52.2 per cent of total incidents (excluding false alarms) (table 9A.14).

Figure 9.5 Non‑fire incidents attended to by fire service organisations (excluding false alarms), 2012‑13a, b, c

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| Figure 9.5 Non fire incidents attended to by fire service organisations (excluding false alarms), 2012-13.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note d), NT. c These data report the type of incident that reflects the most serious situation as determined by operational personnel after arriving at the scene and not the incident type relayed by the communication centre. d Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population.

*Source*: State and Territory governments; table 9A.14.

##### Non‑fire incidents — Non‑fire rescue including road crash rescue

Fire service organisations attended 61 182 non‑fire rescue incidents at which they are called upon to locate, provide initial medical care, and remove entrapped persons from damaged structures (including road vehicles) and other environments in a safe and expeditious manner (table 9A.14).

A large number of these non‑fire rescue incidents involved road crash rescue. Nationally, fire service and State and Territory emergency service organisations attended 23 805 road crash rescue incidents in 2012‑13, or 103.9 incidents per 100 000 people (table 9A.20 and figure 9.6). While responding to road crash rescue incidents, emergency service organisations performed 9163 extractions — the assisted removal of a patient at the scene of the incident — or 40.0 extractions per 100 000 people in 2012‑13 (table 9A.21).

Figure 9.6 Reported road crash rescue incidents**a, b, c, d**

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| Figure 9.6 Reported road crash rescue incidents.  More details can be found within the text surrounding this image. |

a Qld: The decrease in QFRS attendance at traffic incidents in 2009‑10 and 2010‑11 can be attributed to the revised road crash rescue protocols implemented in September 2009 to reduce unnecessary attendance by the QFRS at mobile property crashes. Flooding and wet weather in 2010‑11 also resulted in a lower than anticipated number of road rescue incidents and extrications. b Tas: Data include responses by fire services, ambulance services and SES. c NT: NT Fire and Rescue Service is currently examining its data reporting and inputting processes to ensure accurate reporting in line with the counting rules as defined in the data dictionary. Inconsistencies in data input in this reporting period has resulted in a significant reduction in the number of road crash incidents and extractions. The figure for 2012‑13 is likely to indicate a considerable under‑reporting. d Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details.

*Source*: State and Territory governments (unpublished); tables 9A.20‑9A.21.

Further information on government services for road safety are available in the Emergency management sector overview (sector overview D).

##### Non‑fire incidents — Calls to floods, storm and tempest and other natural disasters

In coordination with other emergency services, fire service organisations responded to 23 040 natural disaster incidents (actual or imminent) in 2012‑13 (table 9A.14). Further information on government services in the event of natural disasters are available in the Emergency management sector overview (sector overview D).

##### Non‑fire incidents — Hazardous materials incidents

Fire service organisations attended 24 918 incidents where materials that have hazardous properties must be controlled or contained in 2012‑13 (table 9A.14). Of these, 6551 incidents (or 28.6 incidents per 100 000 people) were categorised as having the potential to endanger, damage or destroy the health or safety of people, their property or the environment on or beyond the incident site (figure 9.7).

Figure 9.7 Number of hazardous materials incidents attended to by fire service organisations, per 100 000 people**a, b, c, d**

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| Figure 9.7 Number of hazardous materials incidents attended to by fire service organisations, per 100 000 people.  More details can be found within the text surrounding this image. |

a Data represent incidents attended by FSOs. FSOs may not be notified of all hazardous materials incidents occurring in the community. b Coding of hazardous materials incidents is based on the judgment of the reporting fire officer shortly after the time of the incident. Some coding of incidents may be inaccurate due to the information available at the time of reporting. c Changes to hazardous materials incident reporting were accepted and ratified by the AFAC SIMSG in November 2005 for implementation from July 2006. However, each fire service may have implemented these changes at different times, with implementation complete in the 2009‑10. d Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population.

*Source*: State and Territory governments (unpublished); table 9A.19.

##### Fire risk prevention/mitigation activities

‘Fire risk prevention/mitigation activities’ is an indicator of governments’ objective to reduce the adverse effects of fire on the community through prevention/  
mitigation measures (box 9.3).

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| Box 9.3 Fire risk prevention/mitigation activities |
| ‘Fire risk prevention/mitigation activities’ is defined by the measure ‘proportion of residential structures with smoke alarms’, defined as the number of households with a smoke alarm installed, divided by the total number of households.  High or increasing numbers of households with a smoke alarm installed, increases the likelihood that the adverse effects of fire will be avoided or reduced.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period. All required data are not available for SA, Tas, ACT, and NT.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Fire risk prevention/mitigation activities — Jurisdiction strategies

All jurisdictions undertake a range of fire risk prevention/mitigation tasks to assist households, commercial businesses, and communities prepare for the risk of fire.

Fire service organisations provide a range of fire risk prevention/mitigation activities.

* *Public education* — The promotion of good fire safety and mitigation practices in the community, such as the promotion of: smoke alarms and smoke alarm maintenance; the installation of electrical safety switches; and the provision and maintenance of fire extinguishers and fire blanket.
* *Building codes and legislation* (with relevant building and planning authorities) — To ensure new buildings and structures are fire resistant and address locational fire risks.
* *Product standards* (with relevant authorities) — To ensure products minimise the risk of unwanted fires (either because they are faulty or by accidental/deliberate misuse by owners).
* *Effective emergency warning systems* (table 9A.22).

A summary of selected fire risk management/mitigation strategies implemented in each jurisdiction is available at table 9A.23.

##### Fire risk prevention/mitigation activities — Residential structures with smoke alarms

One key fire risk mitigation strategy across all jurisdictions is the mandated installation of smoke detectors in residential structures. Nationally consistent data for all jurisdictions are not available. However, recent survey data indicate that 92.8 per cent, 95.5 per cent and 91.0 per cent of NSW, Queensland and WA households, respectively, had an installed smoke alarm/detector in 2012‑13, an increase from around 80 per cent a decade ago (table 9A.25).

Fire service organisations have also implemented policies encouraging households to regularly test their smoke detector/alarm to ensure that they are operational. In 2012‑13, 87.0 per cent of households in Queensland had a smoke alarm that had been tested in the previous 12 months (table 9A.25).

##### Fire risk prevention/mitigation activities — Ignition factors for structure fires

Fire cause identification assists fire service organisations and other emergency management stakeholders to formulate fire prevention, community safety and public education programs. Cause identification also helps formulate legislation and standards, and is used to assist in recovery through the provision of information to facilitate insurance claims and settlements.

Fire cause identification assists fire service organisations and other emergency management stakeholders to formulate the most appropriate fire prevention and mitigation activities and priorities within each jurisdiction.

In 2012‑13, nationally, firefighter assessments reported that:

* 12 308 structure fires had an ignition factor of misuse, failure or deficiency (62.2 per cent of all structure fires). Of which:
* 2960 fires had an ignition factor of unattended heat sources
* 1840 fires had an ignition factor of short‑circuit and other electrical failure
* 2048 structure fires were deliberately or suspiciously set fires (10.4 per cent) (table 9A.18).

Nationally in 2012‑13, the ignition factor for 22.3 per cent of structure fires was ‘undetermined or not reported’ (figure 9.8).

Figure 9.8 Ignition factors for structure fires, 2012‑13

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| Figure 9.8 Ignition factors for structure fires 2012-13.  More details can be found within the text surrounding this image. |

a NSW: For the NSW Rural Fire Service volunteer brigades, ignition factor is not mandatory data item to be reported for Structure Fires. In cases where ignition factor is not entered, the data are excluded from the total structure fires calculation in this table. as a result, the totals may not add up to the total structure fires in table 9A.4. b Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population. c NT:A change to the grouping for suspicious structure fires has resulted in a increase in figures for this category in 2012‑13. The difference in the number of fires involving a structure and the number of ignition factors reflects that in some cases data in relation to ignition factor is not available.

*Source*: State and Territory governments; table 9A.18.

#### Equity and effectiveness — preparedness

Preparedness indicators relate to fire service organisations’ ability to prepare and assist the community to prepare for fire events.

##### Level of safe fire practices in the community

‘Level of safe fire practices in the community’ is an indicator of governments’ objective to reduce the adverse effects of fires on the community and manage the risk of fires (box 9.4).

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| Box 9.4 Level of safe fire practices in the community |
| ‘Level of safe fire practices in the community’ is defined as the number of households with household fire safety measures installed or prevention procedures followed, divided by the total number of households.  The higher the proportion of households with a fire safety measure installed or prevention measure followed, the greater the level of safe fire practices in the community.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions but are not comparable over time as data are only available for a single year * incomplete for the current reporting period. The latest available data are from October 2007. All required data are not available for WA, SA, Tas, and the NT.   Data quality information for this indicator is under development. |
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The most recent cross‑sectional, nationally consistent data available for households with fire safety measures are for four jurisdictions on a variety of safety precautions (NSW, Victoria, Queensland and the ACT), for October 2007 (table 9A.24). Results indicate that across the four jurisdictions between 13.3 and 19.7 per cent of households had a written or rehearsed emergency plan (ABS 2008).

#### Equity and effectiveness — response

Response indicators relate to fire service organisations’ ability to respond to and suppress fires.

##### Response times to structure fires

‘Response times to structure fires’ is an indicator of governments’ objective to reduce the adverse effects of fire on the community through timely response activities (box 9.5).

Response times need to be interpreted with caution because the data are not directly comparable across jurisdictions. Differences between jurisdictions in definitions of response times, geography, personnel mix, and system type (manual or CAD) (table 9A.49), affect the comparability of response times data (Fire and ambulance services data quality information).

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| Box 9.5 Response times to structure fires |
| ‘Response times to structure fires’ (as illustrated below) is defined as the time taken between the arrival of the first fire crew appliance at the scene of a structure fire and:   * *initial receipt of the call at the communications centre*. Response time (*including* call taking time) reflects jurisdictions’ overall responsiveness to the notification of a structure fire * *dispatch of the responding fire crew*. Response time (*excluding* call taking time) reflects service organisations’ responsiveness to the notification of a structure fire.   Response times are calculated at the 50th and 90th percentile — the time within which 50 per cent and 90 per cent of the first responding fire appliances arrive at the scene of a structure fire, respectively.  Box 9.5 Response times to structure fires.  More details can be found within the text surrounding this image.  Response time measures are provided for:   * state‑wide — the entire jurisdiction * urban centre — measured as the geographic area that incorporates the jurisdictions’ *capital city*. Boundaries are based on the ABS Australian Standard Geographical Classification (ASGC) structure. Capital cities are calculated as the Major cities classification for all jurisdictions, other than Tasmania and NT, where the Inner regional (incorporating Hobart and Launceston) and Outer regional (incorporating Darwin) classifications are applied * remoteness areas — inner regional (excluding Tasmania), outer regional (excluding NT), remote and very remote boundaries based on the ASGC structure.   Calculations are based on emergency responses to structure fire incidents and include responses by both permanent and volunteer brigades (unless otherwise noted).  Shorter response times suggest the adverse effects on the community of emergencies requiring fire services are reduced. |
| Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period (subject to caveats). All required data are not available for SA.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Response times to structure fires — state‑wide

The time within which 90 per cent of the first responding fire appliances arrive at the scene of a structure fire (including call taking time) varies from 10.5 minutes to 18.4 minutes across jurisdictions (figure 9.9 and tables 9A.27–9A.28).

Figure 9.9 Response times to structure fires, state‑wide, 90th percentile **a, b, c, d**

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| Figure 9.9 Response times to structure fires, state-wide: legend.  More details can be found within the text surrounding this image.  Figure 9.9 (Including call taking time)  Response times to structure fires, state-wide, 90th percentile   More details can be found within the text surrounding this image.Figure 9.9 (Excluding call taking time)  Response times to structure fires, state wide, 90th percentile   More details can be found within the text surrounding this image. |

a Excludes calls attended under NRC, late notifications, calls with Event Create time stamp blank. b Qld: Structure fires within the Urban Levy Boundary are included. Excluded are calls where QFRS experienced delays due to either extreme weather conditions or where the initial response was by another agency or brigade. Only primary exposure incidents are included. Incidents that could not be identified by remoteness category have been included in the statewide calculations only. c WA: Data include both career and volunteer responses where response was provided under emergency conditions (lights and sirens). 284 incidents where response time information is incomplete are excluded from response time calculations. Response time for major cities, regional and remote areas are impacted by volunteer data that, particularly in remote areas of the state are affected by significant travel time to incidents. Data includes two outlier incidents attended by volunteer brigades in very remote areas each with travel times of approximately 48 minutes. d SA: Data including call taking time are not available.

*Source*: State and Territory governments (unpublished); tables 9A.27 and 9A.28.

State‑wide response times are affected by the geographic and demographic characteristics of each jurisdiction. In particular, data calculated on a state‑wide basis represent responses to urban, rural and remote areas, which can differ substantially.

##### Response times to structure fires — capital city

Response times in capital cities are lower than the state‑wide responses for all jurisdictions. The time within which 90 per cent of the first responding fire appliances arrive at the scene of a structure fire (including call taking time) within capital cities ranged across jurisdictions from 9.1 to 14.2 minutes (figure 9.10). Population density across Australian capital cities varies considerably and this can impact on response time performance.

Figure 9.10 Response times to structure fires, capital cities, 2012‑13, 90th percentile**a, b, c**

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| Figure 9.10 Response times to structure fires, capital cities, 2012 13, 90th percentile.  More details can be found within the text surrounding this image. |

a Capital cities are calculated as the Major cities ASGC classification for all jurisdictions, other than Tasmania and NT, where the Inner regional (incorporating Hobart and Launceston) and Outer regional (incorporating Darwin) classifications are applied. b Excludes calls attended under NRC, late notifications, calls with Event Create time stamp blank. c Qld: Structure fires within the Urban Levy Boundary are included. Excluded are calls where QFRS experienced delays due to either extreme weather conditions or where the initial response was by another agency or brigade. Only primary exposure incidents are included. Incidents that could not be identified by remoteness category have been included in the statewide calculations only. d WA: Data include both career and volunteer responses where response was provided under emergency conditions (lights and sirens). 284 incidents where response time information is incomplete are excluded from response time calculations. Response time for major cities, regional and remote areas are impacted by volunteer data that, particularly in remote areas of the state are affected by significant travel time to incidents. Data includes two outlier incidents attended by volunteer brigades in very remote areas each with travel times of approximately 48 minutes. e SA: Data including call taking time are not available.

*Source*: State and Territory governments (unpublished); tables 9A.27 and 9A.28.

##### Response times to structure fires — remoteness areas

As fire services operate in more regional and remote areas, response times generally increase for all jurisdictions (figure 9.11).

Figure 9.11 Response times to structure fires, regional and remote areas, 2012‑13, 90th percentile**a, b, c, d, e, f**

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| Figure 9.11 Response times to structure fires, regional and remote areas, 2012-13, 90th percentile.  More details can be found within the text surrounding this image. |

IR = Inner Regional OR = Outer Regional Rem = Remote VR = Very Remote

a Regional and remote response times are calculated as the Inner Regional, Outer regional, Remote and Very remote ASGC classification for all jurisdictions, other than Tasmania and NT, where the Inner regional (incorporating Hobart and Launceston) and Outer regional (incorporating Darwin) classifications excluded. b There are no very remote areas in Victoria. Remote structure fires are rolled into the outer regional classification due to the low numbers of events. Excludes calls attended under NRC, late notifications, calls with Event Create time stamp blank. c Qld: Structure fires within the Urban Levy Boundary are included. Excluded are calls where QFRS experienced delays due to either extreme weather conditions or where the initial response was by another agency or brigade. Only primary exposure incidents are included. Incidents that could not be identified by remoteness category have been included in the statewide calculations only. d WA: Data include both career and volunteer responses where response was provided under emergency conditions (lights and sirens). 284 incidents where response time information is incomplete are excluded from response time calculations. Response time for major cities, regional and remote areas are impacted by volunteer data that, particularly in remote areas of the state are affected by significant travel time to incidents. Data includes two outlier incidents attended by volunteer brigades in very remote areas each with travel times of approximately 48 minutes. e SA: Data including call taking time are not available. f ACT: There are no regional or remote areas in the ACT.

*Source*: State and Territory governments (unpublished); tables 9A.27 and 9A.28.

There are many factors that influence remoteness area response times including:

* land area and population size
* the dispersion of the population (particularly rural/urban population proportions), topography, road/transport infrastructure and traffic densities
* crewing configurations, response systems and processes, and travel distances — for example, some jurisdictions include responses from volunteer stations (often in rural areas) where turnout times are generally longer because volunteers are on call as distinct from being on duty
* small numbers in remote and very remote areas can lead to volatility in the response time data (table 9A.26).

#### Equity and effectiveness — recovery

Recovery indicators relate to community restoration and to communities’ and fire service organisations’ ability to return to a state of preparedness (box 9.6).

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| Box 9.6 Performance indicators — recovery |
| There are two elements to recovery: supporting communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic, ecological and physical wellbeing following a fire event, and return of communities and fire service organisations to a state of preparedness after experiencing a fire event.  Recovery indicators are identified as a key development area for future reports. |
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#### Efficiency

##### Fire service organisations’ expenditure per person

‘Fire service organisations’ expenditure per person’ is a proxy indicator of the efficiency of governments in delivering emergency management services (box 9.7).

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| Box 9.7 Fire service organisations’ expenditure per person |
| ‘Fire service organisations’ expenditure per person’ is defined as total fire service organisation expenditure per person in the population.  All else being equal, lower expenditure per person represents greater efficiency. However, efficiency data are difficult to interpret. While high or increasing expenditure per person may reflect deteriorating efficiency, it may also reflect changes in aspects of the service (such as improved response) or the characteristics of fire events (such as more challenging fires). Similarly, low or declining expenditure per person may reflect improving efficiency or lower quality responses or less challenging fires.  Expenditure per person is employed as a proxy for efficiency. Expenditure per fire is not used as a proxy for fire service organisation efficiency because an organisation that applies more resources to the prevention and preparedness components to reduce the number of fire incidents could erroneously appear to be less efficient.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
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Nationally in 2012‑13, the total expenditure of fire service organisations was $3.6 billion, or $159 per person (table 9A.29–9A.30 and figure 9.12).

Within Australia different jurisdictions have selected different funding models to provide resourcing to fire service organisations. Nationally, total government grants and indirect government funding forms a substantial, but not the major, source of funds for fire service organisations. Nationally, in 2012‑13, government grants and indirect government funding per person was $50.85 (34.2 per cent of total funding for fire service organisations) (figure 9.13).

Nationally, levies are the largest source of fire service organisation revenue at $88.16 per person in the population in 2012‑13 (59.4 per cent of total funding). Fire levies were raised from levies on property owners or, in some jurisdictions, from levies on both insurance companies and property owners (table 9A.31).

Relatively minor contributions are raised from user charges and miscellaneous revenue.

Figure 9.12 Fire service organisations’ expenditure (2012‑13 dollars)**a, b, c, d, e**

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| Figure 9.12 Fire service organisations’ expenditure 2012-13 dollars.  More details can be found within the text surrounding this image. |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. b Figures vary from year to year as a result of abnormal expenditure related to the response to specific major emergencies. (For jurisdiction specific instances see notes to attachment table 9A.30). c Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. d Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. Financial year population estimates are the midpoint estimate of the relevant financial year (that is, as at 31 December). e WA: DFES provides a wide range of emergency services under an integrated management structure. Data cannot be segregated by service and include costs related to the State Emergency Service and volunteer marine rescue as well as fire.

*Source*: State and Territory governments (unpublished); table 9A.30.

Figure 9.13 Fire service organisation funding (2012‑13 dollars)**a, b, c**

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| Figure 9.13 Fire service organisation funding (2012 13 dollars).  More details can be found within the text surrounding this image. |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. b Figures vary from year to year as a result of abnormal expenditure related to the response to specific major emergencies. (For jurisdiction examples see notes to attachment table 9A.4). c Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting.

*Source*: State and Territory governments (unpublished); table 9A.31.

### Outcomes

Outcomes are the impact of services on the status of an individual or group (while outputs are the services delivered) (chapter 1, section 1.5). Caution should be exercised in interpreting data for some indicators, given the significant fluctuations from year to year, particularly for jurisdictions with relatively small populations.

#### Fire death rate

‘Fire death rate’ is an indicator of governments’ objective to minimise the adverse effects of fire events on the community and enhance public safety (box 9.8).

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| Box 9.8 Fire death rate |
| ‘Fire death rate’ is defined by two measures:   * annual fire death rate — all deaths, per million people, whose underlying cause of death is fire related to smoke, fire and flames, including all (structure and landscape) fires * landscape fire death rate — deaths resulting from a landscape fires only (such as bushfires), excluding self‑harm deaths, per million people.   A low or decreasing fire death rate represents a better outcome.  The annual fire death rate and the landscape fire death rate differ according to:   * source — the annual fire death rate is sourced from *Causes of Death, Australia* (ABS 2013). The landscape fire death rate is provided by the Australasian Fire and Emergency Service Authorities Council, which source data from media and agency reports, PerilAus from Risk Frontiers, and the National Coroners’ Information System * fire type — all fire types versus landscape fires only (such as bushfires) * location — the landscape fire death rate records the location according to the location of the fire (not residential address of the victim) * cause of death — in addition to deaths primarily caused due to smoke, fire and flames, the landscape fire death rate includes deaths that may have resulted from the landscape fire, but whose primary cause may be related to other factors (such as the onset of a stress related coronary death or from attempting to flee fire).   Data for these measures are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Fire death rate — Annual fire death rate

The annual fire death rate was 5.8 deaths per million people in 2011 (129 fire deaths) an increase from 4.5 deaths per million people in 2010 (figure 9.14). Nationally, exposure to smoke, fire and flames accounted for the majority of deaths in 2011 (81 deaths). Intentional self‑harm by smoke, fire and flames accounted for 21 deaths and 12 deaths were due to assault by smoke, fire and flames (table 9A.7). Across jurisdictions there is volatility in the annual fire death rate series.

Figure 9.14 Annual fire death rate**a, b, c, d, e**

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| Figure 9.14 Annual fire death rate   More details can be found within the text surrounding this image. |
| Figure 9.14 Annual fire death rate (Australian ten year average)   More details can be found within the text surrounding this image. |

a Data for 2011 are preliminary and subject to a revisions process. Data for 2009 and 2010 have been subject to revisions. See *Causes of Death, Australia* (cat. no. 3303.0). b Fire deaths are coded according to the ICD and Related Health Problems Revision 10 (ICD‑10) and include ICD fire death codes X00‑X09 plus X76, X97 and Y26. c Australian totals includes Other Territories. d The Black Saturday Victorian bushfires occurred in February 2009. The large number of deaths resulting from this event has a significant impact on the time series of the total fire death rate. e Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. Calendar year population estimates are the midpoint estimate of the relevant calendar year (i.e. as at 30 June).

*Source*: ABS (2013) *Causes of Death, Australia*, Cat. no. 3303.0; table 9A.6.

Annual fire death rates can be particularly volatile because of the small number of fire deaths and the influence of large irregular fire events (box 9.9). One method to overcome data volatility is to present fire death rates as three‑year averages (table 9A.6). Alternatively, annual death rates can be viewed over a longer time series to help identify any underlying trends. Nationally, in the ten years from 1982–91 the average deaths per million people was 11.4. In the most recent decade (2002–11), the average deaths per million people was 6.6 (figure 9.14).

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| Box 9.9 Recent history of Australian bushfires |
| Bushfire can be considered an environmental factor that has been a part of the Australian landscape for millions of years. The biodiversity of Australian fauna and flora have evolved with fire and come to depend on it for their survival (CSIRO 2012).  Bushfires are most common over the savannas of tropical Australia, where some parts of the land burn on an annual basis.  The southern parts of Australia, where the majority of the population resides, are susceptible to large bushfires that threaten life and property. Recent examples include:   * Tasmanian Bushfires (Tasmania) — In January 2013, up to 40 fires were burning across Tasmania. One person died — a Victorian volunteer firefighter — and 203 homes were destroyed. Thousands of locals and tourists were stranded, requiring evacuation (many by sea). The insured cost was $87 million. * Perth Hill Bushfires (WA) — In February 2011, 71 homes were destroyed and an estimated 39 homes damaged by two major fires that affected metropolitan Perth. Approximately 1540 hectares were burned, 517 families were evacuated and at least 12 people were hospitalised. The insured cost was $35 million. |
| * Black Saturday Bushfires (Victoria) — In February 2009, the ‘Black Saturday’ fires caused 173 deaths and caused many injuries, burnt 430 000 hectares of land (including 51 towns, 78 communities) destroying homes, businesses, schools and kindergartens. The insured cost was greater than $1 billion.   Fire services across Australia strive to establish fire management regimes that take a systematic approach to risk management and identify the assets and potential consequences of wildfires, and possible impacts of mitigation and management options. |
| *Source*: CSIRO (2012); AGD (2013a); ABS (2013). |
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##### Fire death rate — Landscape fire death rate

Nationally, comparatively few deaths are related to landscape fires annually (0.3 fire deaths per million people in 2012‑13), although the landscape fire death rate is punctuated by large, irregular events (table 9.2 and 9A.8). Parts of Australia are susceptible to large bushfires that threaten life and property (box 9.9). To assist in identifying underlying trends in the annual landscape fire death series, a 30 year time series is provided in table 9A.8.

Table 9.2 Landscape fire deaths**a, b**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2 008-09 | 1 | 178 | – | – | – | – | – | – | 179 | | 2 009-10 | 1 | 1 | – | – | – | – | – | – | 2 | | 2 010-11 | 2 | – | – | 1 | – | – | – | – | 3 | | 2 011-12 | – | 1 | 1 | – | – | – | – | – | 2 | | 2 012-13 | – | 4 | – | 1 | – | 1 | – | – | 6 | | | | | | | | | | |

a The landscape fire death data and the total fire death data are different. The scope and definition of the two measures differ according to fire type (landscape fire death rate is landscape fires only), cause of death (the landscape fire death rate includes deaths that may have resulted from the landscape fire, but whose primary cause may be related to other factors) and location of death (the landscape fire death rate records the location of death according to the location of the fire). a Data may be subject to a revision process as new or amended information is made available. – Nil or rounded to zero.

*Source*: Australasian Fire and Emergency Service Authorities Council (unpublished); table 9A.8.

#### Fire injury rate

‘Fire injury rate’ is an indicator of governments’ objective to minimise the adverse effects of fire events on the community and enhance public safety and is measured by the annual fire hospitalisation rate (box 9.10).

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| Box 9.10 Fire injury rate |
| ‘Fire injury rate’ is defined as the number of fire injuries per 100 000 people.  A lower fire injury rate represents a better outcome.  Fire injuries are represented by hospital admissions (excluding emergency department non‑admitted casualties) and are reported by the State or Territory where the admission occurs. A person injured by fire may be treated more than once, and in more than one State or Territory. Deaths from fire injuries after hospitalisation have been removed from the fire injuries data for the time series because these are counted in the fire death rate.  Data for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Nationally in 2011‑12, there were 4001 hospital admissions due to fire injury (table 9A.9) and the rate per 100 000 people was 17.8 (figure 9.15).

Figure 9.15 Annual fire hospitalisation rate**a, b, c**

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| Figure 9.15 Annual fire hospitalisation rate.  More details can be found within the text surrounding this image. |

a Fire injuries are coded to the ICD and Related Health Problems Revision 10 (ICD‑10) and include ICD fire injury codes X00‑X09 plus X76, X97 and Y26. Fire injuries are reported by the State or Territory where the injury is treated. Excludes secondary fires resulting from explosions, transport incidents, and emergency department non‑admitted casualties. b Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. Financial year population estimates are the midpoint estimate of the relevant financial year (that is, as at 31 December).

*Source*: Australian Institute of Health and Welfare (AIHW), *National Hospital Morbidity Database* (unpublished); table 9A.9.

Analysis of the trends in hospitalised accidental burn injury from the years 2001‑02 to 2010‑11 reveals that the following vulnerable groups were at risk of suffering accidental burns injuries (AIHW 2013).

* *Young children* — Burn injury rates are highest for young children aged 0–4. The national incidence rate is higher for boys than girls aged 0–4.
* *Adolescent/young adult males* — Young adult males show consistently higher burn injury rates, with higher proportions of burn injuries from Exposure to ignition of highly flammable material (such as petrol) and Exposure to controlled fire, not in building or structure (such as campfire).
* *Remoteness of usual residence* — Burn injuries increased with remoteness. In 2010‑11, the lowest national rate was in Major cities (22 per 100 000 population) and the highest in Very remote areas (97).
* *Indigenous Australians* — The age‑standardised burn injury rates among Indigenous Australians are more than twice that of non‑Indigenous people. Indigenous Australians are also more likely to sustain severe burns injuries (APH 2010).

Fire hospitalisation rates need to be interpreted with caution because of the small number of fire injuries. There is also strong anecdotal evidence that reliance on hospital separation data may result in a significant underestimation of the number of people affected by burn injuries (Australian Government 2012). One method to overcome data volatility is to present fire hospitalisation rates as three‑year averages, which are reported in the attachment tables (table 9A.9).

#### Confinement to room/object of origin

‘Confinement to room/object of origin’ is an indicator of governments’ objective to reduce the adverse effects of fire emergency events on the community through a combination of its prevention/mitigation, preparedness, and response (box 9.11).

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| Box 9.11 Confinement to room/object of origin |
| ‘Confinement to room/object of origin’ is defined by two measures.   * Proportion of building fires confined to room of origin — A building fire is a fire that has caused some damage to a building structure (such as a house). Confinement of building fires to room of origin is a measure of the proportion of building fires confined to the room in which the fire originated. * Proportion of building and other structure fires confined to room/object of origin — Other structure fires are fires within a building structure (such as fires confined to rubbish bins, burnt foodstuffs and fires confined to cooking equipment). Confinement of building and other structure fires to object, part room and room of origin is a measure of the both the proportion of building fires andother structure fires confined to the room and/or object from which the fire originated.   A high or increasing proportion of structure fires confined to the object or room of origin is more desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Confinement to room/object of origin — Proportion of building fires confined to room of origin

The proportion of fires, from all ignition types, confined to room of origin varies across jurisdictions, and within jurisdictions over time (figure 9.16). Confinement of building fires to room of origin is reflective of the response strategies of the fire services to extinguish structure fires before they cause extensive building damage. It also reflects of the community’s overall mitigation and preparedness strategies such as constructing buildings that are fire resistant, the installation and maintenance of smoke alarms, and other fire safety practises.

Figure 9.16 Proportion of building fires confined to room of origin, all ignition types**a, b, c, d, e, f**

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| Figure 9.16 Proportion of building fires confined to room of origin, all ignition types.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note c), NT. c Qld: Structure fires within the Urban Levy Boundary are included. Excluded are non‑emergency calls and those where QFRS experienced delays due to either extreme weather conditions or where the initial response was by another agency or brigade. d WA: Total confinement percentages include fires confined but not classified as either accidental or suspicious. e SA: From 2011‑12 data includes reporting from both CFS and MFS. In prior years, data exclude the CFS as they did not routinely collect the source data. f Due to industrial action 90 incident reports are incomplete in 2008‑09.

*Source*: State and Territory governments (unpublished); tables 9A.10.

##### Confinement to room/object of origin — Proportion of building and other structure fires confined to room/object of origin

The proportion of building and other structure fires confined to room/object of origin is generally greater than for building fires confined to room of origin (figure 9.17). The measure incorporates object fires that do not necessary spread to the building. Other structure fires confined to object of origin is reflective of the community’s overall mitigation and preparedness strategies such as constructing ‘objects’ (such as electronic appliances, cooking equipment, and chimneys) that are fire resistant. It is also reflective of the community’s response abilities to contain a fire by having working fire alarms, fire extinguishers and/or fire blankets.

In all jurisdictions, the proportion of incendiary and suspicious structure fires confined to the object or room of origin was less than for accidental structure fires. Trends in individual jurisdictions’ rates varied (tables 9A.10‑9A.11).

Figure 9.17 Proportion of building and other structure fires confined to room/object of origin, all ignition types**a, b, c, d, e, f, g**

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| Figure 9.17 Proportion of building and other structure fires confined to room/object of origin, all ignition types.  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note d), NT. c NSW: Data for other structure fires confined to object of origin are not available prior to 2010‑11. d Qld: Data for other structure fires confined to object of origin are not available prior to 2010‑11. Structure fires within the Urban Levy Boundary are included. Excluded are non‑emergency calls and those where QFRS experienced delays due to either extreme weather conditions or where the initial response was by another agency or brigade. e WA: Total confinement percentages include fires confined but not classified as either accidental or suspicious. f SA: From 2011‑12 data includes reporting from both CFS and MFS. In prior years, data exclude the CFS as they did not routinely collect the source data. g Tas: Due to industrial action 90 incident reports are incomplete in 2008‑09.

*Source*: State and Territory governments (unpublished); tables 9A.11.

#### Value of asset losses from fire events

‘Value of asset losses from fire events’ (box 9.12) is an indicator of the effect of fire on property.

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| Box 9.12 Value of asset losses from structure fire |
| Value of asset losses from fire events’ is defined as the estimated monetary value of the damage to property and contents caused by the fire and fire‑fighting operations. It does not include land value. Two measures are presented.   * *Firefighter assessed property loss from structure fire* is the assessed asset losses recorded by the responding firefighter at the scene of a structure fire. Structure fires are fires in housing and other buildings and exclude losses from landscape fires.   Data are presented for median dollar losses and total dollar losses per person in the population. The median is the middle number in a sequence and is regarded as a more appropriate measure of ‘typical’ losses than the mean loss. |
| Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions. * *Value of insurance claims from fire events* is the sum of the incurred claims on insurance companies related to fires and explosions reported to Insurance Statistics Australia (ISA). Value of insurance claims from fire events, presented as: average domestic insurance claim from fire events; total domestic insurance claims from fire events per person; total commercial insurance claims from fire events per person.   Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * incomplete for the current reporting period. ISA estimate that their data cover approximately 69 per cent of the potential domestic insurance market (including uninsured dwellings) and 60 per cent of the commercial property market (table 9A.13).   Lower or decreasing asset losses from fire events represent a better outcome.  Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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##### Firefighter assessed property losses from structure fire

In real terms, the firefighter assessed median dollar loss and total property loss per person varies across jurisdictions and over time (figure 9.18). There are many factors that influence asset loss data including:

* the costs and values of various types of building (which are subject to jurisdictional differences)
* firefighter methods in estimating the value of asset loss
* structure fire events that causes a large asset losses, which can skew the data in a particular year.

Data for the median property loss and three year average property loss are also available in the attachment tables (table 9A.12).

Figure 9.18 Total firefighter assessed dollar loss per structure fire   
(2012‑13 dollars)**a, b, c, d, e, f**

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| Figure 9.18 Total firefighter assessed dollar loss per structure fire (2012 13 dollars).  More details can be found within the text surrounding this image. |

a Financial and activity data are affected by the reporting scope of each jurisdiction’s ‘fire service organisation’. See table 9A.3 for details for the scope of agencies’ reporting. b All jurisdictions provide data for both career and volunteer (rural) services other than the following jurisdictions: Qld (see note e), NT. c Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. d Some structure fires result in significant direct dollar losses leading to fluctuations in the series. See attachment table footnotes for jurisdiction specific information. Estimates are not validated by the insurance industry, or adjusted for interstate valuation differences. e Qld: Accurate identification of incidents attended by QFRS Rural brigades prior to the 2012‑13 fiscal year was not possible due to incomplete voluntary reporting procedures. Improved reporting practices have resulted in a higher rate of completion of incident reports for incidents where rural brigades are responsible. New procedures were fully implemented from 1 July 2013 in the endeavour to enhance the rate of reporting for volunteer attendances. QFRS Urban stations are estimated to serve 87.6 per cent of Queensland’s population. The 2010‑11 and 2011‑12 results are based on the values over the previous five years due to a systems issue. This issue has now been rectified and data is available from 2012‑13. f Tas: Due to industrial action 90 incident reports are incomplete in 2008‑09.

*Source*: State and Territory governments (unpublished); table 9A.12.

##### Value of insurance claims from fire events

Value of insurance claims from fire events are the actualcost to insurers related to fire event claims. Nationally in 2012‑13, household and commercial property insurance claims in relation to fire events (excluding major events) totalled $753.8 million.

Nationally in 2012‑13, domestic insurance fire event claims increased, with respect to:

* number of claims — from 9777 claims in 2008‑09 to 10 271 claims in 2012‑13
* average claim — a 47.4 per cent increase in real terms from an average claim of $30 345 in 2008‑09 to an average claim of $44 726 in 2012‑13
* claim per person — a 45.2 per cent increase in real terms from $13.81 per person in the population in 2008‑09 to $20.05 per person in the population in 2012‑13 (table 9A.13 and figure 9.19).

Figure 9.19 Total value of fire event insurance claims (2012‑13 dollars)a, b, c, d

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| Figure 9.19 Total value of fire event insurance claims 2012-13 dollars.  More details can be found within the text surrounding this image. |

a Not to be reproduced, published or used without the permission of Insurance Statistics Australia Limited. Please include acknowledgements of Insurance Statistics Australia Ltd as the source. b Data for commercial property are not available by State and Territory. c Data exclude major events (total claims greater than $100 million). d Tas: a large increase in the fire event insurance claims in 2012‑13 coincides with the Tasmanian 2013 bushfires. The insurance claims did not exceed $100 million and have therefore not been classified as a major event.

*Source*: ISA Database (2013), unpublished; table 9A.13.

Nationally, there were 2511 commercial insurance claim from fire events in 2012‑13. In real terms, the total commercial insurance claim from fire events per person in the population decreased 12.3 per cent from $14.66 per person in the population in 2007‑08 to $12.85 per person in the population in 2012‑13 (figure 9.19).

Data sourced from Insurance Statistics Australia (ISA) classify fire events that lead to incurred insurance claims in excess of $100 million as a ‘major event’ and exclude these claims from the fire events statistics (see Emergency management sector overview for analysis of ‘emergency events’). While the Tasmanian 2013 bushfires caused significant losses in the Tasmanian community, incurred insurance losses did not exceed the ISA threshold of $100 million.

The data need to be interpreted with caution as actual asset losses may deviate from incurred claims due to:

* *under insurance* — insurance payouts are limited by the estimated value of assets a policy holder provides when taking out insurance
* *market coverage* — data provided by ISA cover an estimated 68.9 per cent of Australian dwellings and 60 per cent of the commercial property market (table 9A.13)
* *new for old* — new for old policies replace an old asset for a new equivalent
* *excess policy* — most small fire incidents will not be recorded in the insurance data due to the need for policy holders to pay an excess prior to claim.

## 9.4 Profile of emergency services for ambulance events

Ambulance events are incidents that result in demand for ambulance services to respond, including: emergency and non‑emergency pre‑hospital and out‑of‑hospital patient care; transport; inter‑hospital patient transport; specialised rescue services; ambulance services to multi‑casualty events; and capacity building for emergencies. This section provides information on the performance of emergency service organisations in providing services for ambulance events and in preparing the community to respond to emergencies.

### Ambulance service organisations

Ambulance service organisations are the primary agencies involved in providing services for ambulance events. In a limited number of cases, other organisations provide services such as medical transport for emergencies (Emergency management sector overview — table DA.1). The descriptive information provided below on funding, incidents and human resources are for ambulance service organisations only. Ambulance assets are reported in table 9A.39.

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 (table 9A.32). Across jurisdictions the role of ambulance service organisations serves as an integral part of the health system. 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.

The role of paramedics is expanding to provide primary health care, improve emergency response capabilities and strengthen community healthcare collaborations (Stirling et al. 2007). In some rural and remote communities paramedics provide extended access to health service delivery. Access to health services in these areas is often lower than metropolitan areas (chapter 11), in part, due to the difficulty of recruiting and retaining health professionals. Expanding roles are also developing in some metropolitan areas, where paramedics provide care for patients through community health services as alternatives to emergency departments.

### Revenue and funding

Total revenue of ambulance service organisations covered in this chapter was approximately $2.6 billion in 2012‑13. Nationally, revenue increased each year from 2008‑09 to 2012‑13 (in real terms), with an average annual growth rate of 4.5 per cent (table 9.3).

Table 9.3 Revenue of ambulance service organisations (2012‑13 dollars) ($ million)**a, b**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2008-09 | 683.7 | 566.6 | 510.8 | 133.9 | 197.5 | 48.0 | 25.6 | 24.4 | 2 190.5 | | 2009-10 | 704.9 | 584.3 | 530.3 | 146.5 | 194.7 | 55.0 | 25.1 | 20.4 | 2 261.1 | | 2010-11 | 699.4 | 597.1 | 562.0 | 179.5 | 204.4 | 56.1 | 29.0 | 22.8 | 2 350.2 | | 2011-12 | 726.9 | 619.5 | 581.4 | 212.7 | 210.7 | 59.6 | 36.4 | 23.9 | 2 471.1 | | 2012-13 | 770.6 | 681.5 | 571.7 | 226.6 | 241.0 | 62.2 | 36.7 | 25.6 | 2 616.0 | | | | | | | | | | |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. Due to differences in definitions and counting rules, data reported may differ from data in agency annual reports and other sources. b Totals may not sum due to rounding. c Tas: 2011‑12 revenue data have been updated from that published in the ROGS 2013.

*Source*: State and Territory governments (unpublished); table 9A.33.

The primary sources of revenue across all jurisdictions in 2012‑13 were grants from State and Territory governments, transport fees (from public hospitals, private citizens and insurance) and other revenue (subscriptions, donations and miscellaneous revenue) (table 9A.33).

#### Aero‑medical arrangements in Australia

There are fixed and rotary wing (helicopter) ambulance services in all jurisdictions, although arrangements for air ambulance or aero‑medical services vary. In Queensland, WA, SA and NT, all or most of the funding of air ambulance services is external to the ambulance service organisations. Elsewhere the ambulance service organisations provide the service entirely, or they provide the air ambulance staff and an external organisation provide aircraft and crew. The Australian Government provides some capital and recurrent funding for the Royal Flying Doctor Service.

The Council of Ambulance Authorities (CAA) has identified that 80 air ambulance aircraft were available nationally in 2012‑13 (table 9.4). As a result of the varying funding arrangement ambulance service organisation air ambulance expenditure varies across jurisdictions substantially, with some jurisdictions recording low (or no) expenditure (table 9.4). (The expenditure figures do not represent the total cost, only that component funded through the ambulance service organisation.)

Table 9.4 Aero medical resources and expenditure, 2012‑13**a, b, c, d**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Operated by State Ambulance Service | | | | | | | | | | | Fixed wing | 5 | 4 | – | – | – | 1 | – | – | 10 | | Helicopter | 5 | 5 | – | – | – | – | – | – | 10 | | Operated by other service providers | | | | | | | | | | | Fixed wing | 1 | – | 14 | 13 | 7 | – | – | – | 35 | | Helicopter | 5 | – | 12 | 3 | 3 | 1 | 1 | – | 25 | | **Total aircraft** | **16** | **9** | **26** | **16** | **10** | **2** | **1** | **–** | **80** | | **Expenditure ($’000)** | **97 407** | **56 051** | **–** | **600** | **12 876** | **4 238** | **604** | **600** | **172 376** | | | | | | | | | | |

a Qld: The fixed wing network comprises of a total of 14 aircraft, which is made up of 11 primary response aircraft that are solely responsible for patient retrieval and transfers, and three traditional based aircraft that are utilised when not being used for day clinics. In addition, there are spare aircraft to support the fixed wing network. The helicopter network comprises of a total of 12 helicopters, which is supported by nine spare helicopters. b WA and SA: Fixed wing services are provided by the Royal Flying Doctor Service (RFDS). c Tas: Aircraft and pilot are provided by the RFDS under contract, aero medical crew are provided by the State. d NT: Fixed wing services are provided by the RFDS in central section, with Careflight providing rotary and fixed wing services in the ‘top end’ of the NT. – Nil or rounded to zero. na Not available.

*Source*: Council of Ambulance Authorities (CAA) (unpublished); table 9A.40.

### Human resources

Nationally in 2012‑13, 15 220 FTE salaried personnel were involved in the delivery of ambulance services. The majority of salaried ambulance personnel in 2012‑13 were ambulance operatives (81.8 per cent) (such as patient transport officers, students and base level ambulance officers, qualified ambulance officers, other clinical personnel and communications operatives) (table 9A.36).

Nationally, 7456 volunteer personnel (comprising 6874 operatives and 582 support personnel) participated in the delivery of ambulance services in 2012‑13. The proportion of volunteer personnel and the nature of their role varied across jurisdictions. Given the decentralised structure of its ambulance service operations, WA has a relatively higher number of volunteer operational and corporate support personnel (table 9A.36).

Nationally, there were 2323 ambulance community first responders in 2012‑13 (table 9A.36). Community first responders are trained volunteers that provide an emergency response (with no transport capacity) and first aid care before ambulance arrival. In some locations the first responder service is provided by another emergency service agency, for example, a fire service.

### Demand for ambulance services

#### Ambulance incidents, responses and patients per 1000 people

The numbers of incidents, responses and patients are interrelated. Nationally in 2012‑13, there were:

* 3.3 million incidents — events that result in a demand for ambulance resources to respond
* resulting in 4.1 million responses (179 responses per 1000 people) — incidents where a vehicle or vehicles sent to an incident. 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
* for 3.2 million patients (138 patients per 1000 people) — a person assessed, treated or transported by the ambulance service (figure 9.20).

#### Incidents

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 2012‑13, of the 3.3 million incidents ambulance service organisations attended, most were prioritised by the ambulance service organisations as emergency incidents (43.7 per cent). Ambulance service organisations also attended a large number of urgent incidents (24.6 per cent) and non‑emergency incidents (31.6 per cent) (table 9A.34).

Figure 9.20 Reported ambulance incidents, responses and patients, 2012‑13**a, b, c, d, e**

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| Figure 9.20 Reported ambulance incidents, responses and patients 2012-13.  More details can be found within the text surrounding this image. |

a Vic: Incidents and responses are for road ambulances only. b WA: Does not have a policy of automatically dispatching more than one unit to an incident unless advised of more than one patient. Separate statistics are not kept for incidents and responses. Numbers shown under incidents are cases. c NT: A response is counted as an incident. Data for incidents are not available and are not included in the rate for Australia. d Aust: Data for incidents excludes NT. e Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. Financial year population estimates are the midpoint estimate of the relevant financial year (that is, as at 31 December).

*Source*: State and Territory governments (unpublished); table 9A.34.

#### Emergency department triage category by ambulance transport rate

Emergency department presentation rates and demand for ambulance services are closely linked. In 2012‑13, 1.6 million patients arrived at an emergency department by ambulance, air ambulance, or helicopter (24.4 per cent of all emergency department patients) (table 9A.35 and figure 9.21). Of these, 38 363 patients were assessed by emergency department staff to have immediately life threatening conditions on arrival at hospital (triage category ‘resuscitation’). In total, 84.7 per cent of all emergency department resuscitation patients arrived by ambulance, air ambulance, or helicopter in 2012‑13.

Figure 9.21 Emergency department patients who arrived by ambulance, air ambulance or helicopter rescue services, by triage category 2012‑13 (per cent)**a**

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| Figure 9.21 Emergency department patients who arrived by ambulance, air ambulance or helicopter rescue services, by triage category 2012- 13 (per cent).  More details can be found within the text surrounding this image. |

a Total presentations includes presentations for which the triage category was not reported.

*Source*: AIHW (2013) *Australian Hospital Statistics 2012‑13: emergency department care*, Health services series 52, Cat. no. HSE 142; table 9A.35.

## 9.5 Framework of performance indicators for ambulance events

Performance can be defined in terms of how well a service meets its objectives, given its operating environment. Performance indicators focus on outcomes and/or outputs aimed at meeting common, agreed objectives. The Steering Committee has identified four objectives of ambulance services for the purposes of this Report (box 9.13).

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of ambulance services (figure 9.22). This framework is based on the general framework for the health section of the 2014 Report and shows which data are complete and comparable in the Report. For data that are not considered directly comparable, the text includes relevant caveats and supporting commentary. Chapter 1 discusses data comparability from a Report‑wide perspective (see section 1.6).

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| Box 9.13 Objectives for emergency services for ambulance events |
| Governments’ involvement in ambulance services is aimed at providing pre‑hospital and out‑of‑hospital care and patient transport services, that:   * are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care * are equitable and accessible * are effectively, efficiently and sustainably delivered * reduce the adverse effects of emergency events on the community by providing specialised medical care in emergency situations.   Ambulance services also contribute to managing community risks and enhancing public safety through various measures including fostering public education in first aid. |
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Data quality information (DQI) is being progressively introduced for all indicators in the Report. The purpose of DQI is to provide structured and consistent information about quality aspects of data reporting on performance indicators, in addition to material in the chapter or sector overview and its associated attachment tables. DQI in this Report cover the seven dimensions in the ABS’ data quality framework (institutional environment, relevance, timeliness, accuracy, coherence, accessibility and interpretability) in addition to dimensions that define and describe performance indicators in a consistent manner, and key data gaps and issues identified by the Steering Committee. All DQI for the 2014 Report can be found at www.pc.gov.au/gsp/reports/rogs/2014.

The Report’s statistical context chapter contains data that may assist in interpreting the performance indicators presented in this chapter. These data cover a range of demographic and geographic characteristics, including age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (including Indigenous and ethnic status) (chapter 2).

Figure 9.22 Ambulance events performance indicator framework

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| Figure 9.22 Ambulance events performance indicator framework  More details can be found within the text surrounding this image. |

## 9.6 Key performance indicator results for ambulance events

### Outputs

Outputs are the services delivered (while outcomes are the impact of these services on the status of an individual or group) (see chapter 1, section 1.5).

#### Equity — access

Equity of access indicators measure access to services by groups in the community who may have special needs — this chapter provides data on services provided in remote locations, but not on other special needs groups.

##### Response locations

‘Response locations’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are equitable and accessible (box 9.14).

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| Box 9.14 Response locations |
| ‘Response locations’ is defined as the number of paid (or salaried), mixed and volunteer response locations per 100 000 people. Locations are primary ambulance response locations where paid, volunteer or a mix of paid and volunteer ambulance operatives are responding in an ambulance vehicle and providing pre‑hospital care.  Higher or increasing numbers of paid, mixed and/or volunteer response locations, after adjusting for population, suggests better ambulance service response capacity.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Nationally in 2012‑13, the number of salaried, mixed and volunteer response locations was 5.1 per 100 000 people, but varied across jurisdictions (table 9A.38 and figure 9.23). Since 2008‑09, the number of response locations has remained between 5.0 and 5.2 locations per 100 000 people.

Figure 9.23 Total number of ambulance response locations, per 100 000 people, by type of station, 2012‑13**a, b, c, d, e**

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| Figure 9.23 Total number of ambulance response locations, per 100 000 people, by type of station, 2012- 13.  More details can be found within the text surrounding this image. |

a Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. b Some jurisdictions do not satisfy the criteria for all the staffing categories. c Vic: As of 2012‑13, volunteer response locations that do not have a physical building present have also been included. d Qld: There are no mixed response locations in Queensland. e ACT: There are no mixed or volunteer only response locations in the ACT.

*Source*: State and Territory governments (unpublished); table 9A.38.

This indicator should be considered in context of the ‘availability of paramedics’ indicator (box 9.15), which shows the ambulance workforce can comprise a large proportion of volunteers. Similarly, ambulance locations may be staffed by paid ambulance officers, volunteer ambulance officers, or a mix. Some jurisdictions comprise a large proportion of volunteer ambulance locations, particularly in rural and remote locations.

The number and type of ambulance locations also helps explain variation in expenditure for ambulance services across jurisdictions. For example, in some jurisdictions, smaller rural areas are serviced by paid ambulance personnel whereas in others, there may be a mix of paid and volunteer personnel or wholly volunteer personnel. Service delivery strategies have a significant impact on cost and help explain differentials in expenditure per person between jurisdictions.

##### Availability of ambulance officers/paramedics

‘Availability of ambulance officers/paramedics’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are equitable and accessible (box 9.15).

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| Box 9.15 Availability of ambulance officers/paramedics |
| ‘Availability of ambulance officers/paramedics’ is defined as the number of full time equivalent ambulance officers/paramedics per 100 000 people. Ambulance officers/ paramedics includes student and base level ambulance officers and qualified ambulance officers but excludes patient transport officers.  High or increasing availability of ambulance officers/paramedics per 100 000 people (indicating high or increasing ambulance service availability) is desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
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Nationally, there were 46.4 FTE ambulance officers per 100 000 people in 2012‑13. The total number of ambulance officers and the proportion of student and base level ambulance officers varied across jurisdictions (table 9A.36 and figure 9.24).

In the jurisdictions that utilise a higher number of volunteers, the number of paid FTE ambulance officers may be lower — suggesting a lower level of access according to the indicator. However, volunteers are often utilised to provide ambulance access to small rural areas which have low frequency of medical emergencies. Providing paid paramedics in these locations is costly and raises issues with skills maintenance for paramedics whose caseload is low. This indicator is complemented by the response locations indicator, which identifies jurisdictions that provide an ambulance response utilising volunteers (box 9.14).

Figure 9.24 Number of full time equivalent ambulance officers**a, b, c**

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| Figure 9.24 Number of full time equivalent ambulance officers.  More details can be found within the text surrounding this image. |

a Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details.

*Source*: State and Territory governments (unpublished); table 9A.36.

##### Ambulance response times

The next three indicators relate to ambulance response times as defined in box 9.16.

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| Box 9.16 Ambulance response times definition |
| ‘Response times’ (as illustrated below) is defined as the time taken between the arrival of the first responding ambulance resource at the scene of an emergency and the initial receipt of the call for an emergency ambulance at the communications centre.  Box 9.16 Ambulance response times definitions.  More details can be found within the text surrounding this image. |
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| Box 9.16 Continued |
| For this Report, response times are calculated:   * in code 1 situations — responses to potentially life threatening situations that necessitates the use of ambulance warning devices (lights and sirens) * at the 50th and 90th percentile — the time within which 50 per cent and 90 per cent of the first responding ambulance resources arrive at the scene of an emergency.   Although definitions of response times are consistent, not all jurisdictions have systems in place to capture all components of response time for all cases. |
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##### Urban centre response times

‘Urban centre response times’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are equitable and accessible (box 9.17).

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| Box 9.17 Urban centre response times |
| ‘Urban centre response times’ (as illustrated in box 9.16) is defined as the time taken between the arrival of the first responding ambulance resource at the scene of an emergency in code 1 situations and the initial receipt of the call for an emergency ambulance at the communications centre, in urban centres.  Urban centre response times are currently measured by the response times within each jurisdictions’ *capital city* — boundaries based on the ABS Urban Centres Localities structure. Capital cities are Sydney, Melbourne, Brisbane, Perth, Adelaide, Hobart, Canberra and Darwin.  Short or reducing response times suggest the adverse effects on patients and the community of emergencies requiring ambulance services are reduced.  This indicator might be further developed to report data for urban centres with populations of 50 000 and above in future reports. |
| Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
|  |

In 2012‑13, the time within which 90 per cent of the capital city first responding ambulance resources arrived at the scene of an emergency in code 1 situations ranged from 13.7 to 20.6 minutes across jurisdictions (figure 9.25). The median (50th percentile) response times ranged from 8.2 to 10.9 minutes (table 9A.44).

Differences across jurisdictions in the geography and personnel mix can affect capital city response times data. Factors that can impact on capital city response time performance include:

* land area, and population size and density, which varies considerably across Australian capital cities
* capital city topography, road/transport infrastructure and traffic densities
* crewing configurations, response systems and processes, and travel distances.

Figure 9.25 Ambulance response times, capital city, 90th percentile**a, b, c**

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| Figure 9.25 Ambulance response times, capital city 90th percentile.  More details can be found within the text surrounding this image. |

a Response times commence from the following time points: NSW, Queensland and WA from transfer to dispatch; Victoria, SA, Tasmania and the ACT from the first key stroke; and, the NT from when a crew is dispatched. b Capital city response times are calculated using urban centre boundaries based on the ABS Urban Centres Localities structure. Response times for NSW and SA do not strictly adhere to the urban centre boundaries. c Qld: Casualty room attendances are not included in response count and, therefore, are not reflected in response times data. Response time calculations for percentiles for Capital city were sourced from the CAD system.

*Source*: ABS (2008 and unpublished) *Statistical Geography: Volume 3 — Australian Standard Geographical Classification (ASGC) Urban Centres Localities, 2006,* Cat. no. 2909.0, Canberra; State and Territory governments (unpublished); table 9A.44.

#### Effectiveness — access

Effectiveness of access indicators measure how well the outputs of a service achieve the stated objective(s) of that service in a timely and affordable manner to the community.

##### State‑wide response times

‘State‑wide response times’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.18).

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| Box 9.18 State‑wide response times |
| ‘State‑wide response times’ (as illustrated in box 9.16) is defined as the time taken between the arrival of the first responding ambulance resource at the scene of an emergency in code 1 situations and the initial receipt of the call for an emergency ambulance at the communications centre, for state‑wide responses.  Short or reducing response times suggest the adverse effects on patients and the community of emergencies requiring ambulance services are reduced.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
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In 2012‑13, the time within which 90 per cent of the state‑wide first responding ambulance resources arrived at the scene of an emergency in code 1 situations ranged from 13.7 to 23.0 minutes. Over the past 5 years, the change in response times has varied between jurisdictions (figure 9.26). The median (50th percentile) response times ranged from 8.2 to 11.2 minutes (table 9A.44).

Differences across jurisdictions in the geography, personnel mix, and system type for capturing data, affect state‑wide response times data. Factors that can impact on state‑wide response time performance include:

* the dispersion of the population (particularly rural/urban population proportions), topography, road/transport infrastructure and traffic densities
* crewing configurations, response systems and processes, and travel distances — for example, some jurisdictions include responses from volunteer stations (often in rural areas) where turnout times are generally longer because volunteers are on call as distinct from being on duty
* land area, and population size and density — for example, data calculated on a state‑wide basis for some jurisdictions represent responses to urban, rural and remote areas, while others include urban centres only.

Figure 9.26 Ambulance response times, state‑wide, 90th percentile**a, b**

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| Figure 9.26 Ambulance response times, state-wide, 90th percentile.  More details can be found within the text surrounding this image. |

a Response times commence from the following time points: NSW, Queensland and WA from transfer to dispatch; Victoria SA and the ACT from the first key stroke; Tasmania from the time at which enough details to initiate an ambulance response have been recorded; and, the NT from when a crew is dispatched. b Qld: Casualty room attendances are not included in response count and, therefore, are not reflected in response times data. Response time calculations for percentiles for state‑wide were sourced from the CAD system.

*Source*: State and Territory governments (unpublished); table 9A.44.

##### Triple zero (000) call answering time

‘Triple zero (000) call answering time’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.19).

*The Telecommunications (Emergency Call Persons) Determination 1999* (Cwlth), recognises Telstra as the national operator of emergency call services for the triple zero (000) and 112 emergency service numbers. The emergency call service answers triple zero (000) calls and transfers them, with relevant associated information, to the requested emergency service organisation. The Australian Communication Exchange has the same responsibility with regard to the emergency service number 106 Text Emergency Relay Service number, for callers who are deaf or who have a hearing or a speech impairment (AGD 2013b).

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| Box 9.19 Triple zero (000) call answering time |
| ‘Triple zero (000) call answering time’ for ambulance services (as illustrated in box 9.16) is defined as the time interval commencing when the emergency call service has answered the triple zero (000) call and selected the desired emergency service organisation to when the ambulance service organisation has answered the call.  It is measured as the percentage of triple zero (000) calls that were answered by ambulance service communication centre staff in a time equal to or less than 10 seconds.  The greater the percentage of triple zero (000) calls answered within 10 seconds suggests the adverse effects on patients and the community of emergencies requiring ambulance services are reduced.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Nationally in 2012‑13, ambulance service organisations answered 89.9 per cent of calls from the emergency call service for triple zero (000) within ten seconds or less, although this proportion varied across jurisdictions (figure 9.27).

Figure 9.27 Proportion of calls from the emergency call service answered by ambulance service communication centre staff in a time equal to or less than 10 seconds, 2012‑13a, b, c

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| Figure 9.27 Proportion of calls from the emergency call service answered by ambulance service communication centre staff in a time equal to or less than 10 seconds, 2012 -13.  More details can be found within the text surrounding this image. |

a Ambulance Service triple zero (000) call answering time is defined as the time interval commencing when the emergency call service has answered the triple zero (000) call and selected the desired emergency service organisation to when the ambulance service organisation has answered the call. b Data sourced from Telstra may include additional time as the Emergency Call Person (Telstra) ensures the call has been answered which may involve some three way conversation. Some services subtract a fixed time from the Telstra reported times to allow for the time after the call is answered until the Telstra agent disconnects from the call. c SA: SA Ambulance Service sources data from internal systems and might not be comparable with other services where data are provided by Telstra.

*Source*: State and Territory governments; table 9A.45.

#### Effectiveness — appropriateness

Appropriateness indicators measure governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.20).

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| Box 9.20 Performance indicator — appropriateness |
| ‘Appropriateness’ indicators measure how well services meet clients’ needs.  Appropriateness has been identified as a key area for development in future reports. |
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#### Effectiveness — quality — safety

Quality indicators reflect the extent to which a service is suited to its purpose and conforms to specifications where specific aspects of quality can be measured against.

Safety is the avoidance, or reduction to acceptable levels, of actual or potential harm from ambulance services. Safety has been identified as a key area for development in future reports.

##### Clinical incidents

‘Clinical incidents’ have been identified as an overarching indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.21).

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| Box 9.21 Clinical incidents |
| ‘Clinical incidents’ are broadly defined as adverse events that occur because of ambulance service system failure, which result in death or serious harm to a patient.  Clinical incidents will incorporate a wider range of categories than sentinel events. A sentinel event is an adverse event that occurs because of health system and process deficiencies and which results in the death of, or serious harm to, a patient.  This indicator has been identified for development (through the CAA and in accordance with national health‑wide reporting standards) and reporting in future. |
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#### Effectiveness — quality — clinical

Clinical indicators measure the effectiveness and quality of clinical interventions and treatments. Clinical indicators have been identified as a key area for development in future reports.

##### Clinical interventions and treatments

‘Clinical interventions and treatments’ has been identified as an overarching indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.22).

The indicator ‘cardiac arrest survived event rate’ reported in the outcomes section of this chapter has strong links to clinical interventions and treatments.

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| Box 9.22 Clinical interventions and treatments |
| ‘Clinical interventions and treatments’ is yet to be defined.  In the short to medium term, the clinical dimension is likely to provide indicators of service outputs and outcomes. In the longer term additional clinical measures might include indicators of the effectiveness of ambulance services interventions and treatments.  Current development work is focused on the pain management indicator (in the ambulance events outcomes section) and an indicator of cardiac arrest survival to hospital discharge.  This indicator has been identified for development (through the CAA) and reporting in future. |
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#### Effectiveness — quality — responsiveness

Responsiveness is the provision of services that are client orientated and respectful of clients’ dignity, autonomy, confidentiality, amenity, choices, and social and cultural needs.

Patient satisfaction reported in the outcomes section of this chapter has strong links to responsiveness.

#### Effectiveness — quality — continuity

Continuity is the provision of uninterrupted, timely, coordinated healthcare, interventions and actions across programs, practitioners and organisations. The Steering Committee has identified continuity as a key area for development in future reports.

##### Continuity of care

‘Continuity of care’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.23).

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| Box 9.23 Continuity of care |
| ‘Continuity of care’ has been broadly defined as transporting the right patient to the right hospital. Some ambulance services have developed protocols under which patients with particular conditions (for example, cardiac and stroke) are transported directly to the hospital or specialised centre where the best treatment for their needs can be provided, rather than transported to the closest hospital where those services might not be available. Transporting critically injured patients directly to specialised Trauma Centres is a further example.  This indicator has been identified for development (through the CAA) and reporting in future. |
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#### Effectiveness — sustainability

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.

##### Workforce by age group

‘Workforce by age group’ is an indicator of governments’ objective of pre‑hospital and out‑of‑hospital care and patient transport services, that are effectively, efficiently and sustainably delivered (box 9.24).

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| Box 9.24 Workforce by age group |
| ‘Workforce by age group’ is defined as the age profile of the workforce, measured by the proportion of the operational workforce in 10 year age brackets (under 30, 30–39, 40–49, 50–59 and 60 and over).  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, the more likely sustainability problems are to arise in the coming decade as the older age group starts to retire.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Nationally in 2012‑13, 79.1 per cent of the ambulance workforce were aged under 50, a slight increase from 78.8 in 2011‑12 (table 9A.37 and figure 9.28).

Figure 9.28 Ambulance workforce, by age group, 2012‑13

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| Figure 9.28 Ambulance workforce, by age group 2012-13.  More details can be found within the text surrounding this image. |

*Source*: State and Territory governments (unpublished), table 9A.37.

##### Staff attrition

‘Staff attrition’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are effectively, efficiently and sustainably delivered (box 9.25).

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| Box 9.25 Staff attrition |
| ‘Staff attrition’ is defined as level of attrition in the operational workforce. It is calculated as the number of FTE employees who exit the organisation as a proportion of the number of FTE employees. It is based on staff FTE defined as operational positions where paramedic qualifications are either essential or desirable to the role.  Low or decreasing levels of staff attrition are desirable.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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The proportion of attrition in the ambulance workforce for each jurisdiction is shown in figure 9.29. Nationally, the staff attrition rate was 4.3 per cent in 2012‑13.

Figure 9.29 Ambulance staff attrition**a**

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| Figure 9.29 Ambulance staff attrition.  More details can be found within the text surrounding this image. |

a Staff attrition volatility in some jurisdictions is partially due to the relatively small number of staff.

*Source*: State and Territory governments (unpublished), table 9A.37.

#### Efficiency

Care needs to be taken when comparing efficiency data across jurisdictions because there are differences in the reporting of a range of cost items and funding arrangements (funding policies and taxing regimes). Some jurisdictions, for example, have a greater proportion of government funding relative to levies compared with other jurisdictions. Also, differences in geographic size, terrain, climate, and population dispersal may affect costs of infrastructure and numbers of service delivery locations per person.

##### Ambulance service organisation’s expenditure per person

‘Ambulance service organisations’ expenditure per person’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are effectively, efficiently and sustainably delivered (box 9.26).

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

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| Box 9.26 Ambulance service expenditure per person |
| ‘Ambulance service organisations’ expenditure per person’ is defined as total ambulance service organisation expenditure per person in the population.  All else being equal, lower expenditure per person represents greater efficiency. However, efficiency data are difficult to interpret. While high or increasing expenditure per person may reflect deteriorating efficiency, it may also reflect changes in aspects of the service (such as improved response) or the characteristics of events requiring ambulance service response (such as more serious para‑medical challenges). Similarly, low or declining expenditure per person may reflect improving efficiency or lower quality responses or less challenging cases.  Expenditure per person is employed as a proxy for efficiency. Expenditure per ambulance event is not used as a proxy for ambulance service organisation efficiency because an organisation that applies more resources to the prevention and preparedness components of community safety to reduce the demand for ambulance services could erroneously appear to be less efficient.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
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Nationally, total expenditure on ambulance service organisations was $2.5 billion, or $108.94 per person in 2012‑13 (table 9A.46 and figure 9.30).

Within Australia, different jurisdictions have selected different funding models to provide resourcing to ambulance service organisations. The proportions of funding sources varied across jurisdictions (figure 9.31).

Nationally in 2012‑13, total government grants and indirect government funding formed the greatest proportion of ambulance service organisations funding at $79.55 per person in the population (69.7 per cent of total funding for ambulance service organisations).

The contribution of transport fees (such as fees collected from (uninsured) citizens or from motor accident insurers) in 2012‑13 averaged $26.62 per person (23.3 per cent of total funding for ambulance service organisations).

The remaining $8.04 funding per person was from other revenue (table 9A.48), which includes subscription (or ambulance membership) fees, which are substantial in some jurisdictions.

Figure 9.30 Ambulance service organisations’ expenditure per person (2012‑13 dollars)a, b, c, d

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| Figure 9.30 Ambulance service organisations expenditure per person 2012-13 dollars.  More details can be found within the text surrounding this image. |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. b Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. c WA and NT: use a contracted service model for ambulance services. d SA: 2011‑12 SA Ambulance Service (SAA) results include some significant once‑off items. In 2012 revaluations caused increases in (1) Long Service Leave Liability, up by about $9 million, and (2) the Defined Benefit Superannuation Fund liability which experienced an actuarial loss of about $24 million. The 2011‑12 results also include back‑pay for an Enterprise Bargaining Agreement resulting in a retrospective adjustment of approximately $4 million. 2008‑09 data reflect three significant events (1) increase in wages (2) subsequent back pay paid to frontline paramedics from the 2007 enterprise bargaining agreement and (3) an increase in the number of frontline paramedics recruited.

*Source*: State and Territory governments (unpublished); table 9A.47.

Figure 9.31 Sources of ambulance service organisations’ revenue per person, 2012‑13**a, b, c**

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| Figure 9.31 Sources of ambulance service organisations revenue per person, 2012-13.  More details can be found within the text surrounding this image. |

a Time series financial data are adjusted to 2012‑13 dollars using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2012‑13 = 100) (table 2A.51). The GGFCE replaces the Gross Domestic Product implicit price deflator used in previous editions. See chapter 2 (section 2.5) for details. b Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See chapter 2 (table 2A.1‑2) for details. c Subscriptions and other comprises revenue from subscriptions, donations and miscellaneous revenue.

*Source*: State and Territory governments (unpublished); table 9A.48.

##### Expenditure per urgent and non‑urgent response

‘Expenditure per urgent and non‑urgent response’ has been identified for development as an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are effectively, efficiently and sustainably delivered (box 9.27).

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| Box 9.27 Expenditure per urgent and non‑urgent response |
| ‘Expenditure per urgent and non‑urgent response’ is yet to be defined.  This indicator has been identified for development (through the CAA) and reporting in future. |
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### Outcomes

Outcomes are the impact of services on the status of an individual or group (while outputs are the services delivered) (see chapter 1, section 1.5).

#### Cardiac arrest survived event rate

‘Cardiac arrest survived event rate’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.28). Cardiac arrest data are not comparable across jurisdictions and the CAA is undertaking a review to improve data comparability for this indicator.

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| Box 9.28 Cardiac arrest survived event rate |
| ‘Cardiac arrest survived event rate’ is defined by the percentage 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 measures are provided as the percentage of patients aged 16 years and over who had a return to spontaneous circulation in the following circumstances:   * *Adult cardiac arrest where resuscitation attempted* — where: (1) a person was in out‑of‑hospital cardiac arrest (which was not witnessed by a paramedic); and (2) chest compressions and/or defibrillation was undertaken by ambulance or emergency medical services personnel. * *Adult VF/VT cardiac arrests* — where: (1) a person was in out‑of‑hospital cardiac arrest (which was not witnessed by a paramedic); and (2) the arrest rhythm on the first ECG assessment was either Ventricular Fibrillation or Ventricular Tachycardia (VF/VT) (irregular and/or fast heartbeat). * *Paramedic witnessed cardiac arrest* — where a person was in out‑of‑hospital cardiac arrest that occurred in the presence of ambulance paramedic or officer.   A high or increasing cardiac arrest survived event rate is desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period. All required data are not available for NSW.   Data quality information for this indicator is under development. |
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For those jurisdictions for which data are available, most jurisdictions show improving out‑of‑hospital cardiac arrest survival rates over eight years (table 9A.41).

Across jurisdictions the survival rate for patients in Ventricular Fibrillation (VF) or Ventricular Tachycardia (VT) cardiac arrest are higher than for other adult cardiac arrests (figure 9.32). Patients that suffer a VF/VT cardiac arrest more likely to have better outcomes compared with other causes of cardiac arrest as these conditions are primarily correctable through defibrillation.

Figure 9.32 Cardiac arrest survived event rate, 2012‑13**a, b, c, d, e, f**

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| Figure 9.32 Cardiac arrest survived event rate 2012-13.  More details can be found within the text surrounding this image. |

a A ‘survived event’ is defined as the patient having return of spontaneous circulation on arrival to hospital (that is, the patient having a pulse). This is not the same as the patient surviving the cardiac arrest as this is only one factor that contributes to the overall likelihood of survival. b The measure ‘adult cardiac arrests where resuscitation attempted’ provides an overall indicator of outcome without specific consideration to other factors known to influence survival. c NSW: Data consistency issues mean that this measure is unable to be reported. NSW is awaiting the development of a national methodology for calculation of this measure prior to revising its internalprocesses.dVic: Excludespatients with unknown rhythm on arrival at hospital. eTas: Data inconsistency issues — resulting from the introduction of improved counting procedures in 2013 — mean that Paramedic Witnessed event data are unable to be reported. f Cardiac arrest data are not comparable between jurisdictions due to different methods of reporting. Data are only comparable between years for each individual jurisdiction (subject to caveats).

*Source*: State and Territory governments (unpublished); table 9A.41.

Similarly, the survival rate from paramedic witnessed out‑of‑hospital cardiac arrests are higher than for other adult out‑of‑hospital cardiac arrests (excluding VF/VT cardiac arrests). Cardiac arrests that are treated immediately by the paramedic have a better likelihood of survival due to immediate and rapid intervention. This is substantially different to cardiac arrests occurring prior to the ambulance arriving where such increasing periods of treatment delay are known to negatively influence outcome (figure 9.32).

#### Cardiac arrest survival to hospital discharge

‘Cardiac arrest survival to hospital discharge’ has been identified for development as an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.29).

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| Box 9.29 Cardiac arrest survival to hospital discharge |
| ‘Cardiac arrest survival to hospital discharge’ is yet to be defined.  A high or increasing survival rate is a desirable outcome.  This indicator has been identified for development (through the CAA) and reporting in future. |
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#### Pain management

‘Pain management’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.30).

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| Box 9.30 Pain management |
| ‘Pain management’ is defined as the percentage of patients who report a clinically meaningful pain reduction. Clinically meaningful pain reduction is defined as a minimum 2 point reduction in pain score from first to final recorded measurement.  Included are patients who:   * are aged 16 years and 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) on a Numeric Rating Scale * recorded an initial pain score of 7 or above on the Numeric Rating Scale of 1–10.   Excluded are patients who refuse pain medication for whatever reason.  The greater the percentage of patients with relieved pain at the end of ambulance service treatment suggests an improved patient outcome. |
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| Box 9.30 Continued |
| Data reported for this measure are:   * not comparable across jurisdictions * incomplete for the current reporting period. All required 2012‑13 data are not available for SA, the ACT, and the NT.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Ambulance services aim to control pain to a comfortable level for all patients (or in selected cases aim for the abolition of pain). This may be achieved by providing out‑of‑hospital treatment and care to the injury or illness, the use of pain relief medications (analgesics), or a combination of the two. In 2012‑13, across the jurisdictions for which data are available, 84.2 per cent of patients who initially reported severe pain to an ambulance service (a pain score of 7 or above on the Numeric Rating Scale), reported clinically meaningful pain reduction at the end of the service.

Figure 9.33 Patients who report a clinically meaningful pain reduction, 2012‑13a, b, c, d, e

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| Figure 9.33 Patients who report a clincially meaningful pain reduction 2012-13.  More details can be found within the text surrounding this image. |

a Included are patients who: are aged 16 years and 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) on a Numeric Rating Scale; and, recorded an initial pain score of 7 or above on the Numeric Rating Scale of 1‑10. Excluded are patients who refuse pain medication for whatever reason. b Clinically meaningful pain reduction is defined as a minimum 2 point reduction in pain score from first to final recorded measurement. c Qld: For cardiac patients analgesia includes Glyceryl trinitrate and Morphine. For trauma and non‑specified aetiology patients analgesia includes Morphine, Ketamine, Fentanyl and Methoxyflurane. d WA: Where the date of birth of the patient is not recorded/missing, the case is excluded. e Data are not available for SA, the ACT, and the NT. Australian total excludes SA, the ACT, and the NT.

*Source*: State and Territory governments (unpublished); table 9A.42.

#### Level of patient satisfaction

‘Level of patient satisfaction’ is an indicator of governments’ objective of providing pre‑hospital and out‑of‑hospital care and patient transport services, that are high quality, timely, and meet clients’ needs through delivery of coordinated and responsive health care (box 9.31).

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| Box 9.31 Level of patient satisfaction |
| ‘Level of patient satisfaction’ is defined as the total number of patients who were either ‘satisfied’ or ‘very satisfied’ with ambulance services they had received in the previous 12 months, divided by the total number of patients that responded to the *National Patient Satisfaction Survey* (CAA 2013).  A higher level or increase in the proportion of patients who were either ‘satisfied’ or ‘very satisfied’ suggests greater success in meeting patient needs.  Data for these measures are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Data quality information for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
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Nationally, in 2013, 98 per cent of patients indicated that they were satisfied or very satisfied with the ambulance, with no statistically significant differences across jurisdictions. Over ten years, the estimated overall satisfaction levels for ambulance patients were similar across all jurisdictions. Similarly, there are small differences across jurisdictions for particular aspects of the ambulance service (figure 9.34).

Figure 9.34 Proportion of ambulance users who were satisfied or very satisfied with the ambulance service, 2013**a**

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| Figure 9.34 Proportion of ambulance users who were satisfied of very satisfied with the ambulance service 2013.  More details can be found within the text surrounding this image. |

a Based on a survey of people who used an ambulance service in the previous 12 months. Jurisdictions conducted the surveys at various times during each year. Standard errors for the 95 per cent confidence interval for overall patient satisfaction are included.

*Source*: CAA 2013, *Council of Ambulance Authorities Patient Satisfaction Survey 2013*; table 9A.43.

## 9.7 Future directions in performance reporting

A number of developments are underway to improve the comparability and accuracy of data, and to expand the scope of reporting on emergency services. Performance indicators for fire and ambulance services are being improved with the assistance of the Australasian Fire and Emergency Service Authorities Council, the Australian Council of State Emergency Services and the CAA.

### Fire events

Fire service organisations are cooperating to improve the standards for the collection of fire events data, which is evident by the inclusion of rural fire service organisations data by more jurisdictions in recent years. Improvements in data comparability are expected in future reports.

Performance measures are currently being developed for the reporting of fires in the landscape. The long‑term aim is to report annually on the measures for each relevant jurisdiction across Australia. The key landscape fire performance measures that have been agreed to in concept for inclusion in future editions of the Report, subject to the availability of data, are ‘landscape fire injuries per 100 000 people’ and, subject to identification of appropriate denominators to facilitate comparative reporting ‘number of primary dwellings affected by landscape fire’ and ‘total number of hours by volunteers on landscape fire suppression’.

The Emergency Management Working Group (EMWG) is also investigating:

* new indicators of fire risk prevention/mitigation activities. The usefulness of proportion of households with smoke alarms as a performance measure is diminishing as it approaches 90–100 per cent in many jurisdictions (where measured)
* alternative fire service response indicators. Response time to structure fire measures do not fully address fire service organisation effectiveness in responding to and managing fires.

### Ambulance events

Two new ambulance events indicators (pain management and triple zero (000) response time) were introduced in the 2014 Report. Ambulance event reporting will focus on further developing these indicators and those introduced in the 2009 Report. In particular, the EMWG will aim to improve the comparability and completeness of the cardiac arrest survived event indicator.

Several indicators of the ambulance events performance indicator framework that not yet able to be measured. The EMWG, supported by the CAA, will define data requirements, and develop and implement new data collections for these indicators in the forthcoming years, with the current priorities for development being.

### Other event types

The EMWG is also developing descriptive data related to the involvement of emergency services at other event types as a part of the Emergency management sector overview (sector overview D).

### COAG developments

The Australian, State and Territory governments have recognised that a national, coordinated and cooperative effort is needed to enhance Australia’s capacity to withstand and recover from emergencies and disasters (COAG 2009). Accordingly, NEMC developed the *National Strategy for Disaster Resilience*, which COAG adopted on 13 February 2011 (COAG 2011).

## 9.8 Jurisdictions’ comments

This section provides comments from each jurisdiction on the services covered in this chapter.

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| **“** | New South Wales Government comments  NSW experienced a number of disasters in 2013. These included bushfires in January 2013, which destroyed over 50 dwellings in Coonabarabran, and impacted farming properties in the Cooma and Yass/Harden areas. There was also significant flooding in northern NSW at the end of January and again in February 2013. Evacuation centres were established in nine locations due to bushfires, and 12 evacuation centres were established along the mid and north coast due to flooding. Disaster Welfare Services administered of $451 630 in grants for household contents or structural repairs. Funding of $13.57 million was also provided via grants for 215 projects across local and state government and not‑for‑profit organisations to build disaster resilience in NSW communities.  NSW Ambulance provided more than 1 219 262 emergency and non‑emergency responses, an average of 3340 responses per day or a call every 25.9 seconds. A new Chief Executive was appointed and the Reform Plan for NSW Ambulance was released by the Minister for Health. The Non‑Emergency Patient Transport project will improve efficiencies in transporting non‑emergency patients, splitting them from the emergency services tier of NSW Ambulance. The Frequent User Project works with patients who use NSW Ambulance more than 10 times per year. NSW Ambulance held a series of Operational Showcases across the state promoting its service delivery model to Local Health Districts.  The NSW Rural Fire Service attended 23 436 fires and other incidents. The service continued to expand its risk management framework with over 280 000 hectares of land subject to hazard reduction activity. Property protection works were carried out for 146 292 properties, and 833 hazard clearing activities were undertaken through the Assist Infirm, Disabled and Elderly Residents Program. The service also investigated 2625 bush fire hazard complaints and processed 4158 fire‑prone development assessments.  Fire and Rescue NSW responded to 133 611 emergency incidents, including fires, rescues, chemical and medical emergencies and delivered a range of prevention activities, such as visiting 9906 homes to install smoke alarms or check batteries, conducting 2765 fire safety presentations to preschool and primary school children and conducting road safety demonstrations to 8000 high school students. Online home fire safety audits were completed by 48 024 people. The Community Fire Unit Program grew to 7200 members in 605 Units.  The NSW State Emergency Service responded to 25 329 requests for assistance, resulting in volunteers spending 397 438 hours helping communities in NSW. This included undertaking 139 flood rescues. The year saw the distribution of 690 Child Personal Flotation Devices (lifejackets) to operational vehicles across NSW. The NSW SES improved its fleet response capability with the addition of 74 new vehicles, including 11 Community First Responder vehicles. In addition, seven new snowmobiles and three double snowmobile trailers were acquired. The principal partner, NRMA Insurance provided $60 000 to 33 NSW SES Units for community engagement initiatives through its Community Connect program. | **”** |
| **“** | Victorian Government comments  Victoria’s emergency management reform is well underway with the implementation of initiatives to deliver on the intent of the Victorian Government Emergency Management White Paper. The Victorian Parliament enacted the *Emergency Management Act 2013*. This Act establishes the statutory governance arrangements for emergency management in Victoria outlined in the White Paper — a State Crisis and Resilience Council, Emergency Management Victoria, Emergency Management Commissioner and Inspector‑General and a requirement to develop a three‑year rolling Strategic Action Plan.  In 2012, the Government completed its Triple‑Zero regional consolidation programs. All Triple‑Zero calls in Victoria are now managed by the Emergency Services Telecommunications Authority, enabling improved coordination of the responding agencies and streamlined service delivery arrangements.  Demand for Ambulance Victoria’s (AV) services during 2012‑13 continued to grow. To help manage demand, AV’s Referral Service was expanded to include the Barwon South West region. The service enables AV to identify low acuity patients and provide them, where appropriate, with alternatives such as a locum doctor or self‑treating the condition.  AV’s clinical capability was also enhanced through the expansion of the 12‑lead electrocardiogram (ECG) program into more rural areas. Positive clinical outcomes for Victorian’s were also enhanced by increased paramedic resources and establishment new paramedic branches.  Victoria was not immune to the effects of significant weather events. Severe and destructive wind, tornados, a super cell and widespread hail and thunderstorms required response from the State Emergency Service and the Country Fire Authority (CFA) across much of the State.  Victoria also experienced a busy fire season. Between December and March, more than 190 000 hectares of public and private land was burnt and 46 houses destroyed. Incident Controllers issued 1745 Advice Messages, 343 Watch and Act Warnings, 110 Emergency Warnings and telephone alerting was used 61 times. In January, the Bushfire Information Line received more than 18 000 calls, more than in any of the three preceding summers. Fire‑fighters from the then DSE (now Department of Environment and Primary Industries), the CFA and the Metropolitan Fire Brigade responded to over 4400 bush and grass fires. Tragically, this season brought home how dangerous fire can be with the loss of a community member and four fire‑fighters, who perished in the line of duty.  Lightning was a major cause of fires, with one such strike igniting the ‘*Harrietville fire*’, a blaze claiming 37 000 hectares in the Victorian Alpine region. The Emergency Services Commissioner reviewed the response to this fire and identified the importance of the partnership between the DSE, the CFA and the community in enabling more community‑led planning for fire management. | **”** |
| **“** | Queensland Government comments  This year has been busy for emergency response services, with Queensland experiencing multiple adverse weather events such as extreme bushfires, a severe storm in the Barcoo region near Longreach and significant property damage and widespread flooding following ex‑Tropical Cyclone Oswald. During the 2012‑13 disaster season, over 200 staff throughout the Queensland Public Service were called in to support our emergency response operations relating to the ex‑Tropical Cyclone Oswald event.  Queensland’s approach to ambulance service delivery changed this year, with the Queensland Ambulance Service establishing 16 Local Ambulance Service Networks across the State as part of a structural reform and public service renewal program. The ambulance service delivery model is now aligned with the Department of Health’s Hospital and Health Services model to enable local accountability and the delivery of local solutions. This alignment is further complemented by the transition of the Queensland Ambulance Service to the Department of Health from October 2013.  As part of Queensland’s renewed emphasis on enhancing operational front‑line services, an additional 60 ambulance officers were allocated to roster in 2012‑13 with 60 more planned for in 2013‑14. In addition, ‘Firefighters as a percentage of all personnel’ has increased by 2.9 percentage points since 2011‑12.  Ambulance and fire service delivery was further boosted in 2012‑13 with the commissioning of 130 ambulance vehicles and the completion of 52 fire fighting vehicles. Significant capital works projects for the year included three ambulance stations and four fire and rescue stations.  Queensland’s ambulance and fire services continue to have some of the fastest response times in the country. Queensland is investing in Emergency Vehicle Priority (EVP) technology, which is designed to intercept downstream traffic signals to provide green lights in advance of an emergency vehicle’s arrival, improving incident response times and road safety.  This year has also seen evidence of improved performance in the time taken to unload patients from Queensland Ambulance Service stretchers at public hospitals. This means that ambulances are being returned back into the system ready to respond to emergencies. The Queensland Government continued to provide all Queensland residents with free authorised ambulance services throughout Australia.  Queensland’s SES activities continued to be supported in 2012‑13 with the delivery of 23 new flood boats for SES groups and $1.25 million to the Cairns Regional Council towards the construction of a new SES headquarters.  Throughout 2012‑13, there were a number of reviews involving Queensland’s police, fire and rescue, ambulance and emergency services. As a result, 2013‑14 will see restructuring and improvement to emergency service delivery in Queensland. | **”** |
| **“** | Western Australian Government comments  While 2012‑13 was a challenging year for Western Australia (WA) in relation to emergency events, there were fewer major bushfire incidents and a lower incidence of property damage compared to previous years. Notable incidents included a number of major bushfires that required a multiagency response over several days. These affected the metropolitan region, outer Perth area, South West and Great Southern regions. There were also several complex hazardous materials incidents that impacted the metropolitan region.  Unseasonal weather patterns in 2012‑13 caused significant disruption. Severe storms affected Perth, the Midwest Gascoyne and South West corner of WA between November 2012 and January 2013. In June 2013 record levels of rainfall in the Pilbara and Kimberley caused major flooding that stranded some people.  WA was also threatened by four cyclones in this period, with two crossing the Pilbara coast. The most serious threat was Severe Tropical Cyclone Rusty in February 2013. The large, slow moving Category 4 system required an extensive response and forced the evacuation of some remote communities.  The major focus for fire response agencies this year has been continued implementation of recommendations from recent major bushfire reviews. Achievements include the establishment of an Office of Bushfire Risk Management to oversee hazard reduction in vulnerable locations as well as the development of rapid response protocols and increased capital investment for the Capes region in WA’s South West. Agencies have also worked closely to develop a comprehensive approach to improve the timeliness and consistency of public information to communities impacted by emergencies.  The ambulance service in Western Australia continued to expand in 2012‑13 with an increased injection of State Government funding. This funding has resulted in an increase in paramedic FTE across the State which includes an additional seven Career Paramedics at major country sub centres and an increase to 18 Community Paramedics. There is a reported 56 per cent increase in ambulance operative volunteers in 2012‑13.  Response time targets were met for 2012‑13 despite an increase in demand for services. There was a reported increase of 13.8 per cent emergency ambulance response and 16.7 per cent increase of non‑emergency responses in WA during the 2012‑13 financial year. A total of 231 498 patients were transported; an increase of 4.6 per cent from the previous year. In 2012‑13, the contracted provider St John Ambulance Australia (Western Australia) Inc has commenced several innovation pre hospital care pathway projects with State Government support including an Ambulance Surge Capacity Unit (ASCU). | **”** |
| **“** | South Australian Government comments  ***Fire and Emergency Services***  The SA Government published a Strategic Direction 2008–2014 Statement for fire and emergency services that commits the sector to Community Engagement, Seamless Integration, Improved Communication, Building Partnerships, Improving Community Resilience and Being Accountable. To this end, several initiatives were undertaken or continued during 2012‑13 including:   * completed implementation of the e‑connect program including development of a volunteer web portal to provide centralised access to services and systems, delivery of an online learning system * implementation and maintenance of the Emergency Alert national telephony warning * continued implementation of the Alert SA project including enhancements to the website www.alert.sa.gov.au * continued maintenance of the State Emergency Information Call Centre Capability * conducting of state‑wide Hazard Leader Risk Assessment workshops.   ***SA Ambulance Service (SAAS)***  Highlights for 2012‑13 included:   * completion of the rollout of Mobile Data Terminals (MDTs) in all ambulance vehicles across the state * answering more than 90 per cent of the 177 752 triple zero (000) calls received within 10 seconds * following the success of SAAS’s Extended Care Paramedic (ECP) Program in the metropolitan area, SAAS commenced a trial of this in the regional areas of Mount Gambier and Port Lincoln * implementation of a new operational safety training program as part of induction and professional development education schedules for all operational staff * establishment of a second Country Regional Response Team (CRRT) — this increased the CRRT numbers by 40.5 per cent. The CRRT are a group of volunteers based in the metropolitan area who provide regional areas with short‑notice roster coverage across the State when required.   Initiatives for 2013‑14 include:   * Commencing in August 2013, increasing paramedic numbers by 34 FTE. Additional resources, including vehicles and equipment, will support existing staff and enable the state’s ambulance service to meet increased demand. | **”** |
| **“** | Tasmanian Government comments  Tasmania has a number of unique characteristics that influence the provision of emergency services throughout the State and affect response/turnout times and infrastructure costs. These characteristics include a small and dispersed population, diseconomies of scale, reliance on a network of dedicated volunteers in rural and remote areas and the State’s rugged topography. Tasmania’s two major urban centres have low population density compared to the large urban centres in other states.  Tasmania’s data includes both urban and rural Fire, Emergency and Ambulance service performance. Tasmania has the highest percentage of all jurisdictions of its population in rural and remote areas (34.4 per cent — compared with a national average of 11.6 per cent). Conversely Tasmania has the lowest proportion in highly accessible areas making it difficult to reliably compare the response performance of Tasmania with other jurisdictions.  Tasmania Fire Service (TFS) comprises four career brigades and 228 volunteer brigades that respond to fires in all metropolitan and rural areas. Tasmania reports all incidents attended by these brigades, and the TFS bears the full cost of funding both the operating and capital costs of its brigades.  TFS continues to deliver a broad range of educational and promotional programs to assist at‑risk sectors of the community, prevent fires and minimise the impact of fires that occur. The accidental house fire rate (arson‑related fires excluded) in Tasmania declined some 50 per cent in the fifteen years to 2010‑11. The 2012‑13 rate is significantly higher due to the number of structures (203 dwellings) lost during the 2012‑13 summer bushfire season.  Tasmania’s State Emergency Service (SES) continues to provide road crash rescue services outside the main metropolitan centres. SES comprises 35 volunteer units, 24 of which have road crash rescue as their primary role. These units are responsible to the three regional headquarters. This is in addition to the primary role of storm and flood and response and general assistance provided to all emergency services and local government.  TFS has responsibility for road crash rescue in and around metropolitan areas.  Ambulance Tasmania (AT) provides emergency ambulance care, medical retrieval services and a non‑emergency patient transport service. In addition, AT provides fixed‑wing and staff for helicopter aero‑medical services.  Tasmania is currently one of two States that provide a free‑of‑charge ambulance service to the public and consequently there is a far greater reliance on government funding for ambulance services than in jurisdictions that are not government funded. The State Government has increased funding to improve services in both urban and rural areas.  Tasmania continues to enjoy a high level of patient satisfaction in ambulance services. This factor reflects positively on its ambulance personnel. | **”** |
| **“** | Australian Capital Territory Government comments  The ACT Emergency Services Agency (ESA), which is part of the Justice and Community Safety Directorate, comprises the ACT Ambulance Service, ACT Fire and Rescue, ACT Rural Fire Service and the ACT State Emergency Service along with emergency management and support areas. It also incorporates the affiliated Snowy Hydro Southcare aero‑medical service.  The ESA provides services across a broad geographic base to encompass the Bush Capital Planning Model. This geographic spread provides challenges to meet benchmark response standards and community expectations.  Over the past twelve months the ESA has continued to foster the ‘all hazards all agencies’ approach to delivering emergency services and emergency management for the ACT and surrounding region. The operational capability of the ESA was further improved or enhanced through the continued work of the following key projects:   * commencement of the construction of the co‑located West Belconnen ambulance and fire station * delivery and replacement of cardiac monitor / defibrillators on all frontline intensive care ambulances and semi‑automatic external defibrillators on supporting emergency response vehicles * recruitment of additional frontline ambulance officers * continued work on strengthening the triple zero (000) back‑up capability * completion of construction of a new ACT Rural Fire Service shed at Tidbinbilla * completion of Fire and Rescue Recruit College 35 in October 2012.   During 2012‑13, the four services of the ESA provided in excess of 52 000 responses to incidents within the ACT. | **”** |
| **“** | Northern Territory Government comments  In 2012‑13, the Northern Territory Fire and Rescue Service (NTFRS) continued its focus on fire prevention, preparedness, response and recovery in order to minimise the impact of fire and other emergencies on the people of the Northern Territory.  The NTFRS hazard abatement program identifies and mitigates excessive fuel loads to prevent potential wildfires and loss of life and property in the Northern Territory. This program also works to identify and report the incidence of gamba grass to further reduce the potential intensity of wildfire.  NTFRS initiated and launched the Bushfire Arson Prevention Campaign, a whole of Government program aimed at reducing bushfire arson throughout the Northern Territory.  Throughout 2012‑13 the NTFRS finalised the renewal of major operational front line appliances for the two major centres of Darwin and Alice Springs. These vehicles are a combination pumper rescue, having both fire fighting pumping and road crash rescue equipment, thereby enabling crews to respond and manage a greater range of emergency incidents independent of other resources.  The NTFRS, representing other emergency services and on behalf of the NT Government, will take a lead role in providing ‘end user’ input into Northern Australian research projects emanating from the newly formed Bushfire and Natural Hazards Cooperative Research Centre which commenced in July 2013.  Northern Territory Emergency Services (NTES) experienced a moderate level of activity in 2012‑13, with a variety of activities including search and rescue operations undertaken by NTES staff and volunteers as part of a Tri‑service response. During the reporting period, NTES continued to develop its capability to assist remote communities improve their resilience.  The Darwin NTES Volunteer Unit started operating from its new building at Berrimah Fire and Emergency Service facility and work commenced at the Palmerston NTES Volunteer Unit with an expectation that they will be relocated in 2013‑14.  NTES continued to co‑ordinate emergency management across the NT Government and, prior to the commencement of the wet season, all Local Counter Disaster and Regional Plans were reviewed and updated.  Bushfires NT’s Territory‑wide strategic fire‑break program is designed to limit the impact of wildfire and provide more effective options for wildfire suppression. Over 6700 km of strategic breaks were established in 2012‑13 using a combination of aerial incendiary and ground‑based operations. These breaks complement landholder maintained breaks and contribute significantly to improved community safety. | **”** |

## 9.9 Definitions of key terms

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| **Revenue** | Revenue received directly or indirectly by fire and 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** | Revenue from fees and charges on individuals, private/public organisations and insurers. |
| * **Subscriptions and other income** | Other revenue, including:   * subscriptions and benefit funds received from the community * donations, industry contributions and fundraising received * other income. |
| * **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. |
| **Expenditure** | Includes:   * salaries and payments in the nature of salaries to fire and ambulance personnel * capital expenditure (such as the user cost of capital) * other operating expenditure (such as running expenditure, contract expenditure, training expenditure, maintenance expenditure, communications expenditure, provision for losses and other recurrent expenditure).   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). |
| **Human resources** | Human resources refers to any person delivering a service, or managing the delivery of this service, including:   * firefighters (qualified paid and volunteer firefighters) * salaried ambulance personnel, remunerated volunteer and non‑remunerated volunteer ambulance personnel * support personnel (any paid person or volunteer directly supporting operational providers, including administrative, technical and communications personnel). |
| **Volunteer personnel** | *Volunteer firefighters/ambulance operatives*  All personnel engaged on an unpaid casual basis by the emergency service organisation 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) * deliver or manage a firefighting service directly to the community and who are formally trained and qualified to undertake firefighting duties, but do not receive remuneration other than reimbursement of ‘out of pocket expenses’.   *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. For fire service organisations, this includes any staff whose immediate client is the firefighter. 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’. |

## 9.10 List of attachment tables

Attachment tables are identified in references throughout this chapter by an ‘9A’ prefix (for example, table 9A.3 is table 3). Attachment tables are provided on the Review website (www.pc.gov.au/gsp).

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