8 Emergency management

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. This chapter reports on selected emergency events, including fire, ambulance (pre-hospital care, treatment and transport) and emergency road rescue events. While section 8.1 contains some information on the scope of emergency services organisations' (ESOs) activities, the chapter does not report on the total range of State and Territory ESO activities.

An overview of emergency management appears in section 8.1. A framework of performance indicators is outlined in section 8.2. The data are discussed in sections 8.3, 8.4 and 8.5, and future directions for performance reporting are discussed in section 8.6. Jurisdictions' comments are provided in section 8.7. The chapter concludes with definitions in section 8.8.

Changes for the 2005 Report

The major change to the chapter for this Report has been a restructuring of the performance reporting model. Under the new structure, performance reporting is based on emergency event types (fire events, ambulance events and road rescue events), rather than on ESOs (fire service organisations, ambulance service organisations and road rescue organisations) as reported in 2004. The purpose of the new structure is to allow for a more complete assessment of the performance of government resources committed to the management of emergency events.

Other changes include improved comparability of the survival rate from out-of-hospital cardiac arrest data (section 8.4), and the inclusion for the first time of descriptive information on the number of accidental residential structure fires reported to fire service organisations per 100 000 households (section 8.3).

Supporting tables

Supporting tables for chapter 8 are provided on the CD-ROM enclosed with the Report. The files are provided in Microsoft Excel format as

\Publications\Reports\2005\Attach8A.xls and in Adobe PDF format as \Publications\Reports\2005\Attach8A.pdf.

Supporting tables are identified in references throughout this chapter by an 'A' suffix (for example, table 8A.3 is table 3 in the electronic files). These files can be found on the Review web page (www.pc.gov.au/gsp). Users without Internet access can contact the Secretariat to obtain these tables (see details on the inside front cover of the Report).

8.1 Overview of emergency management

Emergency management is defined as a range of measures to manage risks to communities and the environment (EMA 2003). The emergency management sector includes a range of ESOs engaged in areas as diverse as risk assessment, State and city governance, legislation, community development, emergency response, urban development and land use management, and community recovery.

The range of events addressed by emergency management includes fires, medical transport and emergencies, rescues, other natural events (such as floods, earthquakes, landslides, heatwaves, cyclones and other storms), consequences of acts of terrorism, technological and hazardous material incidents (such as chemical spills, harmful gas leaks, radiological contamination, explosions and spills of petroleum and petroleum products), and the quarantine and control of diseases and biological contaminants. Emergency management aims to create and strengthen safe, sustainable and resilient communities that can avoid or minimise the effects of emergencies and, at the same time, have the ability to recover quickly by restoring their socioeconomic vitality.

Roles and responsibilities

The practice of emergency management requires cooperation among Australian, State, Territory and local governments, industry, community organisations and the community in general.

Australian Government

The primary role of the Australian Government is to support and develop national emergency management capability. This is achieved by a range of activities, including:

- coordinating the Australian Government's material and technical assistance to states and territories in the event of large scale emergencies (through Emergency Management Australia [EMA], which is a division within the Australian Attorney-General's Department)
- providing financial assistance to states, territories and authorities for natural disaster and flood prevention/mitigation (through the Natural Disaster Mitigation Program and the Regional Flood Mitigation Program of the Department of Transport and Regional Services [DOTARS]) and for helping to bear the costs of natural disasters (through DOTARS's Natural Disaster Relief Arrangements)
- providing information, best practice materials and training programs (through EMA)
- providing funding for risk management (through the DOTARS's Natural Disaster Risk Management Studies Program) and undertaking comprehensive risk assessment (through DOTARS and Geoscience Australia)
- supporting community awareness activities (through EMA, the Bureau of Meteorology and Geoscience Australia).

Australian Government agencies also have specific emergency management responsibilities, including: the control of exotic animal diseases; aviation and maritime search and rescue; the management of major marine pollution and meteorological and geological hazards; the provision of firefighting services at some airports and some defence installations; human quarantine; and research and development.

State and Territory governments

State and Territory governments are responsible for instituting regulatory arrangements for the protection of life, property and the environment, and they have the primary responsibility for delivering emergency services (including fire and ambulance services) directly to the community. Australian, State and Territory governments are also jointly responsible for developing building fire safety codes, undertaking fire-related research, formulating policies and providing advice on fire safety.

Local governments

Local governments in most states and territories are involved to varying degrees in emergency management. Their roles and responsibilities include:

- considering community safety in regional and urban planning by assessing risks, and developing mitigation measures and prevention plans to address emergencies such as bushfires and structure fires, floods, storms, landslips and hazardous materials incidents
- improving community preparedness through local emergency and disaster plans
- issuing hazard reduction notices to private land holders and clearing vegetation in high risk public areas
- collecting statutory levies to fund fire and other emergency services
- allocating resources for response and recovery activities
- providing financial and operational assistance to rural fire brigades and/or other voluntary emergency service units.

Emergency service organisations

State and Territory governments and local governments provide emergency management services to the community through a range of ESOs. The structure and reporting lines of ESOs vary across jurisdictions. These organisations range from government departments to statutory authorities, and to smaller branches, agencies or services within larger departments or authorities. In some instances, non-government organisations are also involved in the provision of emergency management services, such as St John Ambulance in WA and the NT.

In all jurisdictions, there is considerable cooperation and coordination among ESOs in response to major emergency events. There can also be substantial cooperative efforts across government, particularly in the recovery stages after a major incident. Events of considerable magnitude and duration, such as earthquakes, cyclones and bushfires, can involve interstate cooperation and support.

Fire service organisations

State and Territory governments provide a range of emergency management activities through agencies historically considered as fire service organisations, including prevention, preparedness, response and recovery (see section 8.2). The role of fire service organisations varies across jurisdictions and includes

involvement in an expanding variety of activities (table 8A.35). Fire service organisations are involved in:

- 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 safety and road safety issues
- assisting individuals and communities to prepare for bushfires
- responding to structure, bush, vehicle and other fires
- providing rural land management advice on the role and use of fire
- providing road accident rescue and other rescue services
- managing hazardous material incidents
- administering legislation relating to fire safety, hazardous materials facilities and hazard mitigation.

Fire service organisations work closely with other government departments and agencies — including ESOs such as the State Emergency Service/Territory Emergency Service (SES/TES), police and ambulance services, and community service organisations — to minimise the impact of fire and other emergencies on the community. Their management structure differs across jurisdictions (box 8.1).

Box 8.1 **Delivery and scope of activity of primary fire service organisations[a]**

	Urban	***Rural***
	Attend residential and commercial structure fires; incidents involving hazardous materials; and road accidents within major urban centres.	***Attend local structure fires and other events outside major urban centres; rural non-structure fires (including crop, bushland and grassland fires on private property); and fires in national parks and State forests.***
NSW	*NSW Fire Brigades* — this government department reports to the Minister for Emergency Services directly.	*NSW Rural Fire Service* — this government department reports to the Minister for Emergency Services directly.
Vic[b]	*Metropolitan Fire and Emergency Services Board* — this statutory authority reports to the Minister for Police and Emergency Services and the Emergency Services Commissioner.	*Department of Sustainability and Environment* — this department is responsible for public lands.
	Country Fire Authority — this statutory authority reports to the Minister for Police and Emergency Services and the Emergency Services Commissioner.	

(Continued on next page)

Box 8.1 **(Continued)**

Qld	*Queensland Fire and Rescue Service* — this service, incorporating the Rural Fire Service, is a division of the Department of Emergency Services, reporting to the Director-General, who reports to the Minister for Emergency Services.
WA[c]	*Fire and Emergency Services Authority of WA* (FESA) — this umbrella statutory authority reports to the Minister for Police and Emergency Services directly.
SA	*Metropolitan Fire Service* — this statutory authority reports to the Minister for Emergency Services directly.
	Country Fire Service — the board of this authority reports to the Minister for Emergency Services directly.
Tas	*Tasmania Fire Service* — this is the operational arm of the State Fire Commission, which reports to the Minister for Health and Human Services.
ACT	*ACT Fire Brigade and ACT Bushfire Service* — these are agencies of the ACT Emergency Services Bureau, which reports to the ACT Minister for Police and Emergency Services.
NT[d]	*NT Fire and Rescue Service* — this is a branch of the larger Department of Police, Fire and Emergency Services. The Chief Fire Officer reports to the Commissioner for Police, who reports to the Minister for Police, Fire and Emergency Services. *Bushfires Council* — this is a board, which reports to the Minister for Infrastructure, Planning and Environment.

[a] Excludes brigades employed by large scale public and private land managers; port, mining and other infrastructure brigades; and land management departments and brigades operating under Australian jurisdiction (for example, airport and defence installations). [b] The Metropolitan Fire and Emergency Services Board provides urban fire services coverage from the Melbourne Central Business District through to the middle and outer suburbs. The Country Fire Authority provides urban and rural fire services coverage for all parts of Victoria other than the Melbourne Metropolitan Fire District and public lands. This includes outer metropolitan Melbourne and regional centres. [c] As the primary fire service organisation in WA, FESA incorporates the Fire and Rescue Service (FRS) and the Bush Fire Service in one Fire Services Division. The FRS career (paid) firefighters serve the gazetted fire districts in the Perth metropolitan area and five major urban regional centres. Volunteers in FRS serve in gazetted fire districts in smaller urban centres in regional areas. FESA provides funding and Bush Fire Service support to local government volunteer bush fire brigades, which are responsible for fire response in all other regional areas apart from National parks and forests. Fire response in the latter is the responsibility of the Department of Conservation and Land Management. [d] The NT Bushfires Council is primarily a land management organisation and responds only to grass fires and bushfires on land outside the Fire and Rescue Service response areas. The NT statistics in this chapter do not apply to the Bushfires Council unless stated.

Source: State and Territory governments (unpublished).

Separate urban and rural fire service organisations deliver fire services in most jurisdictions. Land management departments also typically provide rural fire services (although data on these agencies are not reported in this chapter unless stated). Jurisdictions with more than one fire authority may separate services 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.

Some jurisdictions have particular arrangements for the provision of fire services to Indigenous communities. (For more information on fire services provided to Indigenous communities, see SCRCSSP 2002, p. 572.)

Ambulance service organisations

The role of ambulance service organisations across jurisdictions generally includes:

- providing emergency pre-hospital patient care and transport in response to sudden injury and illness
- retrieving emergency patients
- accessing emergency pre-hospital patients (for example, in confined spaces and hazardous environments)
- undertaking interhospital patient transport
- conducting road accident rescue
- planning and coordinating patient services in multi-casualty events.

Some government ambulance service organisations also provide first aid training courses, as do non-government providers such as St John Ambulance Australia and the Australian Red Cross. The Royal Flying Doctor Service responds to medical emergencies in remote inland areas of Australia. It was contracted in 1999-2000, for example, by the Ambulance Service of NSW for routine and emergency work in the north west sector of NSW. Similarly, the Queensland and Tasmanian ambulance services contract the Royal Flying Doctor Service to provide aircraft and pilots for their air ambulance services, and the costs of those services are included in the ambulance costs reported for these jurisdictions. Data relating to other Royal Flying Doctor Service activities are not included in the Report.

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 (box 8.2).

Some jurisdictions have particular arrangements for the provision of ambulance services to Indigenous communities. (For an example of ambulance services provided to Indigenous communities in Queensland, see SCRCSSP 2002, p. 574. For information on Indigenous access to air medical services, see SCRCSSP 2003, pp. 8.7–8.8.)

Box 8.2 **Relationships of primary ambulance response and management organisations to government**

NSW	*Ambulance Service of NSW* — a statutory authority reporting to the Minister for Health
Vic	*Metropolitan Ambulance Service, Rural Ambulance Victoria, and Alexandra and District Ambulance Service* — separate statutory bodies reporting to the Minister for Health
Qld	*Queensland Ambulance Service* — a division of the Department of Emergency Services, reporting to the Director-General, who reports to the Minister for Emergency Services
WA	*St John Ambulance* — an incorporated not-for-profit organisation under contract to the WA Government
SA	*SA Ambulance Service* (SAAS) — SAAS is the trading name of SA St John Ambulance Service Inc, established under the *Associations Incorporations Act 1985* (SA). The *Ambulance Services Act 1992* (SA) authorises and licenses SAAS to provide an ambulance service in SA.
Tas	*Tasmanian Ambulance Service* — a statutory service of the Hospital and Ambulance Division of the Department of Health and Human Services
ACT	*ACT Ambulance Service* — an agency of the ACT Emergency Services Bureau, reporting to the ACT Minister for Police and Emergency Services
NT	*St John Ambulance* — an incorporated not-for-profit organisation under contract to the NT Government

Source: State and Territory governments (unpublished).

State Emergency Services and Territory Emergency Services

State and Territory governments contribute to a range of emergency management activities through SES/TES. The activities of SES/TES (table 8A.36) include prevention, preparedness, response and recovery (see section 8.2). The role of SES/TES across jurisdictions encompasses a variety of activities. SES/TES are primarily the combat agencies responsible for flood and storm operations but also have a role in attending road rescue incidents and performing extrications.

Other ESOs

The Review does not yet report on the performance of Australian Government or local government emergency management services or their agencies.

Volunteers in emergency management

Volunteers play a significant role in the provision of emergency services in Australia, across the areas of prevention/mitigation, preparedness, response and recovery. The input by volunteers is particularly important in rural and remote service provision, where caseload/incident levels are low but community safety needs are still a high priority. In Victoria's Country Fire Authority, for example, approximately 85 per cent of its 61 657 volunteers in 2001-02 functioned in rural areas (CFA, VRFBA and VUFBA 2001) (table 8.1).

Volunteers in many ESOs — including fire, ambulance, SES/TES, marine rescue, and recovery and relief agencies — provide services relating to emergency situations and disasters resulting from natural hazards such as wildfires, floods, severe storms, earthquakes, cyclones, and human caused and technological events. In total, over 500 000 volunteers from ESOs and other organisations (such as the Red Cross) participate each year in the management of a broad range of emergency situations and disasters (EMA 2001).

Table 8.1 **Volunteers in emergency service organisations**

	NSW[a]	*Vic*[b]	*Qld*[c]	*WA*	*SA*[c]	*Tas*[c]	*ACT*	*NT*[c]	*Aust*
2001-02									
ASOs	67	358	352	2 705	1 753	516	–	24	5 775
FSOs	68 710	61 657	46 534	21 676	17 000	4 866	650	461	221 554
Total	**68 777**	**62 015**	**46 886**	**24 381**	**18 753**	**5 382**	**650**	**485**	**227 329**
2002-03									
ASOs	57	387	403	2748	1654	530	–	22	5 801
FSOs	68 676	58 000	46 677	23 608	12 244	4 912	650	455	215 222
SES/TES	9 072	5 129	18 265	2 308	6 808	485	180	539	42 786
Total	**77 805**	**63 516**	**65 345**	**28 664**	**20 706**	**5997**	**830**	**1016**	**263 809**
2003-04									
ASO	115	501	445	2 720	1 583	567	–	20	5 951
FSO	73 059	58 583	44 286	21 987	11 161	4 766	810	521	215 173
SES/TES	10 026	4 839	17 211	2 039	2 050	464	180	582	37 391
Total	**83 200**	**63 923**	**61 942**	**26 746**	**14 794**	**5 797**	**990**	**1123**	**258 515**

ASO = ambulance service organisation. FSO = fire services organisation. [a] For NSW, fire service organisation numbers include community fire unit members. [b] Victorian ambulance service organisation data include remunerated volunteers. These volunteers were remunerated for some time (usually response time), but not for other time (usually on-call time). There were 362 remunerated volunteers in 2003-04, 335 in 2002-03 and 328 in 2001-02. [c] Fire service organisation numbers include part paid volunteers. – Nil or rounded to zero.

Source: State and Territory governments (unpublished); tables 8A.5, 8A.21 and 8A.31.

Governments incur costs in supporting volunteers to deliver emergency services in their communities by providing funds and support through infrastructure, training, uniforms, personal protective equipment, operational equipment and support for other operating costs. The cost to the Tasmanian Government in 2000-01 of services

wholly provided by ambulance volunteers, for example, was $1385 flagfall per case, compared with $781 flagfall per case in the mixed career/volunteer stations, and only $535 flagfall per case in the urban areas, where every crew has two salaried ambulance personnel (TAS and KPMG 2001). (For more information on estimates of volunteer participation in the provision of emergency services, see SCRCSSP 2003, pp. 8.16–8.19.)

Emergency management events

This chapter focuses on the performance of emergency management in relation to three emergency events: fire events (section 8.3), ambulance events (section 8.4), and road rescue events (section 8.5). There are, however, many other categories of emergency management that are not currently reported, including: rescues on land (other than road rescues) and at sea; natural events (such as floods, earthquakes, landslides, heatwaves, cyclones and other storms); the consequences of acts of terrorism; technological and hazardous material incidents (such as chemical spills, harmful gas leaks, radiological contamination, explosions and spills of petroleum and petroleum products); and the quarantine and control of diseases and biological contaminants.

8.2 Framework for measuring the performance of emergency management

The broad aim of emergency management is to reduce the level of risk to the community from emergencies. The framework of performance indicators in this chapter is based on the objectives for emergency management, which are common to all Australian ESOs (box 8.3). These objectives are nationally agreed and developed by the Emergency Management Working Group.

Box 8.3 **Objectives for emergency management**

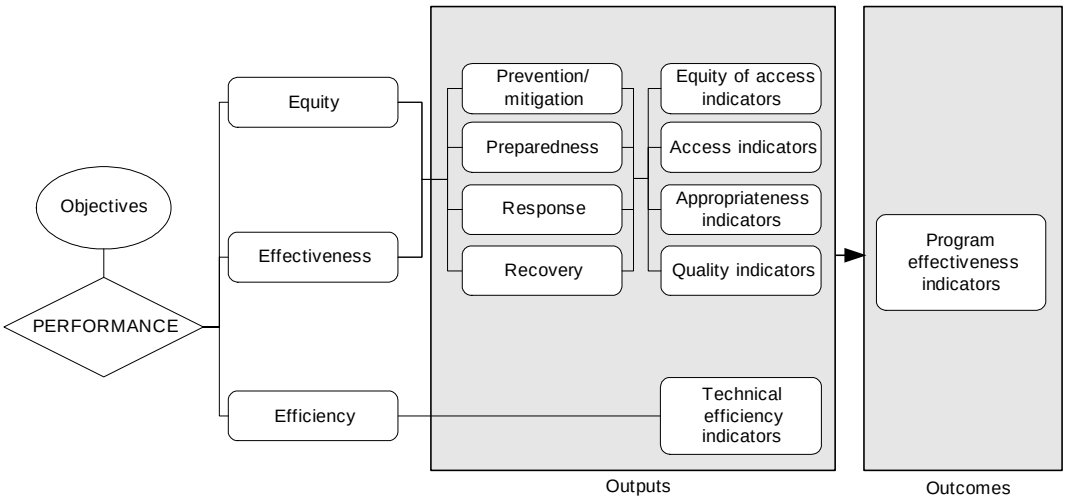
Emergency management services aim to provide highly effective, efficient and accessible services that:

- reduce the adverse effects of emergencies and disasters on the Australian community (including people, property, infrastructure, economy and environment)
- contribute to the management of risks to the Australian community
- enhance public safety.

Emergency service organisations aim to reduce the number of emergency events through prevention activities, and to reduce the impact of emergency events through community and operational preparedness. Fast, effective response and recovery services are critical to containing hazards and managing the consequences of emergency events. The prevention/mitigation, preparedness, response and recovery performance indicator framework (figure 8.1) used in this chapter reflects all these activities.

The general performance indicator framework presented in figure 8.1 has been applied to fire events (section 8.3), ambulance events (section 8.4) and road rescue events (section 8.5). The outcome indicators in the performance framework provide an indication of the effects of ESOs on the community, economy and environment. Those currently reported are the 'fire death rate', the 'fire injury rate', the 'median dollar losses from structure fire', 'total property losses from structure fire', and the 'survival rate from out-of-hospital cardiac arrest'.

Figure 8.1 **General performance indicator framework for emergency management**



The framework uses the widely accepted 'comprehensive approach' (prevention/mitigation, preparedness, response and recovery) to classify the key functions common to ESOs in managing emergency events. Outputs in the emergency event frameworks are grouped accordingly.

- *Prevention and mitigation* — the results of measures taken in advance of an emergency aimed at decreasing or eliminating its impact on the community and the environment. Activities that contribute to outputs of prevention and mitigation include: advice on land management practice for hazard reduction and prevention; the inspection of property and buildings for hazards, compliance

with standards and building codes, and levels of safe practices; the preparation of risk assessment and emergency management plans; risk categorisation for public information campaigns; and public information campaigns and educational programs to promote safe practices in the community.

- *Preparedness* — the results of measures to ensure, if an emergency occurs, that communities, resources and services are capable of responding to, and coping with, the effects. Activities that contribute to outputs of preparedness include: public education and training; emergency detection and response planning (including the installation of smoke alarms and/or sprinklers); hazardous chemicals and material certification, and the inspection of storage and handling arrangements; the exercising, training and testing of emergency service personnel; and standby and resource deployment and maintenance. Preparedness also involves establishing equipment standards and monitoring adherence to these standards.
- *Response* — the results of strategies and services to control, limit or modify the emergency to reduce its consequences. Activities that contribute to outputs of response include: the implementation of emergency plans and procedures; the issuing of emergency warnings; the mobilisation of resources in response to emergency incidents; the suppression of hazards (for example, fire containment); the provision of immediate medical assistance and relief; and search and rescue.
- *Recovery (ESOs*) — the results of strategies and services to return agencies to a state of preparedness after emergency situations. Activities that contribute to outputs of emergency services recovery include: critical incident stress debriefing; and the salvage and restoration of an emergency site to a safe state.
- *Recovery (community)* — the results of strategies and services to support affected individuals and communities in their reconstruction of physical infrastructure and their restoration of emotional, social, economic and physical wellbeing. Activities that contribute to outputs of community recovery include: the restoration of essential services; counselling programs; temporary housing; long term medical care; and public health and safety information.

Effective prevention activities reduce the requirement to respond to, and recover from, emergency events. Efficient resource use reduces the risk to the community by supporting a greater availability of services. Every jurisdiction is placing a greater emphasis on preventative activities.

8.3 Fire events

This section contains information on the performance of ESOs in providing emergency management 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.

Emergency management services for fire events

Fire service organisations are the primary agencies involved in providing emergency management services for fire events. A range of other agencies may also be involved, including ambulance service organisations, SES/TES and police services (table 8A.38).

Full reporting would ideally include information on the resources allocated by all ESOs to the management of fire events. Although this information is currently unavailable, work is underway to improve this information for future reports. The descriptive information provided below on funding, incidents and human resources relate to fire service organisations only (although, as discussed in section 8.1, fire service organisations are involved in other activities not directly related to fire events).

Funding

Total funding of the fire service organisations covered in this Report was $1.6 billion in 2003-04 (excluding funding for land management agencies). Nationally, over the period 1999-2000 to 2003-04, funding increased with an average annual growth rate of 4.8 per cent. Within jurisdictions, funding increased (in real terms) both each year and overall in Victoria and Queensland, and increased overall for all other jurisdictions except the NT (table 8.2).

Table 8.2 **Real funding of fire service organisations (2003-04 dollars) ($ million)[a]**

	NSW [b]	*Vic*	*Qld*	*WA*[c]	*SA*	*Tas*	*ACT*	*NT*	*Aust*[d]
1999-2000	482.0	312.3	251.1	110.6	119.6	39.1	23.5	22.1	1 360.3
2000-01	466.7	336.7	259.5	105.3	119.9	40.7	26.9	22.7	1 378.3
2001-02	586.6	356.9	272.4	99.0	112.2	42.9	26.3	14.4	1 510.7
2002-03	662.8	390.6	294.2	103.1	123.8	49.6	26.5	16.0	1 666.6
2003-04	568.4	433.7	296.4	116.4	129.2	48.1	34.4	15.7	1 642.3

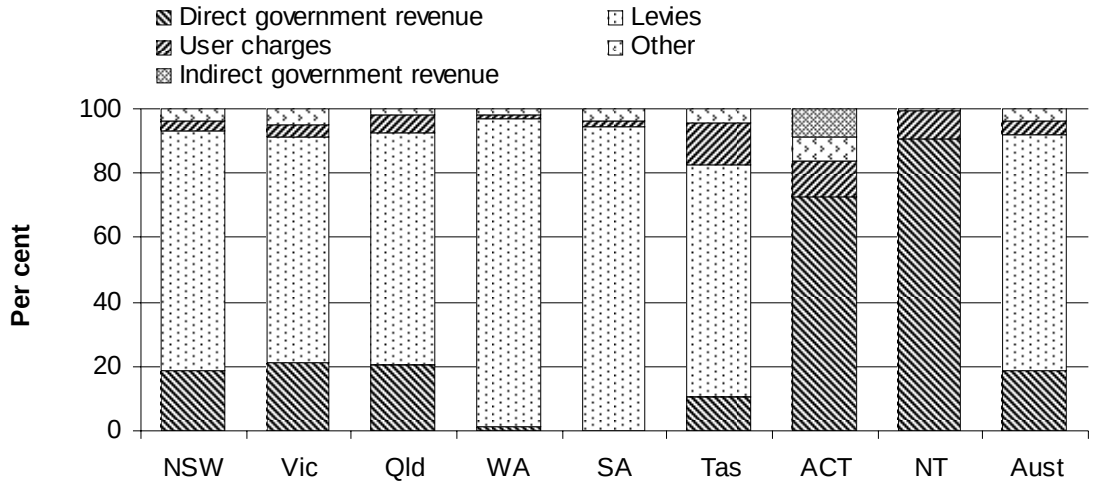
[a] Real funding is based on the Australian Bureau of Statistics (ABS) gross domestic product price deflator (2003-04 = 100) (table A.26). [b] Data for NSW provide a distorted representation of trends in fire service funding. NSW Fire Services data for 2001-02 and 2002-03 are artificially inflated by significant abnormal grants associated with natural disasters. [c] For WA, data for 2003-04 include operational and recurrent costs of local government Bush Fire Brigades, now funded by the Emergency Services Levy (ESL). [d] Totals may not sum as a result of rounding.

Source: State and Territory governments (unpublished); table 8A.1.

Levies on insurance companies were the primary source of funding for NSW and Victoria in 2003-04. WA was in a transitional year, phasing out levies on insurance companies and introducing a property-based levy. In Queensland, SA and Tasmania, levies on property owners were the largest contributors of funds to fire service organisations. Territory governments were the most important source of funds for the ACT and the NT (table 8A.1). In addition to relying on funded resources, all states and territories rely on volunteer firefighters, who make a significant contribution to the community.

Nationally, 18.7 per cent of funding for fire service organisations was provided directly by government in 2003-04. Across jurisdictions, the highest proportion of direct government funding was in the NT (90.7 per cent) and the lowest was in SA (0.3 per cent) (figure 8.2).

Figure 8.2 **Major sources of fire service organisation funding, 2003-04[a, b]**



a Indirect revenue is counted in government grants in table 8A.1. Funding reported is the sum of government grants, levies, user charges and miscellaneous revenue. Indirect revenue is shown separately (where government grants are shown net of indirect revenue, and indirect revenue is included in indirect government and other revenue) so is not to be interpreted as an additional amount. **b** In WA, a property-based ESL began on 1 July 2003; insurance fire levies ended on 31 December 2003. For this transitional year, 2003-04 funding includes part insurance fire levy and part ESL.

Source: State and Territory governments (unpublished); table 8A.1.

Fires and other emergency incidents

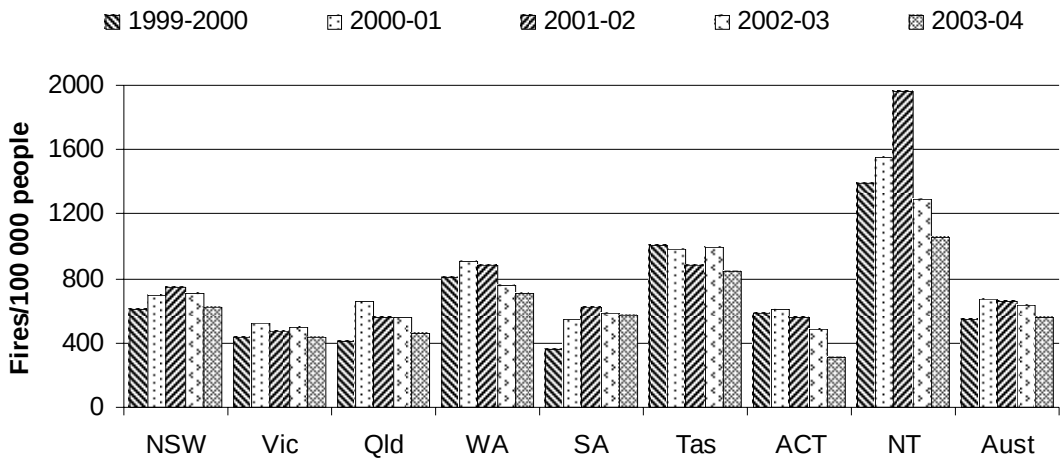
Information on reported fires and other incidents was provided separately for fire service organisations in each jurisdiction, but data were not available for all fire service organisations across jurisdictions. Fire service organisations are required by legislation to respond to all calls, and an incident cannot be deemed to be a false report until the fire service organisation has responded and investigated the site. Nationally, 31.1 per cent of the 353 628 reported incidents were fires and 67.8 per cent were other emergencies and incidents in 2003-04 (table 8A.2).

The proportion of incident types varied substantially across jurisdictions in 2003-04. In WA, for example, fire service organisations attended 25 703 incidents, of which 53.9 per cent were fires and 46.1 per cent were other emergencies and incidents. By comparison, in the ACT, fire service organisations attended 9485 incidents, of which 10.6 per cent were fires and 89.4 per cent were other emergencies and incidents. In Queensland, WA, Tasmania and the NT, the highest proportion of fires attended were landscape, bushfires and grass fires. In all other jurisdictions, other fires constituted the most attendances. Fires within or involving a structure were the least attended type of fire for all jurisdictions, except the ACT (table 8A.2). The historic emphasis on structure fires in this chapter is due to their high threat to life and property.

Total fire incidents attended by fire service organisations per 100 000 people

Nationally, 553 fire incidents per 100 000 people were reported in 2003-04. Across jurisdictions, the rate was highest in the NT (1055 per 100 000 people) and lowest in the ACT (311 per 100 000 people). The rate fell in all jurisdictions between 2002-03 and 2003-04 (figure 8.3).

Figure 8.3 **Total fire incidents attended by fire service organisations[a, b, c, d, e, f]**



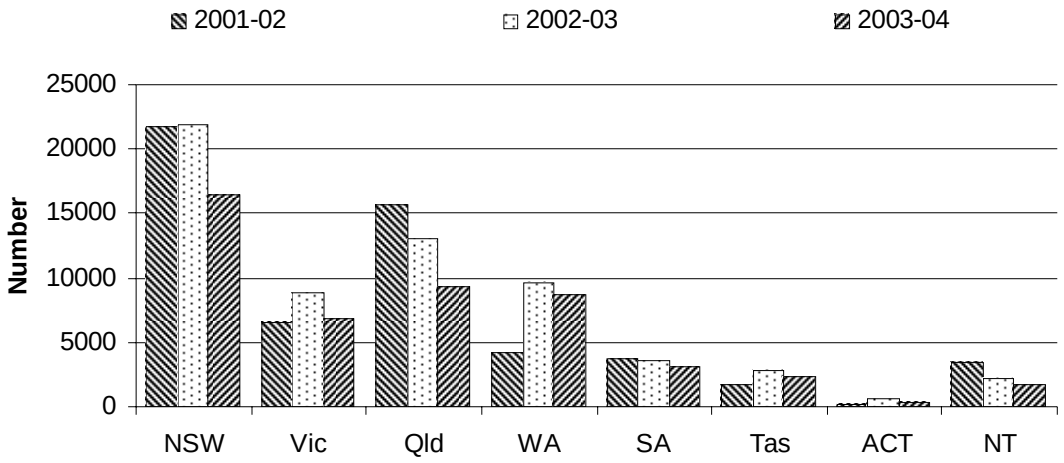
a Total fire incidents data include landscape fire incidents attended by fire service organisations. **b** Includes data for both urban and rural fire service organisations in all jurisdictions except the ACT and the NT, which report data for either urban or rural fire service organisations (but not both). **c** Due to data collection issues, 1999-2000 data for the NSW Fire Brigades are derived from a sample representing 80 per cent of incidents, and 2000-01 data for the NSW Fire Brigades are derived from a sample representing 85 per cent of the incidents. NSW 2000-01 data for areas serviced by the NSW Rural Fire Service have been derived from one third of Rural Fire Districts. The increase in incident levels for 2001-02 was due to the expansion of the incident reporting system to all NSW Rural Fire Districts. **d** In Queensland, accurate identification of incidents attended by both Queensland Fire and Rescue Service (QFRS) urban and rural crews is not possible at this stage. Reporting of incident attendance by QFRS rural crews is incomplete due to voluntary reporting procedures. The extent of under-reporting is unknown. **e** In the NT data, the high number of incidents per 100 000 people can be attributed to the large number of grass fires in central Australia caused by drought conditions during the reporting period, and to the improved monitoring of previously faulty fire alarms. **f** The average for Australia excludes rural fire service data for some years as per the jurisdictions' caveats.

Source: State and Territory governments (unpublished); table 8A.10.

Total reported landscape fire incidents

Nationally, 32 348 landscape fire incidents were reported in 2003-04 (table 8A.3). Across jurisdictions, the total number was highest in NSW (16 529 incidents) and lowest in the ACT (238 incidents) (figure 8.4). Landscape fire incidents reported to land management agencies are excluded for some jurisdictions.

Figure 8.4 **Fire service organisations and land management agencies reported total landscape fire (bush and grass) incidents[a, b, c, d, e, f, g]**



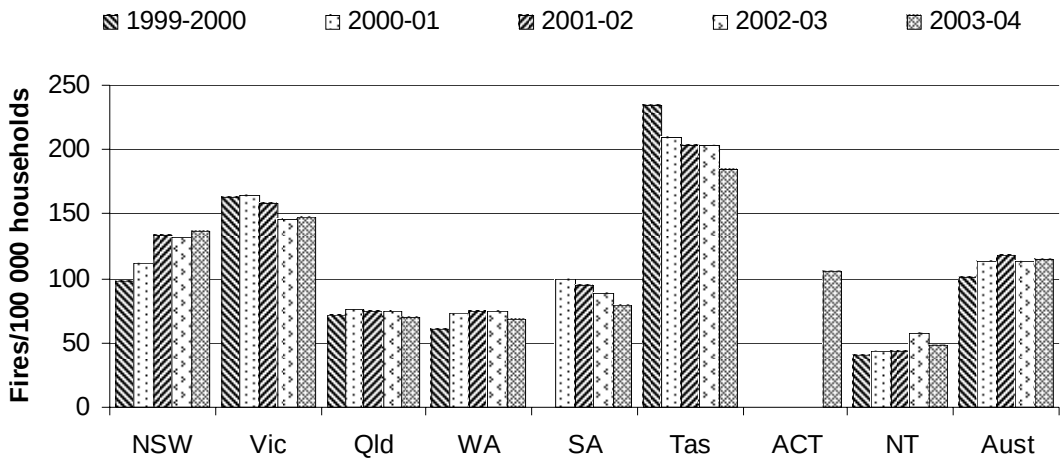
a These data may be different to those reported elsewhere in the chapter because these data reflect responses from fire and other services for some jurisdictions. **b** NSW data include fires from the NSW Department of Environment and Conservation, the NSW Rural Fire Service and the NSW Fire Brigades for all bushfires and grass fires regardless of size of area burnt. **c** Victorian landscape fires data for 2001-02 do not include incidents from the Department of Sustainability and Environment (DSE). Victorian landscape fires data for 2002-03 include 857 incidents from DSE (which burnt nearly 1.2 million hectares) and landscape fires for 2003-04 include 705 incidents from DSE. **d** Queensland data include QFRS urban stations and rural brigades. Accurate identification of incidents attended by both QFRS urban and rural crews is not possible at this stage. Reporting of incident attendance by QFRS rural crews is incomplete due to voluntary reporting procedures. The extent of under-reporting is unknown. Land management agency data are not available to QFRS. **e** Data for WA include 353 landscape fires in 2003-04, for which the Department of Conservation and Landscape Management was the lead agency. **f** For Tasmania, data refer to all fire brigades, both full time and volunteer. **g** NT data exclude the NT Bushfires Council and some NT Fire and Rescue Service volunteer brigades.

Source: State and Territory governments (unpublished); table 8A.3.

Accidental residential structure fires reported to fire service organisations per 100 000 households

Nationally, 114.9 accidental residential structure fires per 100 000 households were reported in 2003-04 (table 8A.4). Across jurisdictions, the rate was highest in Tasmania (185.3 incidents) and lowest in the NT (47.6 incidents) (figure 8.5).

Figure 8.5 **Accidental residential structure fires reported to fire service organisations[a]**



a Includes data for both urban and rural fire service organisations in all jurisdictions except the ACT, which reports data for either urban or rural fire service organisations (but not both).

Source: ABS Cat. no. 4102.0 (various years); State and Territory governments (unpublished); table 8A.4.

Human resources

Human resources refers to any person delivering a firefighting or firefighting-related service, or managing the delivery of this service, including:

- firefighters (qualified paid and volunteer firefighters)
- support personnel (any paid person or volunteer directly supporting the operational provider, including technical and communications personnel and personnel staff).

Nationally, 13 447 full time equivalent (FTE) paid personnel were involved in the delivery of fire services in 2003-04. Across jurisdictions, the number of FTE paid personnel ranged from 4714 in NSW to 214 in the NT. Nationally, the majority of paid personnel were firefighters (76.3 per cent). Across jurisdictions, this proportion was highest in SA (96.6 per cent) and lowest in Tasmania (65.1 per cent) (table 8A.5).

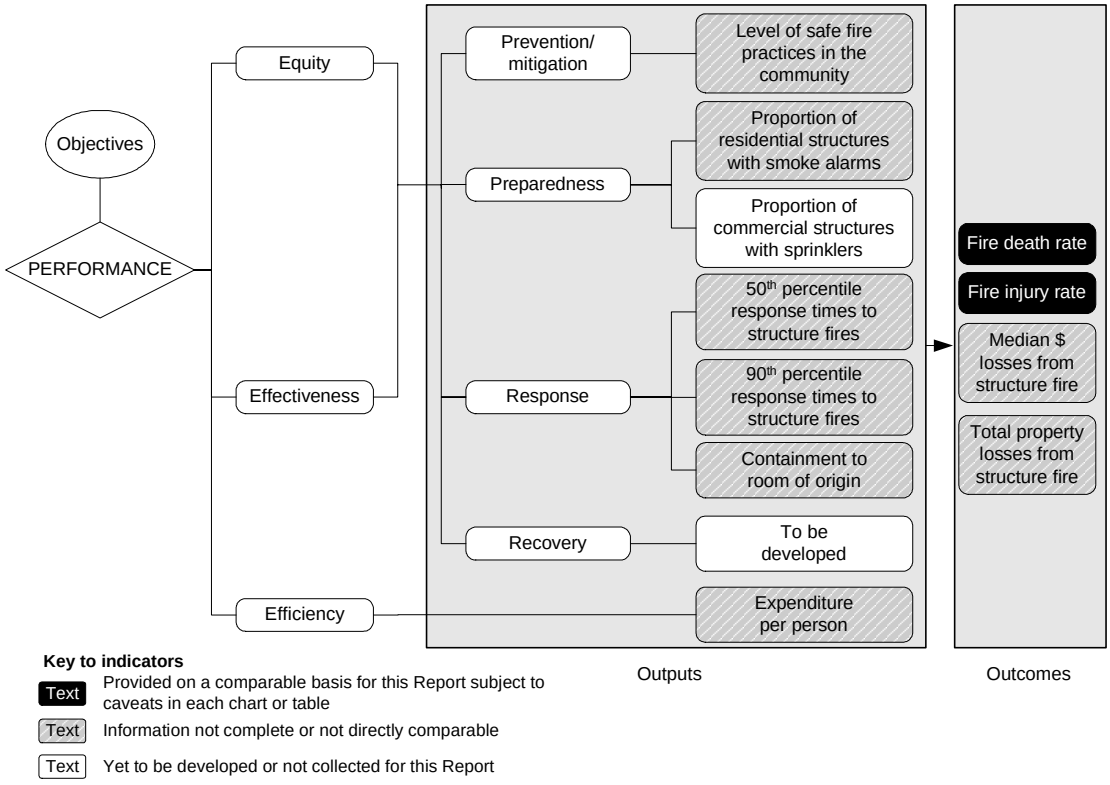
Volunteer firefighters (215 173 people) also participated in the delivery of fire services in 2003-04. The number of volunteer firefighters varied across jurisdictions, from 73 059 in NSW to 521 in the NT (table 8A.5).

Framework of performance indicators

Figure 8.6 presents the performance indicator framework for fire events that has been developed from the general framework for all emergency events. Definitions of all indicators are provided in section 8.8.

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

Figure 8.6 **Performance indicators for fire events**



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 the relatively small populations (as in Tasmania, the ACT and the NT).

The role of volunteers, particularly for country and rural fire brigades, also needs to be considered when interpreting some indicators (such as fire service organisation expenditure per 1000 people). Specifically, volunteer personnel provide a substantial proportion of fire services (and emergency services more generally)

(ABS 2001a). 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 much greater without volunteers (assuming these functions were still performed).

Further, 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. Fire service organisations are cooperating to improve and enhance the standards for the collection of fire events data, which is evident by the inclusion of rural fire service organisations data for more jurisdictions in more current years. Differences in counting rules are expected to be minimised in future reports.

The performance indicator framework for fire events shows which data are comparable in the 2005 Report (figure 8.6). 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).

Key performance indicator results

Outputs — equity and effectiveness

Outputs are measured by the 'level of safe fire practices in the community'; 'the proportion of residential structures with smoke alarms'; 'the proportion of commercial structures with sprinklers'; 'the 50^{th} and 90^{th} percentile response times to structure fires'; 'containment to the room of origin'; and 'expenditure per person'.

Prevention/mitigation — level of safe fire practices in the community

One measure of the extent of preparedness in the community is 'the level of safe fire practices in the community' (box 8.4). Selected fire risk management/mitigation strategies across jurisdictions are identified in table 8A.33. Nationally consistent data on household fire safety measures installed or prevention procedures followed were previously available from the Australian Bureau of Statistics (ABS) Population Survey Monitor (table 8A.12), which has been discontinued. Nationally consistent data are not currently available.

Data for 2001-02 were collected by some jurisdictions and collated by the Australasian Fire Authorities Council. Differences in the survey methods and

instruments of these two collections mean that the data are not fully comparable over time. Comparison across jurisdictions also need to be treated with caution because sample size influences the accuracy of sample estimates. Table 8A.12 contains data for 2001-02 for Victoria and Queensland, and Population Survey Monitor data for households with a fire safety measure, by fire safety measure installed or followed.

Box 8.4 **Level of safe fire practices in the community**

'The level of safe fire practices in the community' is included as an output indicator of governments' objective to reduce the adverse effects of fires on the Australian community and manage the risk of fires.

Fire prevention output indicators focus on the level of fire safety practices in the community. Selected fire risk management/mitigation strategies across jurisdictions are identified in table 8A.33. Data are also reported on the proportion of households with a fire safety measure installed or prevention measure followed: the Steering Committee has identified this indicator for development and reporting in future.

Holding other factors constant, the higher the proportion of households with a fire safety measure installed or prevention measure followed, the less likely are fires to occur or cause excessive damage. This indicator does not provide information on the degree to which practices under consideration contribute to fire prevention and mitigation.

Preparedness — proportion of residential structures with smoke alarms

Another measure of the extent of preparedness in the community is 'the proportion of residential structures with smoke alarms' (box 8.5).

Box 8.5 **Proportion of residential structures with smoke alarms**

'The proportion of residential structures with smoke alarms' is included as an output indicator of governments' objective to reduce the adverse effects of fire on the Australian community through preparedness measures.

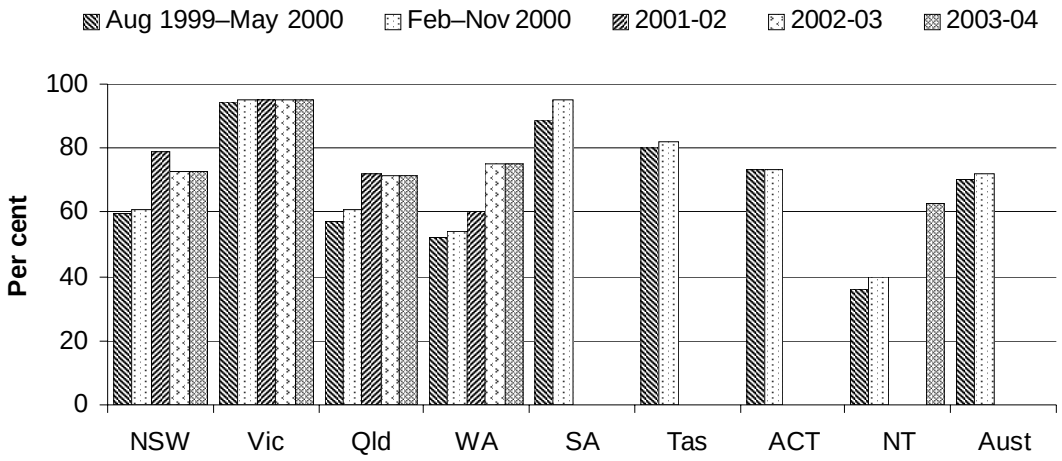
The indicator is defined as the number of households with an operational smoke alarm installed, divided by the total number of households.

The higher the proportion of households with an operational smoke alarm installed, the greater is the likelihood that the adverse effects of fire will be avoided or reduced.

Nationally consistent and complete data are not currently available on 'the proportion of residential structures with smoke alarms'. Nationally consistent data were last available in 2000 (from the discontinued ABS Population Survey Monitor). Since 2001-02, a number of jurisdictions have undertaken surveys on the number of households with an operational smoke alarm installed (table 8A.11); some jurisdictions did not undertake a survey in 2003-04, however, because 'the proportion of total households with a fire safety measure' is close to 100 per cent (as in SA) and, in any case, is a slow moving indicator. Caution needs to be exercised when interpreting this survey data, given changes in sources over time and the reliability of sample data.

Four jurisdictions (NSW, Victoria, Queensland and WA) conducted surveys in 2003-04, collecting data on total households that had an operational smoke alarm or smoke detector installed. Across those jurisdictions that undertook a survey, the proportion of total households that had an operational smoke alarm or smoke detector installed was highest in Victoria (95.9 per cent) and lowest in the NT (63.0 per cent). The proportions in 2003-04 were virtually unchanged from the proportions reported by jurisdictions in 2002-03 (figure 8.7).

Figure 8.7 **Households with an operational smoke alarm installed**[a, b, c, d, e]



[a] Caution needs to be used where there are small differences in the Population Survey Monitor results, which are affected by sample and estimate size (see section 11.8 of the *2002 Report on Government Services*). The Population Survey Monitor ceased in the final quarter for 2000. From 2001-02, data are from jurisdictional collections and are not strictly comparable with the Population Survey Monitor data, because the two sets of survey instruments used to collect the data differ. [b] Data for 2001-02 are sourced from the 2002 NSW Department of Health's Continuous Health Survey Program. Data for 2002-03 are sourced from the NSW Health Survey 2002 (HOIST), Centre for Epidemiology and Research, NSW Department of Health. Data for 2001-02 represent six months of 2002: 95 per cent of these data fell within the following confidence interval — 77.8–80.2 per cent of households that had at least one smoke alarm. Data for 2002-03 represent the full 12 month period of 2002: 95 per cent of these data fell within the following confidence interval — 71.8–74.0 per cent of households that had at least one smoke alarm. Data for 2003-04 represent the full 12 month period of 2003: 95 per cent of these data fell within the following confidence interval — 71.6–73.9 per cent of households that had at least one smoke alarm. [c] Victorian 2001-02 data are sourced from a random telephone survey of 2304 respondents residing within the 23 local government areas significant to the metropolitan fire district. The MFESB commissioned Crime Prevention Victoria to develop a survey around fire safety issues through its Local Safety Survey. The 2003-04 data are based on the results of the most recent survey conducted in April 2004. [d] For Queensland, data are collected by the Office of Economic and Statistical Research as part of the November quarter Queensland Household Survey each year. [e] For WA, 2003-04 data are sourced from a random telephone survey of both metropolitan Perth and regional residents.

Source: ABS (2001b); State and Territory governments (unpublished); table 8A.11.

Preparedness — proportion of commercial structures with sprinklers

The Steering Committee has identified 'the proportion of commercial structures with sprinklers' as an indicator of preparedness for fire events (box 8.6). Data for this indicator, however, were not available for the 2005 Report.

Box 8.6 **Proportion of commercial structures with sprinklers**

'The proportion of commercial structures with sprinklers' will provide an output indicator of governments' objective to reduce the adverse effects of fire on the Australian community through preparedness and mitigation.

The indicator is defined as the number of commercial structures with sprinklers installed, divided by the total number of commercial structures.

The higher the proportion of commercial structures with sprinklers installed, the greater is the likelihood that the adverse effects of fire are reduced. This indicator will not provide information on the operational status of sprinkler systems or their contribution to fire prevention.

Response

Response times and containment of structure fires (to the object or room of origin) are indicators of the effectiveness of fire service organisations in terms of their ability to respond to and suppress fires. Response times to structure fires are reported first, followed by containment to room of origin.

Response — 50th and 90th percentile response times to structure fires

The 50th and 90th percentile response times to structure fires provide an important measure of response activities (box 8.7). The data relate to the performance of the reporting agency (or agencies) only, not necessarily to the performance of all fire service organisations within each jurisdiction. Response time data need to be viewed with care because performance is not strictly comparable across jurisdictions, given the following:

- Response time data for some jurisdictions represent responses to urban, rural and remote areas.
- Responses may include career firefighters, auxiliary/part time firefighters and volunteers.
- While definitions on response times are consistent, not all jurisdictions have systems in place to capture all components of response time for all cases from the time of the call to arrival at the scene.
- The definition of response times varies across jurisdictions (that is, the data provided by jurisdictions may diverge from the definitions agreed for the Report). This occurs partly because some agencies use a manual system to calculate response time figures, while other services retrieve the data from computer aided dispatch (CAD) systems.

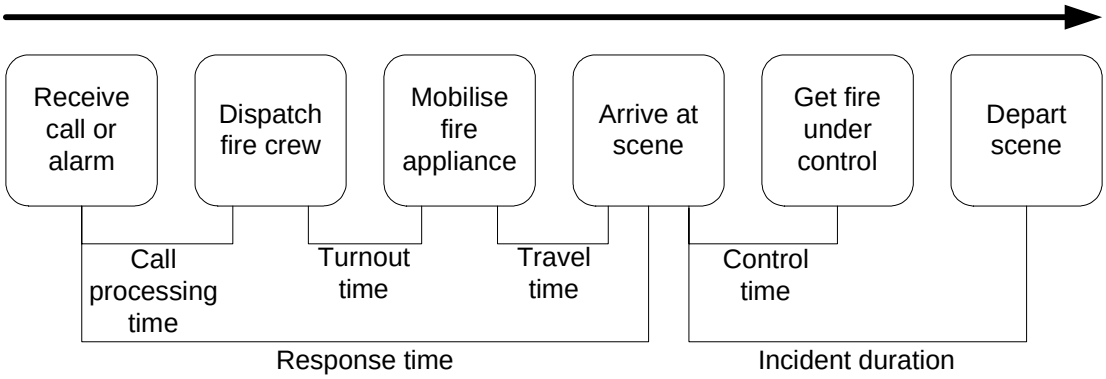
Box 8.7 **50th and 90th percentile response times to structure fires**

50th and 90th percentile response times to structure fires are included as output indicators of governments' objective to reduce the adverse effects of fire on the Australian community through timely response.

The indicator '50th percentile response time', is defined as the time within which 50 per cent of the first responding fire resources arrive at the scene of structure fires. Similarly, '90th percentile response time', refers to the time within which 90 per cent of the first responding fire resources arrive at the scene of structure fires. Structure fires are those fires in housing and other buildings. The response time is defined as the interval between the receipt of the call at the dispatch centre and the arrival of the vehicle at the scene (that is, when the vehicle is stationary and the handbrake is applied). This and other intervals are illustrated in figure 8.8.

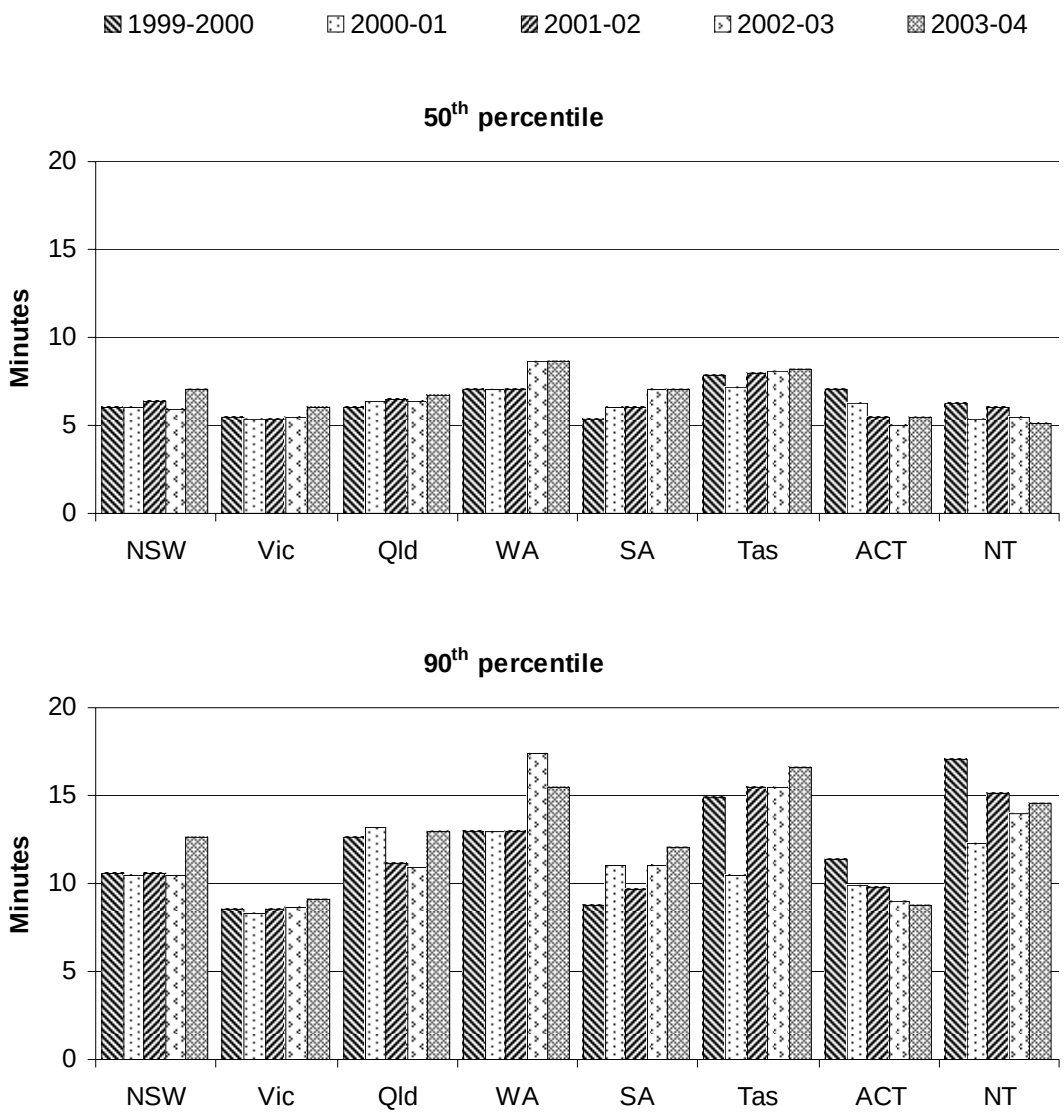
Shorter response times are more desirable.

Figure 8.8 **Response time points and indicators for fire events**



The 50th percentile response time in 2003-04 was highest in WA (8.6 minutes) and lowest in the NT (5.1 minutes) (figure 8.9). The 90th percentile response time in 2003-04 was highest in Tasmania (16.6 minutes) and lowest in the ACT (8.8 minutes) (figure 8.9). Response times vary within a jurisdiction depending on the remoteness of the area in which the responses occur (among other factors). Response times are segmented into remoteness areas, based on the ABS Australian Standard Geographical Classification.

Figure 8.9 **Response times to structure fires**[a, b, c, d, e, f, g]



a Differences between jurisdictions in definitions of response times, geography, personnel mix, and system type (manual or CAD) affect the comparability of response times data. **b** Includes data for both urban and rural fire service organisations in all jurisdictions except Queensland and the ACT, which report data for either urban or rural fire service organisations (but not both). **c** NSW data for 1999-2000 to 2001-02 are for NSW Fire Brigades only, but include responses to calls outside NSW Fire Brigades' designated fire district. Due to data collection issues, 1999-2000 data are derived from a sample representing 80 per cent of the incidents, and data for 2000-01 are derived from a sample representing 85 per cent of the incidents. Data for 2002-03 and 2003-04 include responses from the NSW Fire Brigades and the NSW Rural Fire Service. **d** Victorian data for 2001-02 and 2002-03 are not uniformly consistent with the nationally agreed definition. Specifically, some inner metropolitan calls do not include all of the call processing time (approximately 36-40 seconds per response time), due to the time stamp generated by the computer aided dispatch system. Response times figures for 2003-04 are consistent with the nationally agreed definition and now include call handling time across the State. **e** For Queensland, collection procedures do not differentiate between responses made under normal road conditions and emergency responses. **f** WA data exclude reports with incorrect time details. Data for 1999-2000 are for urban services only. From 2000-2001, data include both urban and rural fire services. **g** Tasmanian data for 2000-01 exclude the Rural Fire Brigades.

Source: State and Territory governments (unpublished); table 8A.13.

For major cities, the 50th percentile response time in 2003-04 was highest in WA (8.0 minutes) and lowest in the ACT (5.4 minutes). For outer regional areas, it was highest in Tasmania (10.3 minutes) and lowest in the NT (5.2 minutes), and for very remote areas it was highest in WA (13.0 minutes) and lowest in the NT (5.0 minutes) (figure 8.10).

For major cities, the 90th percentile response time in 2003-04 was highest in WA (12 minutes) and lowest in Victoria (8.2 minutes). For outer regional areas, it was highest in WA (23 minutes) and lowest in Victoria (14 minutes), and for very remote areas, it was highest in WA (60 minutes) and lowest in Tasmania (17.2 minutes) (figure 8.10).

Response — containment to room of origin

Another indicator of response effectiveness is 'containment to the room of origin' (box 8.8).

Box 8.8 **Containment to the room of origin**

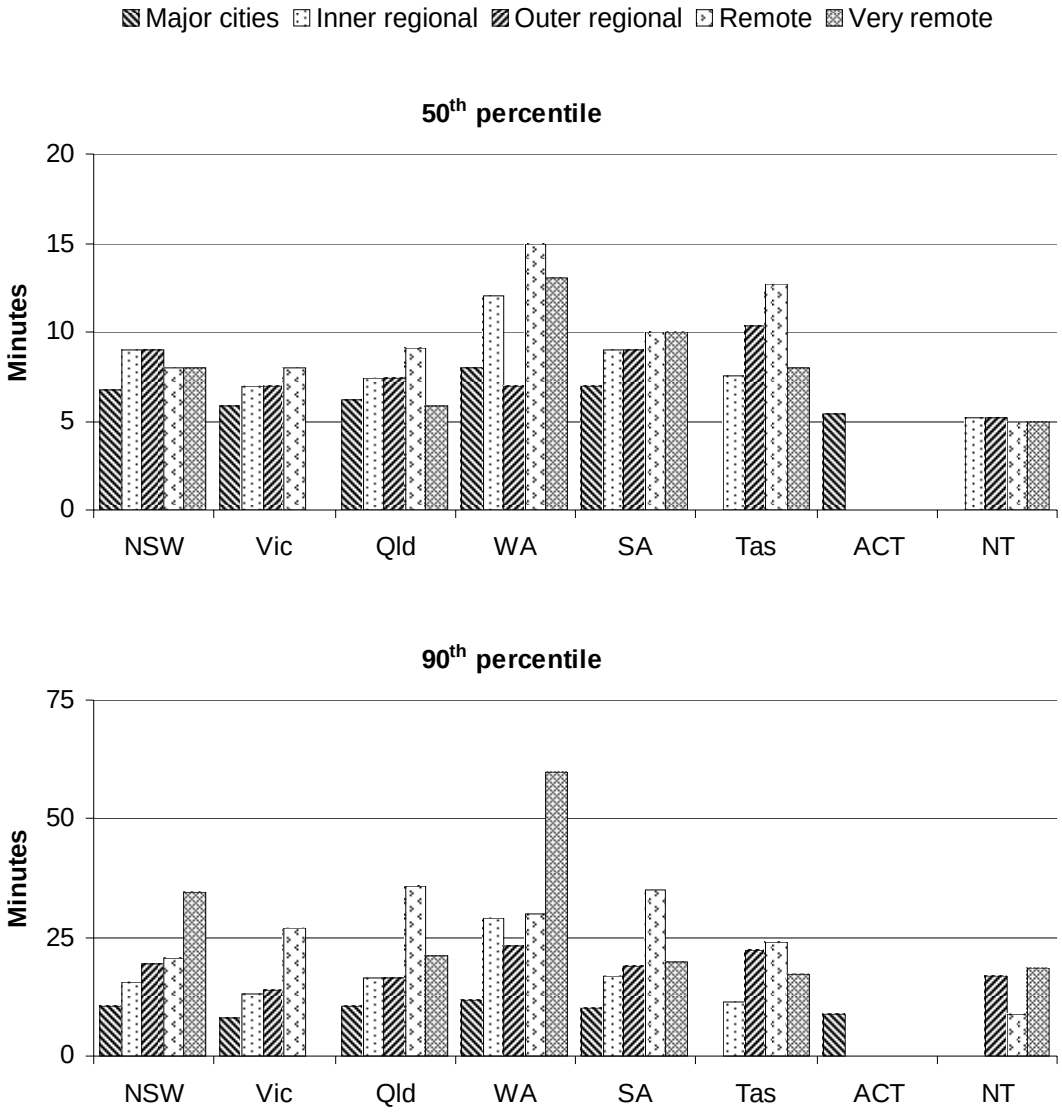
'Containment to the room of origin' is included as an output indicator of governments' objective to reduce the adverse effects of fire emergency events on the Australian community by response and mitigation strategies.

The indicator is defined as the number of structure fires contained to the object or room of origin divided by the total number of structure fires. Structure fires are those fires in housing and other buildings.

A higher proportion of structure fires contained to the object or room of origin is more desirable.

Nationally, the proportion of fires contained to the object or room of origin was 72.8 per cent in 2003-04. Across jurisdictions, the proportion was highest in the ACT (81.0 per cent) and lowest in Tasmania (63.5 per cent) (figure 8.11).

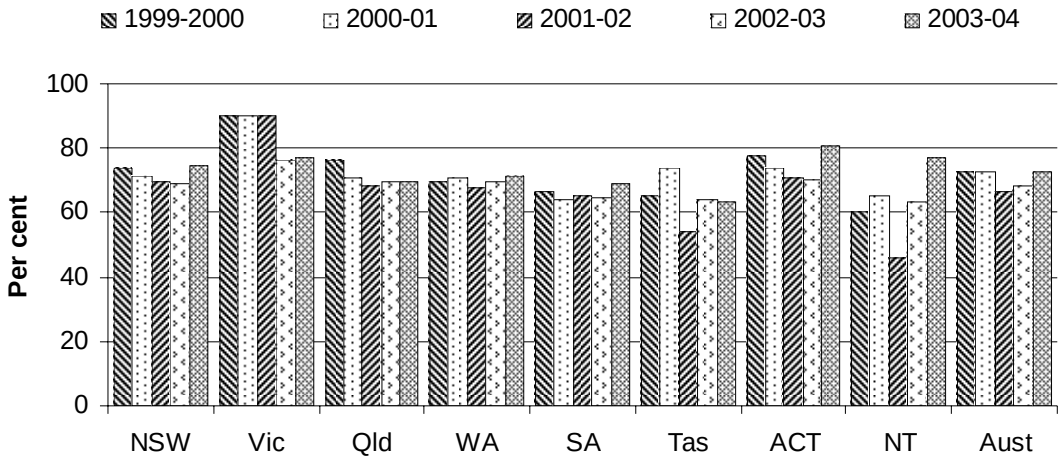
Figure 8.10 **Response times to structure fires, by geographic area, 2003-04[a, b, c, d, e, f, g, h]**



[a] Differences between jurisdictions in definitions of response times, geography, personnel mix, and system type (manual or CAD), affect the comparability of response times data. [b] NSW data include responses from the NSW Fire Brigades and the NSW Rural Fire Service. [c] For Victoria, response times figures for 2003-04 are consistent with the nationally agreed definition. Previously, Victorian data were not uniformly consistent with the nationally agreed definition because some inner metropolitan calls did not include all of the call processing time. [d] For Queensland, data collection procedures do not differentiate between responses made under normal road conditions and emergency responses. [e] WA data include both career (full time) and volunteer brigades. Response times in inner and outer regional, remote and very remote areas may be affected by the availability of volunteers, who have to travel from remote home or work locations to stations before they respond to an incident, which may also be at a distant location. [f] In SA, the Country Fire Service and the Metropolitan Fire Service do not have geocoded data. SA data include incident records with both alarm and arrival times. [g] For Tasmania, figures include data provided by all fire brigades, both full time and volunteer. [h] For the NT, data include auxiliary stations where response is generally made from home to station and then to the incident. Data do not include the NT Bushfires Council and some NT Fire and Rescue Service volunteer stations.

Source: State and Territory governments (unpublished); table 8A.14.

Figure 8.11 **Structure fires contained to the object/room of origin[a, b, c, d]**



a Includes data for both urban and rural fire service organisations in all jurisdictions except NSW, Queensland, SA and the ACT, which report data for either urban or rural fire service organisations (but not both). **b** NSW data exclude the NSW Rural Fire Service, but include responses to calls outside the NSW Fire Brigades designated fire districts. Due to data collection issues, 1999-2000 data are derived from a sample representing 80 per cent of the incidents, and 2000-01 data are derived from a sample representing 85 per cent of the incidents. **c** Victorian data for 1999-2000 and 2001-02 exclude the Country Fire Authority. Data for 2002-03 and 2003-04 include the Country Fire Authority. **d** The average for Australia excludes rural fire service data for some years as per the jurisdictions' caveats.

Source: State and Territory governments (unpublished); table 8A.15.

Outputs — recovery

The Steering Committee has identified recovery as a key area for further development in future reports (box 8.9).

Box 8.9 **Performance indicator — recovery**

An output indicator of governments' objective to reduce the adverse effects of fires on the Australian community through recovery has yet to be developed.

Outputs — efficiency

Efficiency indicators report on the unit cost of service delivery. The calculation of unit costs requires the specification of outputs. For fire service organisations, this is a difficult task, given the diversity of activities undertaken. The fire sector has considered a range of options for specifying outputs.

Expenditure per person

'Expenditure per person' is an indicator of the efficiency of governments in delivering emergency management services (box 8.10). Fire service organisation funding per 1000 people is reported to show the contribution of governments and other funding sources. The quality of efficiency data improved for the 2003 Report, with the adoption of a consistent basis for reporting payroll tax. In the 2004 Report, total expenditure per person was reported for the first time (replacing total government expenditure per person less indirect and government and non-government revenue per person). Efficiency data are not fully comparable, however, because there are differences in the reporting of asset related costs.

Box 8.10 **Expenditure per person**

'Expenditure per person' is included as an output indicator of governments' objective to deliver efficient emergency management services. The indicator is defined as fire service organisation expenditure per 1000 people.

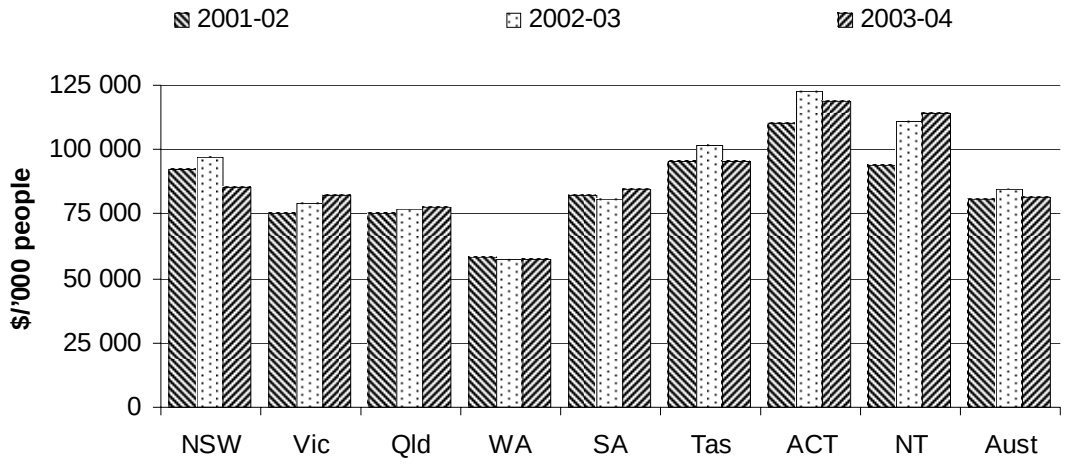
Expenditure is employed as a proxy for efficiency. Expenditure per fire is not used as a proxy for fire service organisation efficiency because an organisation that devotes more resources to the prevention and preparedness components to reduce the number of fire incidents could erroneously appear to be less efficient.

Holding other factors constant, lower expenditure per person represents greater efficiency. 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 (response times) or less challenging fires.

Expenditure is reported as the total cost (total direct and indirect government and other fire expenditure) of fire service organisations. Cost to government is reported as total government funding of fire service organisations. Total expenditure is a measure of efficiency for fire service organisations, and government funding is a measure of the cost to government of fire service organisations. Both are reported, because revenue from other sources is significant for a number of jurisdictions.

Nationally, the total expenditure on fire service organisations per 1000 people in 2003-04 was $81 352. Across jurisdictions, it ranged from $119 140 in the ACT to $57 232 in WA (figure 8.12).

Figure 8.12 **Real fire service organisations expenditure (2003-04 dollars)[a, b, c, d]**



a Total fire expenditure includes levies on insurance companies and property owners, user charges, fundraising and donations, and indirect revenue. **b** NSW fire service organisations data for 2001-02 and 2002-03 are artificially inflated by significant abnormal grants associated with natural disasters. **c** A property-based ESL was introduced in WA on 1 July 2003; insurance fire levies ended on 31 December 2003. For this transitional year, 2003-04 funding includes part insurance fire levy and part ESL. **d** User cost of capital in the NT includes assets for the NT Fire and Rescue Service only. Revenue from user charges includes the NT Fire and Rescue Service only, and other revenue includes the Bushfires Council only.

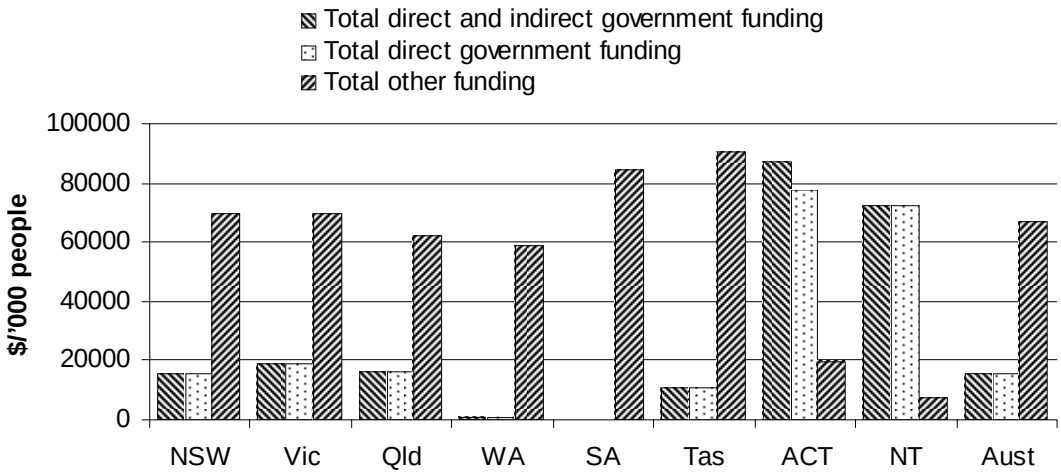
Source: State and Territory governments (unpublished); tables 8A.17.

Nationally, direct and indirect government funding of fire service organisations per 1000 people in 2003-04 was $15 454. Across jurisdictions, it ranged from $87 213 in the ACT to $221 in SA. Direct government funding per 1000 people in 2003-04 was $15 299 nationally, ranging across jurisdictions from $77 663 in the ACT to $221 in SA. Other funding per 1000 people was $67 154 nationally, ranging across jurisdictions from $90 281 in Tasmania to $7381 in the NT (figure 8.13).

Outcomes

The indicators of outcomes reported here relate to the objective of ESOs to minimise the effect of fire on life, property and the environment. The 'fire death rate', 'fire injury rate', 'median dollar losses from structure fire' and 'total property losses from structure fire' are indicators of outcomes in terms of the effect of fire on life, property and the environment. Caution in interpreting data for some indicators must be exercised (given, for example, the relatively small number of deaths and the significant fluctuations from year to year), particularly for jurisdictions with relatively smaller populations.

Figure 8.13 **Fire service organisation funding 2003-04**[a, b, c]



[a] Total fire expenditure includes levies on insurance companies and property owners, user charges, fundraising and donations, and indirect revenue. [b] A property-based ESL was introduced in WA on 1 July 2003; insurance fire levies ended on 31 December 2003. For this transitional year, 2003-04 funding includes part insurance fire levy and part ESL. [c] User cost of capital in the NT includes assets for the NT Fire and Rescue Service only. Revenue from user charges includes the NT Fire and Rescue Service only, and other revenue includes the Bushfires Council only.

Source: State and Territory governments (unpublished); table 8A.18.

Fire death rate

The 'fire death rate' is an indicator of governments' objective to minimise the adverse effects of fire events on the Australian community (box 8.11).

Box 8.11 **Fire death rate**

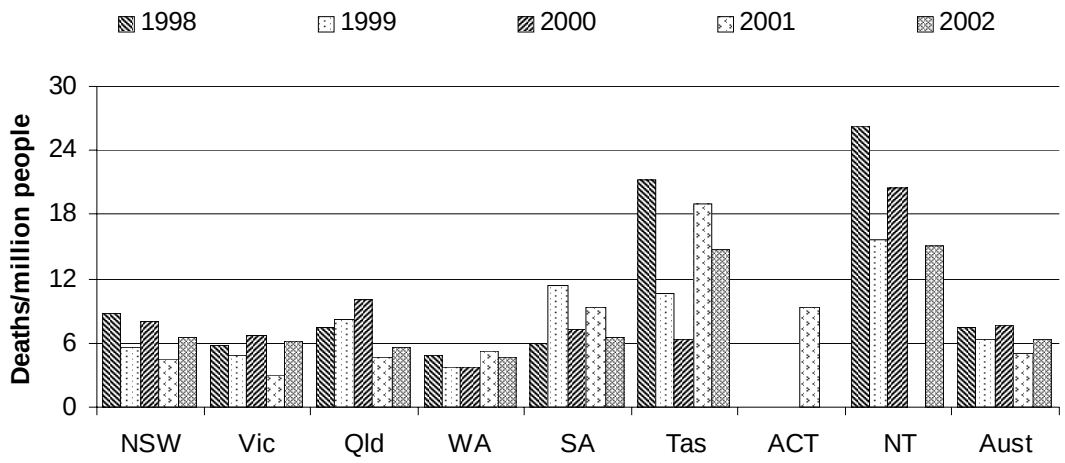
The 'fire death rate' is included as an outcome indicator of governments' objective to minimise the adverse effects of fires on the Australian community and enhance public safety.

The indicator is defined as the number of fire deaths per million people. A lower fire death rate represents a better outcome.

Nationally, there were 123 fire deaths in 2002. Exposure to smoke, fire and flames accounted for the largest proportion (81.3 per cent), followed by fire deaths from intentional self-harm by smoke, fire and flames (16.3 per cent) (table 8A.6). Nationally, the fire death rate was 6.3 deaths per million people in 2002. Across jurisdictions, the rate was highest in the NT (15.1 fire deaths per million people) and lowest in the ACT (no fire deaths) (figure 8.14).

Fire deaths data are volatile over time, given the small number of fire deaths. To overcome data volatility, a three year average fire death rate is reported. Nationally, the three year average fire death rate was 6.3 per million people for 2000–2002. Across jurisdictions, the three year average rate was highest in Tasmania (13.4 deaths per million people) and lowest in the ACT (3.1 deaths per million people) (table 8A.6).

Figure 8.14 **Fire death rate**[a, b, c, d]



[a] Fire deaths data are reported by the State or Territory of the deceased's usual residence, and by the year in which the death was registered. [b] The small number of deaths means it is difficult to establish patterns and provide detailed analysis. The rates fluctuate from year to year. This fluctuation demonstrates the data volatility, which must be taken into account in any interpretation of data. [c] The ACT had no fire deaths in 1998, 1999 and 2002. [d] The NT had no fire deaths in 2001.

Source: ABS Cat. no. 3303.0 (unpublished); table 8A.6.

Fire injury rate

The 'fire injury rate' is an indicator of governments' objective to minimise the adverse effects of fire events on the Australian community (box 8.12). Fire injuries are represented by hospital admissions 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).

Nationally, there were 2706 hospital admissions for fire injuries in 2002-03, or 13.6 admissions per 100 000 people. Among those jurisdictions for which data were available, the fire injury hospitalisation rate was highest in SA (17.2 fire injuries per 100 000 people) and lowest in Victoria (10.9 per 100 000 people) (figure 8.15).

Fire injury rates are volatile over time, given the small number of fire injuries. To overcome data volatility, a three year average fire injury rate is reported. Nationally,

the three year average rate for 2000-01 to 2002-03 was 14.5 per 100 000 people. Across jurisdictions, the three year average fire injury rate was highest in WA (18.3 fire injuries per 100 000 people) and lowest in Victoria (10.3 fire injuries per 100 000 people) (table 8A.7).

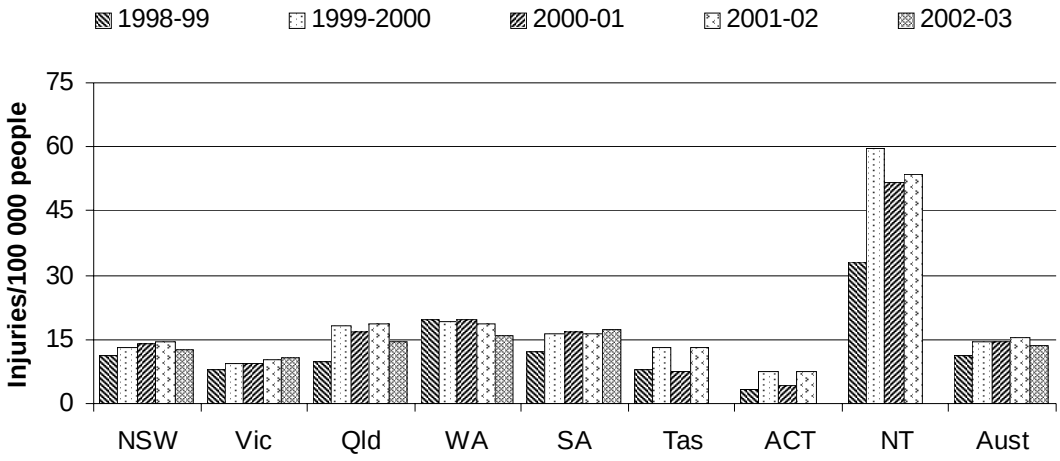
Box 8.12 **Fire injury rate**

The 'fire injury rate' is included as an outcome indicator of governments' objective to minimise the adverse effects of fires on the Australian community and enhance public safety.

The indicator is defined as the number of fire injuries per 1000 people. A lower fire injury rate represents a better outcome.

Fire injuries are represented by hospital admissions (excluding emergency department non-admitted casualties). 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.

Figure 8.15 **Fire injury rate[a]**



a Fire injuries are defined as the number of hospital admissions to public and private hospitals. The data exclude emergency department non-admitted casualties and fire injuries arising from arson, secondary fires resulting from explosions, and transport accidents. Fire injuries are reported by the State or Territory in which the fire injury is treated.

Source: ABS (unpublished); AIHW (unpublished); table 8A.7.

Losses from structure fire

The 'median dollar losses from structure fire' (box 8.13) and the 'total property loss from structure fire' (box 8.14) are indicators of outcomes in terms of the effect of fire on property. These data (expressed in real terms) have not been adjusted for jurisdictional differences in the costs and values of various types of building. In addition, NSW, Queensland and the NT were able to provide data for urban fire services only, so the results across jurisdictions are not directly comparable. Further, the method of valuing property loss from fire varies across jurisdictions.

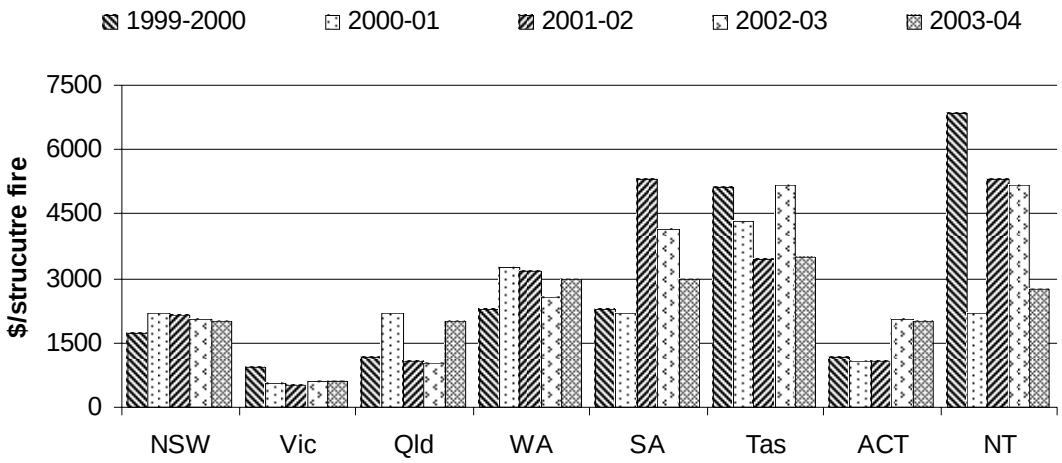
Box 8.13 **Median dollar losses from structure fire**

'Median dollar losses from structure fire' is included as an outcome indicator of governments' objective to minimise the adverse effects of fires on the Australian community.

This indicator is defined as the median dollar losses from structure fire (a fire in housing or a building), adjusted for inflation. Lower median dollar losses represent a better outcome.

The median dollar loss in 2003-04 was highest in Tasmania ($3500 per structure fire) and lowest in Victoria ($600 per structure fire) (figure 8.16). Across jurisdictions, the real median dollar loss increased in Queensland and WA from 2002-03 to 2003-04, and decreased in all other jurisdictions (table 8A.8).

Figure 8.16 **Real median dollar loss from structure fire (2003-04 dollars)[a, b, c, d]**



a Real expenditure is based on the ABS gross domestic product price deflator (2003-04 = 100) (table A.26). Estimates have not been validated by the insurance industry or adjusted for interstate valuation differences. **b** Includes data for both urban and rural fire service organisations in all jurisdictions except NSW, Queensland, the ACT and the NT, which report data for either urban or rural fire service organisations (but not both). **c** NSW data are for the NSW Fire Brigades only, but include responses to calls outside NSW Fire Brigades designated fire districts. Due to data collection issues, data for 1999-2000 are derived from a sample representing 80 per cent of the incidents, and data for 2000-01 are from a sample representing 85 per cent of the incidents. Data for 2001-02 include an outlier that resulted in a direct dollar loss of more than $60 million. **d** For the ACT, data for 2002-03 exclude the January 2003 wildfire that destroyed over 500 houses and resulted in losses in excess of $200 million.

Source: State and Territory governments (unpublished); table 8A.8.

Box 8.14 **Total property losses from structure fire**

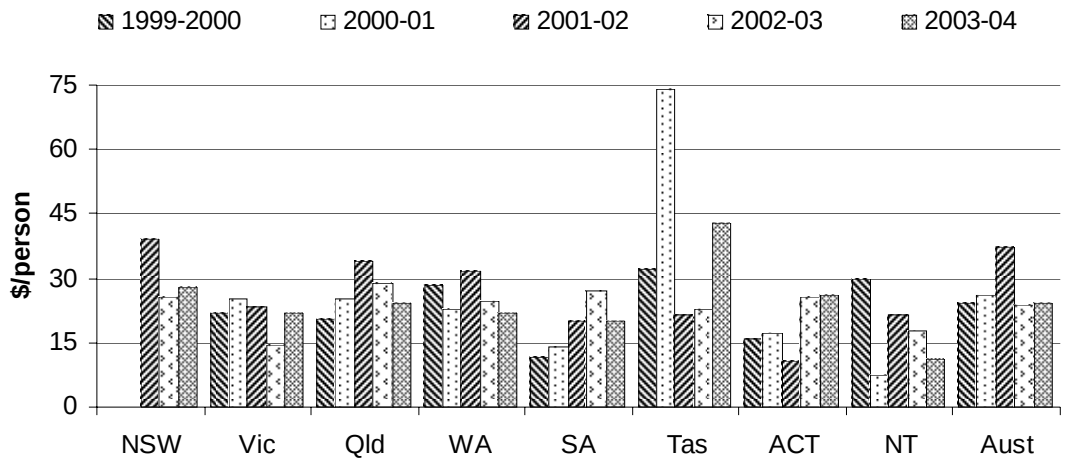
'Total property losses from structure' fire is included as an outcome indicator of governments' objective to minimise the adverse effects of fires on the Australian community.

This indicator is defined as the total property loss from structure fire (a fire in housing or a building) per person adjusted for inflation. Lower total property losses from structure fire per person represent better outcomes.

Nationally, the total property loss from structure fire in 2003-04 was $24 per person. Across jurisdictions, it was highest in Tasmania ($43 per person) and lowest in the NT ($11 per person). The real total property loss increased from 2002-03 to 2003-04 in NSW, Victoria and Tasmania, and decreased in all other jurisdictions except the ACT, where it remained the same (figure 8.17).

Nationally, the three year average total dollar loss from structure fire to 2003-04 was $28 per person. Across jurisdictions, the three year average total dollar loss from structure fires was highest in NSW ($31 per person) and lowest in the NT ($17 per person) (table 8A.9).

Figure 8.17 **Real total property loss from structure fire (2003-04 dollars)[a, b, c, d, e, f, g]**



a Real expenditure is based on the ABS gross domestic product price deflator (2003-04 = 100) (table A.26). Estimates have not been validated by the insurance industry or adjusted for interstate valuation differences. **b** Includes data for both urban and rural fire service organisations in all jurisdictions except NSW, Queensland, the ACT and the NT, which report data for either urban or rural fire service organisations (but not both). **c** NSW data are for the NSW Fire Brigades only, but include responses to calls outside NSW Fire Brigades designated fire districts. Data for 2001-02 include an outlier that resulted in a direct dollar loss of more than $60 million. No data are available for NSW for 1999-2000 and 2000-01. **d** For Queensland, data for all years except 2003-04 exclude incidents solely attended by the Rural Fire Services. Incidents with missing or nil dollar losses have been excluded. **e** For Tasmania, the small population size means figures are affected by single large-loss events. Increases have been influenced by rising property prices. **f** For the ACT, data for 2002-03 exclude the January 2003 wildfire which destroyed over 500 houses and resulted in losses in excess of $200 million. **g** The average for Australia excludes rural fire service data for some years as per the jurisdictions' caveats.

Source: State and Territory governments (unpublished); table 8A.9.

8.4 Ambulance events

This section provides information on the performance of ESOs in providing emergency management services for ambulance events. Ambulance events are incidents that result in demand for ambulance services to respond. They include the provision of emergency pre-hospital patient care and transport in response to sudden injury and illness; the retrieval of emergency patients; and the accessing of emergency pre-hospital patients (for example, in confined spaces and hazardous environments).

Emergency management services for ambulance events

Ambulance service organisations are the primary agencies involved in providing emergency management services for ambulance events. In a limited number of cases, however, other organisations provide services such as medical transport for emergencies (table 8A.38). The descriptive information provided below on funding, incidents and human resources are for ambulance service organisations only (although, as discussed in section 8.1, these organisations are involved in other activities in addition to providing ambulance event services).

Funding

Total funding of ambulance service organisations covered in this Report was $1.2 billion in 2003-04. Nationally, real funding increased each year from 1999-2000 to 2003-04, with an average annual growth rate of 5.8 per cent. Across jurisdictions, real funding increased both each year and overall in Victoria, Queensland, WA, Tasmania and the NT; for all other jurisdictions, real funding did not increase every year, but it did increase overall between 1999-2000 to 2003-04 (table 8.3).

Table 8.3 **Real funding of ambulance service organisations (2003-04 dollars) ($ million)[a, b, c]**

	NSW[d]	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*[e]
1999-2000	294.5	224.6	223.8	64.0	78.2	16.8	9.8	9.8	921.5
2000-01	315.3	262.7	246.5	67.9	84.6	17.6	16.4	9.8	1 020.7
2001-02	298.4	283.5	247.9	68.9	92.1	17.6	10.4	10.2	1 030.0
2002-03	327.6	308.6	266.5	72.0	83.5	19.1	15.4	11.3	1 104.0
2003-04	331.2	319.6	286.1	77.7	93.7	19.6	13.1	11.6	1 152.5

[a] Real funding is based on the ABS gross domestic product price deflator (2003-04 = 100) (table A.26). [b] Indirect revenue is counted in government grants in table 8A.19. Funding reported is the sum of government grants, subscription fees, transport fees, donations and miscellaneous revenue. [c] Due to differences in definitions and counting rules, data reported may differ from data in agency annual reports and other sources. [d] NSW has a subscription scheme but funds are deposited in the consolidated revenue of NSW Treasury. [e] Totals may not sum as a result of rounding.

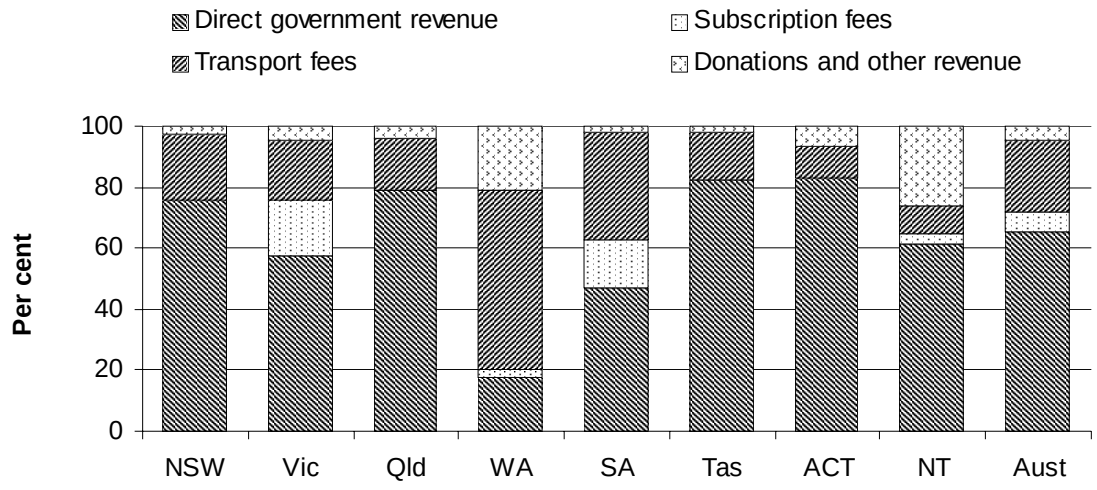
Source: State and Territory governments (unpublished); table 8A.19.

Ambulance service organisations are funded by a variety of sources, with non-government sources making a significant contribution. The primary sources of funding across all jurisdictions in 2003-04 were grants from State and Territory governments, subscriptions, transport fees (from government hospitals, private citizens and insurance) and donations.

State and Territory governments were the largest contributors to ambulance service organisation funding in all states and territories except WA. The contribution from this level of government in 2003-04, including direct and indirect funding, was highest in the ACT (83.1 per cent) and lowest in WA (17.7 per cent). The primary source of funds in WA was transport fees (59.3 per cent) (figure 8.18).

All jurisdictions except NSW, Queensland and Tasmania received funding from subscriptions in 2003-04 (table 8A.19). There is an ambulance subscription scheme in NSW, but these funds are deposited in the consolidated revenue of NSW Treasury. Nationally, 64.4 per cent of funding for ambulance service organisations in 2003-04 was provided directly by government (figure 8.18).

Figure 8.18 **Major sources of ambulance service organisation funding, 2003-04[a]**



a NSW has a subscription scheme but funds are deposited in the consolidated revenue of NSW Treasury.

Source: State and Territory governments (unpublished); table 8A.19.

Incidents

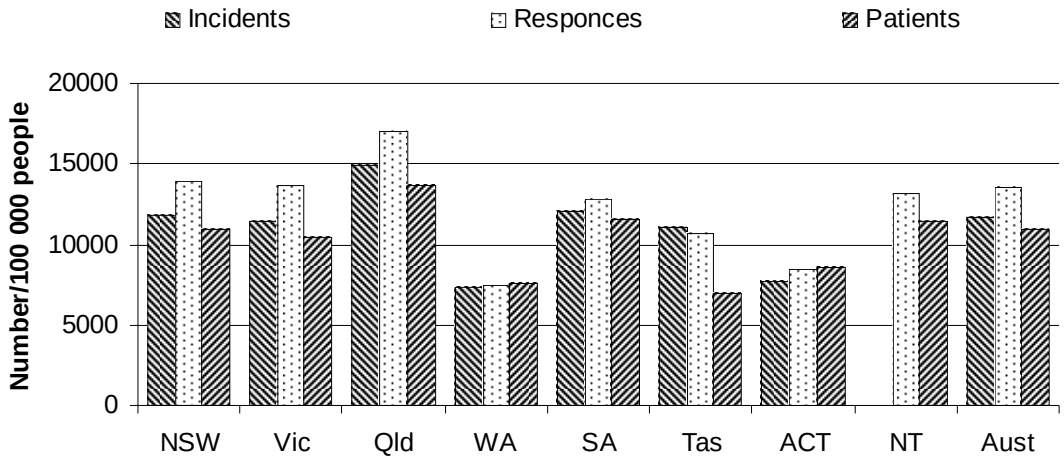
Ambulance services organisations attended 2.3 million incidents nationally in 2003-04. Most of these were emergency incidents (43.6 per cent), followed by non-emergency incidents (23.9 per cent) and urgent incidents (20.6 per cent). The proportion of emergency incidents was highest in NSW (65.5 per cent) and lowest in Queensland (25.6 per cent) (table 8A.20). Data for NSW are not strictly comparable with the data of other jurisdictions because NSW does not triage emergency calls. Urgent incident and response caseload data for NSW are included in emergency caseload figures.

Ambulance incidents, responses and patients per 100 000 people

The numbers of incidents, responses and patients are interrelated. Multiple responses/vehicles may be sent to a single incident, and there may be more than one patient per incident. There may also be responses to incidents that do not have people requiring treatment (so no patients).

Nationally, there were 11 682 incidents per 100 000 people, 13 547 responses per 100 000 people and 10 940 patients per 100 000 people in 2003-04. Across jurisdictions, the number of incidents per 100 000 people was highest in Queensland (14 921) and lowest in WA (7387), and the number of responses per 100 000 people was highest in Queensland (17 057) and lowest in WA (7398) (figure 8.19). For jurisdictions that were able to provide complete data, the number of patients per 100 000 people was highest in Queensland (13 710) and lowest in WA (7520) (the number of patients per 100 000 people reported for Tasmania is not complete due to an extended period of industrial action resulting in loss of data).

Figure 8.19 **Reported ambulance incidents, responses and patients, 2003-04**[a, b, c, d, e, f]



[a] An incident is an event that results in a demand for ambulance resources to respond. An ambulance response is a vehicle or vehicles sent to an incident. Multiple responses/vehicles may be sent to a single incident. A patient is someone assessed, treated or transported by the ambulance service. [b] NSW does not triage emergency calls. Urgent incident and response caseload are included in emergency caseload figures. [c] For Queensland, 2002-03 incidents, response and patient data are extracted from the Ambulance Integrated Information Management System, based on patient care records. Incident and response data for 2003-04 are extracted from the Queensland Ambulance Case Information Reporting system using CAD data, so data are not directly comparable. Total fleet road kilometres include operational vehicles only. [d] WA does not have a policy of automatically dispatching more than one unit to an incident unless advised of more than one patient. [e] For Tasmania, the number of patients transported in 2003-04 may not be complete because an extended period of industrial action may have resulted in loss of data. [f] For the NT, a response is counted as an incident.

Source: State and Territory governments (unpublished); table 8A.20.

Nationally, between 2002-03 and 2003-04, the number of incidents fell by 9.0 per cent, the number of responses increased by 3.9 per cent and the number of patients increased by 1.2 per cent (table 8A.20).

Human resources

Data on human resources for ambulance service organisations are reported by operational status on an FTE basis to provide a detailed description of the human resources profile for ambulance service organisations. Human resources include any person involved in delivering an ambulance service or managing the delivery of this service, including:

- ambulance operatives (including patient transport officers, students and base level ambulance officers, qualified ambulance officers, other clinical personnel and communications operatives)
- operational and corporate support personnel (including management, operational planners and coordinators, education and training personnel, corporate support personnel, non-operative communications and technical personnel)
- remunerated and non-remunerated volunteers (including any paid and unpaid volunteer personnel providing ambulance services on an on-call basis, and corporate support).

Nationally, 10 088 FTE salaried personnel were involved in the delivery of ambulance services in 2003-04. Across jurisdictions, the number of FTE salaried ambulance personnel ranged from 3301 people in NSW to 117 people in the NT. The majority of salaried ambulance personnel in 2003-04 were ambulance operatives (81.6 per cent). Across jurisdictions, this proportion ranged from 86.8 per cent in NSW to 63.3 per cent in the NT (table 8A.20).

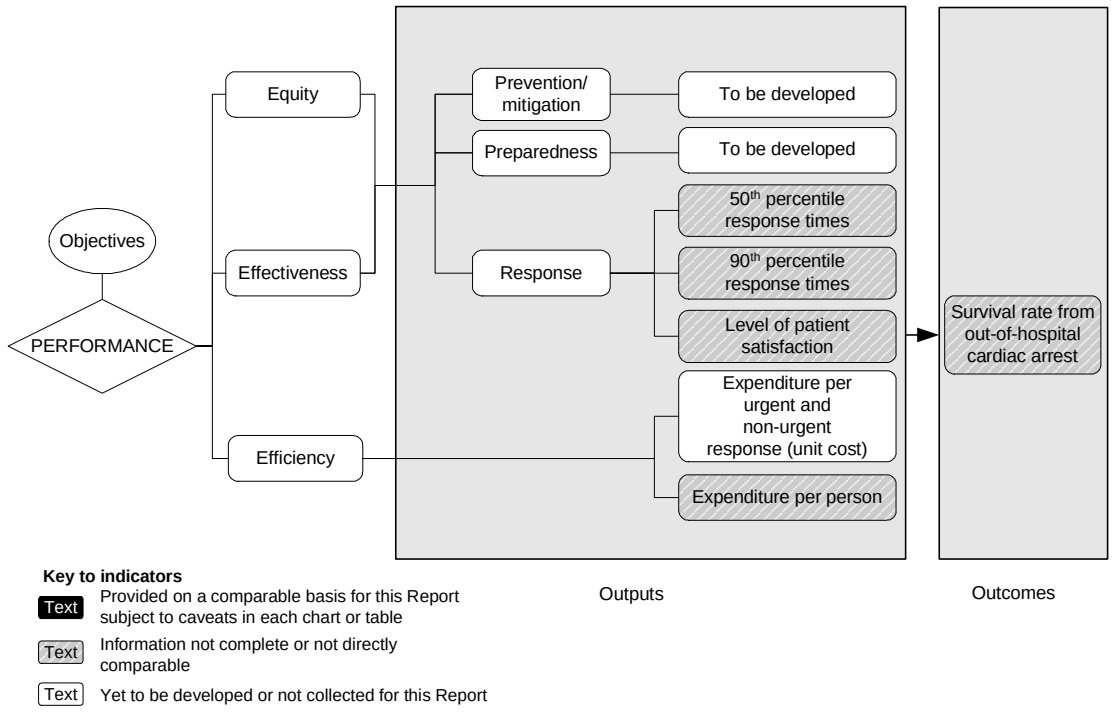
Nationally, 5951 volunteer ambulance personnel (comprising 4724 ambulance operatives and 1227 support personnel) participated in the delivery of ambulance services in 2003-04. The number of volunteers varied across jurisdictions, from 2720 in WA to zero in the ACT. In addition to ambulance operative volunteers, operational and corporate support volunteers participated in service delivery in WA (1026), SA (200) and the NT (one). Given the decentralised structure of its ambulance service operations, WA has a high number of volunteer operational and corporate support personnel (table 8A.21).

Framework of performance indicators

Figure 8.20 presents the performance indicator framework for ambulance events that has been developed from the general framework for all ESOs (figure 8.1). Definitions of all indicators are provided in section 8.8. Performance has been reported for a number of indicators, but different delivery contexts, locations and types of client may affect these indicators. Appendix A contains demographic and socioeconomic data that may assist in interpreting the performance indicators presented in this section.

The performance indicator framework for ambulance events shows which data are comparable in the 2005 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 8.20 **Performance indicators for ambulance events**



The performance indicators for ambulance events have been provided at the State and Territory government level in the Report since 1998. Evaluation of performance has been limited, however, by factors that make comparisons difficult. Comparison of the small, urban Government operated ACT Ambulance Service with the privately operated St John Ambulance Service in the NT or the large Statewide NSW Ambulance Service, for example, is limited by both demographic and corporate governance issues.

The effect of volunteer activity has implications for the interpretation of financial and non-financial performance indicators in this chapter. Notional wages costs for volunteers are not reflected in monetary estimates of inputs or outputs, which means that some data for performance indicators may be biased where the input of volunteers is not counted but affects outputs and outcomes. This issue may be explored in the future as the Review continues to examine data on rural and remote service provision in the emergency services sector.

There are difficulties in identifying useful and reliable indicators of prevention/preparedness, given that other elements of both the health and justice systems are involved in these areas.

Key performance indicator results

Outputs — equity and effectiveness

Prevention/mitigation

The Steering Committee has identified prevention/mitigation as a key area for development in future reports (box 8.15).

Box 8.15 **Performance indicator — prevention/ mitigation**

An output indicator of governments' objective to reduce the adverse effects of emergencies requiring ambulance services on the Australian community through prevention and mitigation strategies has yet to be developed.

Preparedness

The Steering Committee has identified preparedness as a key area for development in future reports (box 8.16).

Box 8.16 **Performance indicator — preparedness**

An output indicator of governments' objective to reduce the effects of emergencies requiring ambulance services on the Australian community through preparedness strategies has yet to be developed.

Response

Indicators of response include the times during which 50 per cent and 90 per cent of first responding ambulance resources respond in code 1 situations, and the level of patient satisfaction (figure 8.20).

Response — 50th and 90th percentile response times

The 50th and 90th percentile response times for ambulance service organisations provide an important measure of response activities (box 8.17). Response time data need to be viewed with care, however, because performance is not strictly comparable across jurisdictions:

- Response time data for some jurisdictions represent responses to urban, rural and remote areas, while others include urban areas only.
- Responses in some jurisdictions include responses from volunteer stations where turnout times are generally longer because volunteers are on call rather than on duty.
- Response times can be affected by the dispersion of the population (particularly rural/urban population proportions), topography, road/transport infrastructure and traffic densities.

While definitions of response times are consistent, not all jurisdictions have systems in place to capture all components of response time for all cases from the time of the call to arrival at the scene.

Box 8.17 **50th and 90th percentile response times**

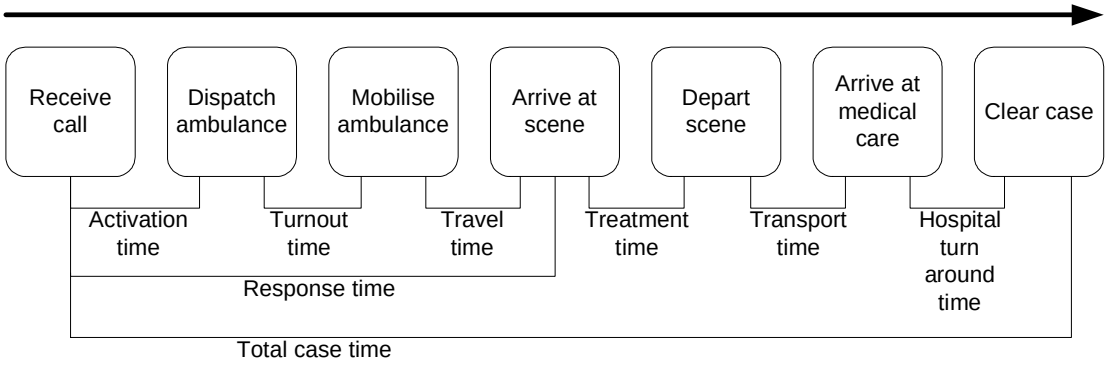
The 50th and 90th percentile response times are included as output indicators of governments' objective to reduce the adverse effects of emergencies requiring ambulance services on the Australian community through timely response.

The indicator '50th percentile response time', is defined as the time within which 50 per cent of the first responding ambulance resources arrive at the scene of an emergency in code 1 situations. Similarly, '90th percentile response time', is the time within which 90 per cent of the first responding ambulance resources arrive at the scene of an emergency in code 1 situations. Shorter response times are more desirable.

The response time is defined as the time taken between the initial receipt of the call for an emergency ambulance and the ambulance's arrival at the scene of the emergency (figure 8.21). Emergency responses are categorised by an assessment of the severity of the medical problem:

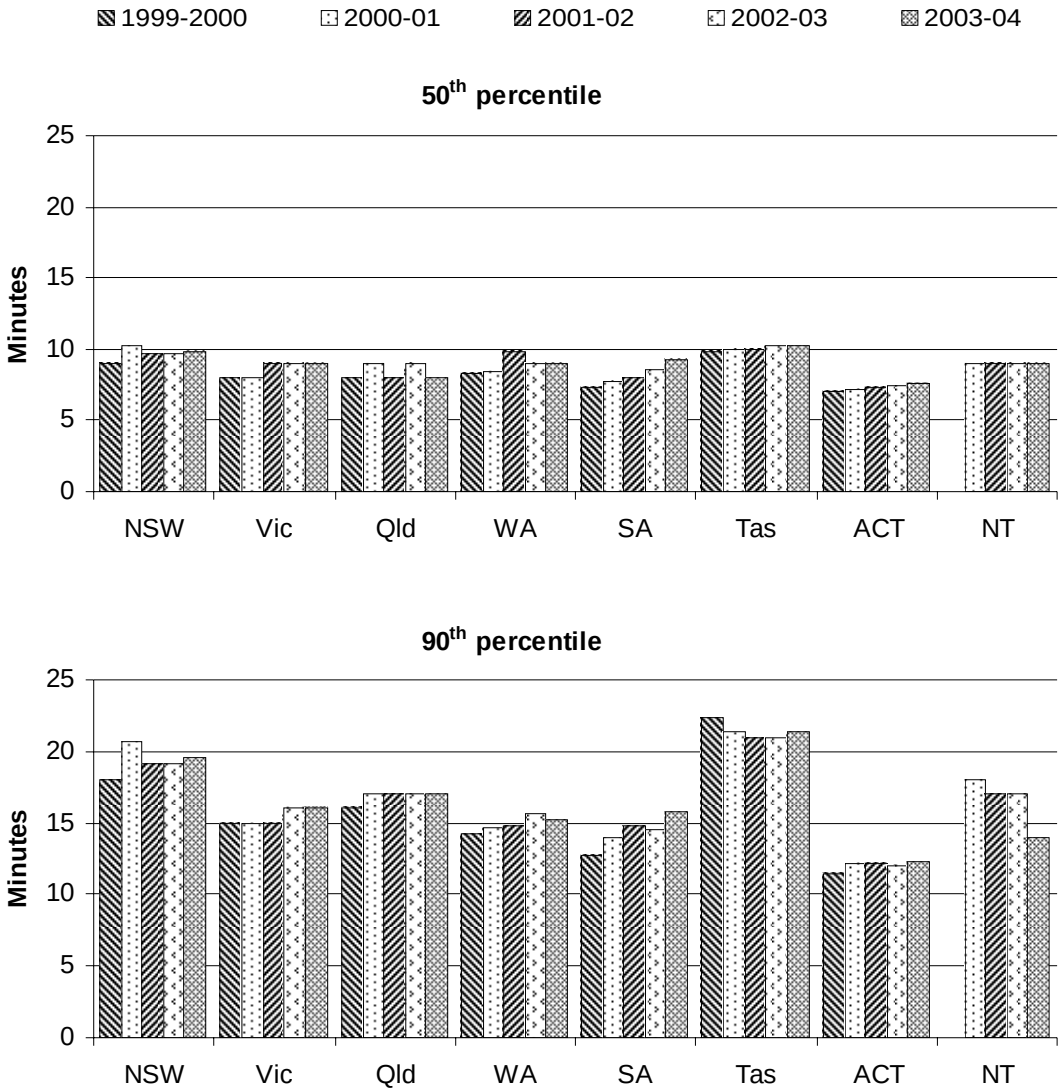
- code 1 — responses to potentially life threatening situations using warning devices
- code 2 — responses to acutely ill patients (not in life threatening situations) where attendance is necessary but no warning devices are used.

Figure 8.21 **Response time points and indicators for ambulance events**



In 2003-04, the '50th percentile response time' was highest in Tasmania (10.3 minutes) and lowest in the ACT (7.5 minutes). The '90th percentile response' time was also highest in Tasmania (21.3 minutes) and lowest in the ACT (12.3 minutes) (figure 8.22).

Figure 8.22 **Ambulance response times**[a, b, c, d, e]



a Differences across jurisdictions in definitions of response times, geography, personnel mix and system type for capturing data affect the comparability of response time data. **b** NSW does not triage emergency calls. Results for code 1 cases represent '000' and urgent medical incidents. **c** For Queensland, casualty room attendances are not included in response count, so are not reflected in response times data. Response times are reported from the CAD data. **d** WA data relate to urban responses only. **e** Most of Tasmania's population lives in regional areas (appendix A).

Source: State and Territory governments (unpublished); table 8A.24.

Response — level of patient satisfaction

Another indicator of response is the 'level of patient satisfaction' (box 8.18). The performance of ambulance service organisations in providing response services can be measured in terms of the satisfaction of those people who directly used the service (table 8A.25). Data for 2002 to 2004 were collected by jurisdictions and collated by the Convention of Ambulance Authorities (CAA).

Box 8.18 **Level of patient satisfaction**

The 'level of patient satisfaction' is included as an output indicator of governments' objective to reduce the adverse effects of emergencies requiring ambulance services on the Australian community by meeting patient needs.

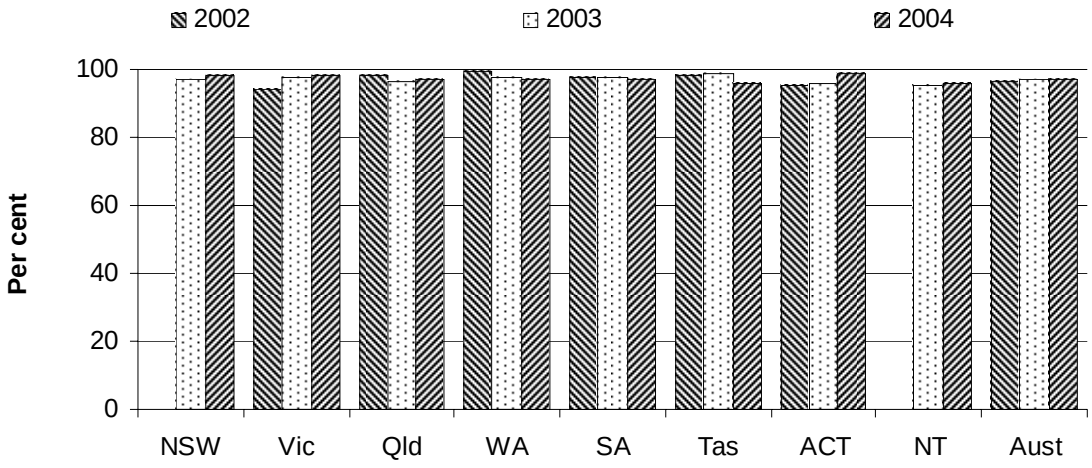
The indicator is defined as the total number of patients who were either 'satisfied' or 'very satisfied' with ambulance services they had received in the previous 12 months, divided by the total number of patients.

A higher level or increase in the proportion of patients who were either 'satisfied' or 'very satisfied' suggests greater success in meeting patient needs.

This indicator does not provide information on why some patients were not satisfied. It also does not provide information on the level of patient expectations.

The CAA surveyed approximately 4183 of the 2.2 million ambulance patients nationally who used an ambulance service in 2004 (table 8A.25). The satisfaction level for ambulance patients nationally increased slightly to 97.3 per cent in 2004 from 97.1 per cent in 2003 (figure 8.23).

Figure 8.23 **Proportion of ambulance users who were satisfied or very satisfied with the ambulance service[a, b, c]**



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 2002, 2003 and 2004. **b** Reported categories differ from 2002 to 2003, enabling comparisons of these years in two aggregated categories only. **c** Data for NSW and the NT were not available for 2002.

Source: CAA (2002, 2003); table 8A.24.

Across jurisdictions, the proportion of ambulance users who were either very satisfied or satisfied increased in 2004 in all jurisdictions except WA, SA and

Tasmania. The proportion was highest in the ACT (99.0 per cent) and lowest in Tasmania (96.0 per cent) (table 8A.25).

Outputs — efficiency

The main efficiency indicator is expenditure by ambulance service organisations per 1000 people. Funding of ambulance service organisations per 1000 people is also reported to show the contribution of governments and other funding sources. Care needs to be exercised when interpreting efficiency data, however, because differences in the reporting of asset-related costs mean data are not fully comparable across jurisdictions.

Expenditure per urgent and non-urgent response

The Steering Committee has identified 'expenditure per urgent and non-urgent response' as an indicator of the efficiency with which governments deliver ambulance services. Data for this indicator, however, were not available for the 2005 Report (box 8.19).

Box 8.19 **Expenditure per urgent and non-urgent response**

'Expenditure per urgent and non-urgent response' has been identified for development as an output indicator of governments' objective to deliver efficient emergency management services.

Expenditure per person

'Expenditure per person' is an indicator of the efficiency of governments in delivering emergency management services (box 8.20). Care needs to be taken when comparing data across jurisdictions, however, 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 compared with other jurisdictions.

Nationally, total expenditure on ambulance service organisations per 1000 people was $58 664 in 2003-04. Across jurisdictions, Queensland had the highest expenditure rate ($73 059) and WA had the lowest ($34 217) (figure 8.24).

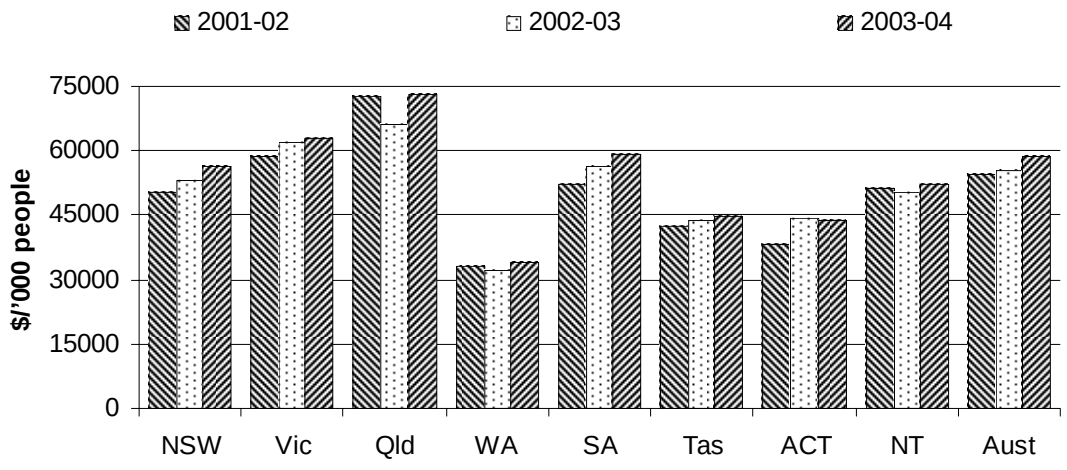
Box 8.20 **Expenditure per person**

'Expenditure per person' is included as an output indicator of governments' objective to deliver efficient emergency management services.

The indicator is defined as ambulance service organisation expenditure per 1000 people. Expenditure is reported as the total cost (total direct and indirect government and other ambulance expenditure) of ambulance service organisations. The cost to government is reported as total government funding of these organisations. Total expenditure is a measure of efficiency for ambulance services, and government funding is a measure of the cost to government of ambulance service organisations. Both are reported, because revenue from other sources is significant for a number of jurisdictions.

Holding other factors constant, a decrease in expenditure per person represents an improvement in efficiency. Efficiency data are difficult to interpret, however. 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 changes in the characteristics of emergencies requiring ambulance services (such as more serious para-medical challenges). Similarly, low or declining expenditure per person may reflect improving efficiency or lower quality (slower response times) or less severe cases.

Figure 8.24 **Real ambulance service organisations expenditure (2003-04 dollars)**

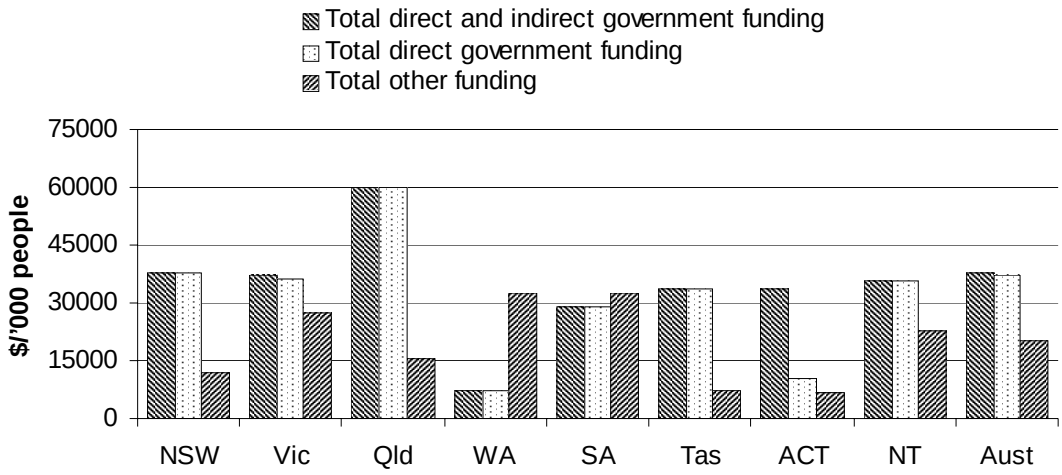


Source: State and Territory governments (unpublished); tables 8A.26 and 8A.27.

Nationally, direct and indirect government funding on ambulance service organisations per 1000 people was $37 936 in 2003-04. Across jurisdictions, it was highest in Queensland ($59 764) and lowest in WA ($7033). Nationally, direct government funding per 1000 people was $37 319. Across jurisdictions,

Queensland had the highest funding rate ($59 764) and WA had the lowest ($7033) (figure 8.25).

Figure 8.25 **Ambulance service organisations funding, 2003-04[a]**



a Total government ambulance expenditure per person was reported in the 2004 Report for the time series, replacing total ambulance service organisation expenditure less indirect government and non-government revenue per person. Non-government revenue is now termed 'other revenue' because some items in this category (for example, the Department of Veterans' Affairs) are not strictly non-government.

Source: State and Territory governments (unpublished); table 8A.28.

Outcomes

Survival rate from out-of-hospital cardiac arrest

The measure of outcomes for ambulance events is the survival rate from out-of-hospital witnessed cardiac arrest (box 8.21).

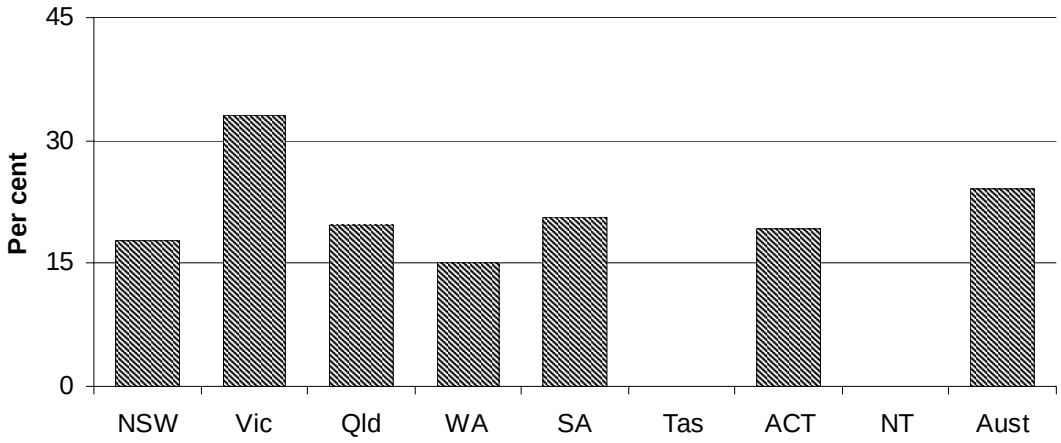
Box 8.21 **Survival rate from out-of-hospital cardiac arrest**

'Survival rate from out-of-hospital cardiac arrest' is included as an outcome indicator of governments' objective to reduce the adverse effects of emergencies requiring ambulance services on the Australian community.

The indicator is defined as the percentage of patients aged 16 years and over in bystander (not paramedic) witnessed out-of-hospital cardiac arrest of presumed cardiac origin on whom resuscitation was attempted and who had vital signs on arrival at hospital. Higher survival rates represent better outcomes.

Nationally, the survival rate from out-of-hospital witnessed cardiac arrest was 24.1 per cent in 2003-04. Across jurisdictions that provided data, the survival rate was highest in Victoria (33.1 per cent) and lowest in WA (15.1 per cent) (figure 8.26).

Figure 8.26 **Cardiac arrest survival rate, 2003-04[a, b, c]**



a Data published in the 2005 Report for this indicator are not comparable with data published in previous reports. **b** The definition of witnessed cardiac arrest survival rates relates to the percentage of patients aged 16 years or over in bystander (not paramedic) witnessed out-of-hospital cardiac arrest of presumed cardiac origin on whom resuscitation was attempted and who had vital signs on arrival at hospital. **c** The ACT survival rate from out-of-hospital cardiac arrests data is a six year rolling average.

Source: State and Territory governments (unpublished); table 8A.23.

8.5 Road rescue events

A road rescue event is an accident or incident involving a motor vehicle and the presumption that there are injuries or that assistance is required from ESOs.

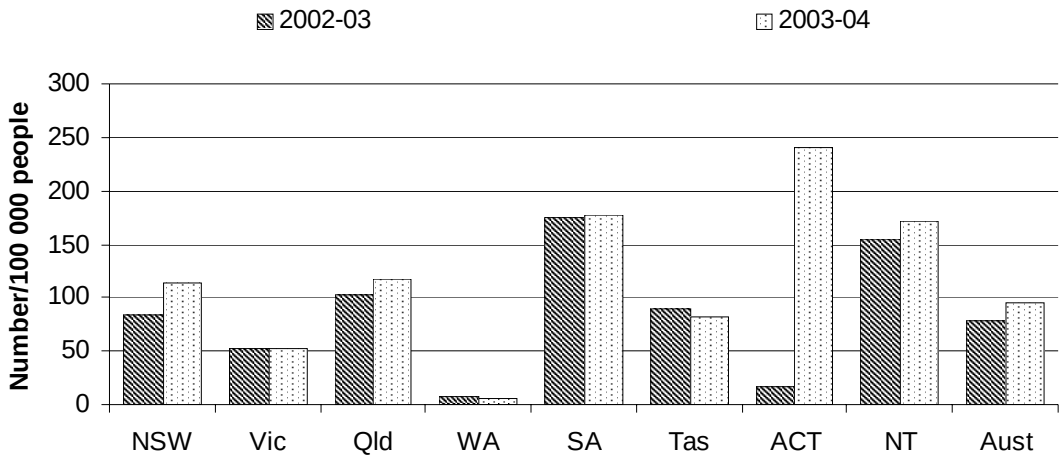
Emergency management services for road rescue events

In all jurisdictions, a diverse range of ESOs provide emergency management services for road rescue events. In some jurisdictions several agencies provide road rescue services, although the trend is towards consolidation. In most jurisdictions, SES/TES have an important role in providing road rescue services, although this is not always the case. In Tasmania, for example, the State ambulance service provides road rescue services, while in NSW road rescue services are provided by five organisations: the NSW Ambulance Service, NSW Fire Brigades, NSW SES, the Volunteer Rescue Association and the NSW Police Service.

Number of reported road rescue incidents

Nationally, there were 18 915 road rescue incidents in 2003-04, or 95.1 incidents per 100 000 people (table 8A.29). Across jurisdictions, the number of road rescue incidents per 100 000 people was highest in the ACT (239.8) and lowest in WA (6.1) (figure 8.27).

Figure 8.27 **Reported road rescue incidents** [a, b, c]



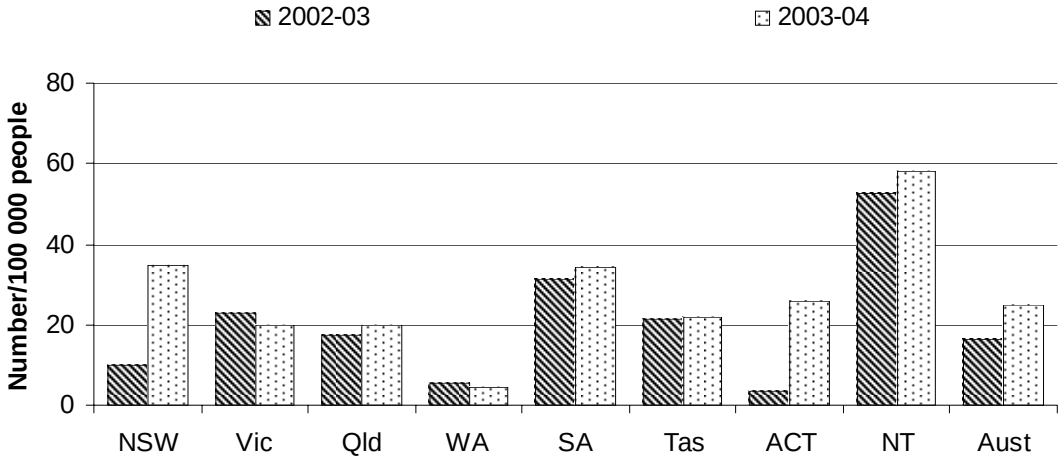
[a] Five organisations provide road rescue services in NSW. Data for 2002-03 have been reported by the NSW Ambulance Service and the NSW Fire Brigades, and data for 2003-04 data have been reported by all five organisations: NSW Ambulance Service, NSW Fire Brigades, NSW SES, the Volunteer Rescue Association and the NSW Police Service. [b] WA data for 2002-03 include 42 road rescues by SES and 2003-04 data include 32 road rescues by SES. [c] For Tasmania, data include responses by fire service organisations, ambulance service organisations and SES.

Source: State and Territory governments (unpublished); table 8A.29.

Number of reported road rescue extrications

Nationally, there were 4986 extrications in 2003-04, or 25.1 extrications per 100 000 people (table 8A.29). The number of extrications per 100 000 people was highest in the NT (58.0) and lowest in WA (4.6) (figure 8.28).

Figure 8.28 **Reported road rescue extrications** [a, b, c]



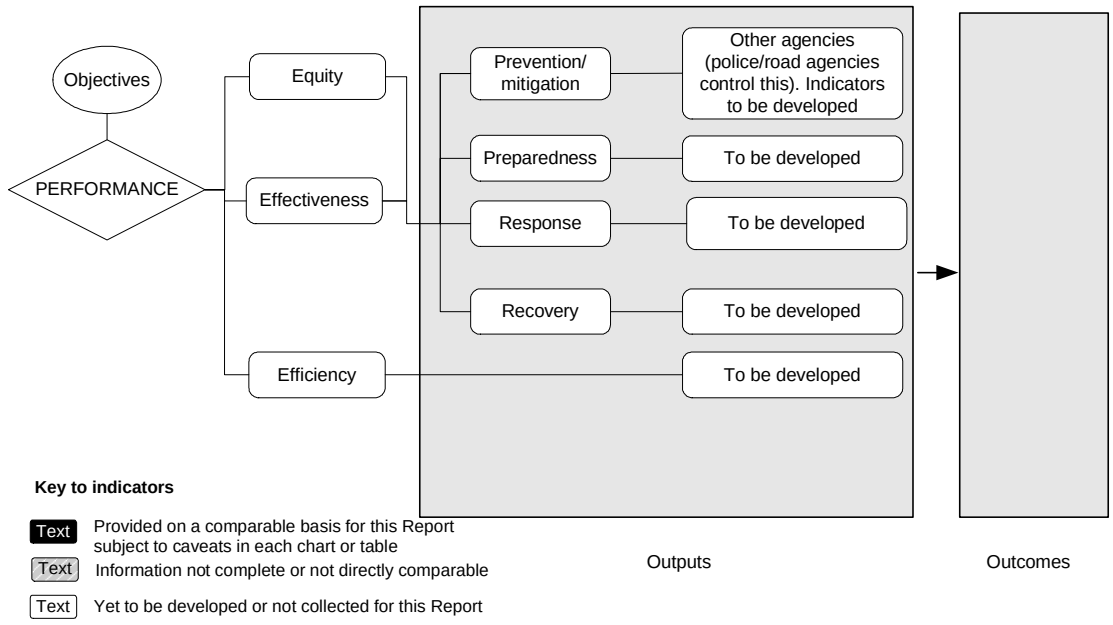
[a] Five organisations provide road rescue services in NSW. Data for 2002-03 have been reported by the NSW Ambulance Service and the NSW Fire Brigades, and data for 2003-04 data have been reported by all five organisations: NSW Ambulance Service, NSW Fire Brigades, NSW SES, the Volunteer Rescue Association and the NSW Police Service. [b] WA data for 2002-03 include 12 extrications by SES, and 2003-04 data include eight extrications by SES. [c] For Tasmania, data include responses by fire service organisations, ambulance service organisations and SES.

Source: State and Territory governments (unpublished); table 8A.30.

Framework of performance indicators

Figure 8.29 presents the performance indicator framework for road rescue events that has been developed from the general framework for emergency management (figure 8.1).

Figure 8.29 **Performance indicators for road rescue events**



Key performance indicator results

No performance indicators are reported this year for road rescue services. Work is being undertaken to develop and report performance indicators for road rescue events for future reports. Prevention/mitigation indicators for road safety and traffic management, however, are reported in chapter 5 ('Police services'). Road rescue data are closely related to the road safety and traffic management data reported.

8.6 Future directions in performance reporting

A number of developments are underway to improve data quality and comparability, and to expand the scope of reporting on emergency services.

Performance reporting of emergency events

The 2005 Report is the first year for which performance reporting is based on emergency events, rather than on the performance of ESOs. An aim of future reporting is to provide more information on the range of government resources committed to the management of emergency events. Financial indicators, for example, are expected to be developed based on total jurisdiction expenditure on the various types of events reported rather than on the type of ESO as reported in the 2005 Report.

Expanding the scope of reporting

The Survey of Emergency Management Activities undertaken in 2000 identified the agencies involved in various event-type services (table 8A.38). Road rescue was selected as the next event-type service to report, and initial reporting has occurred. The road rescue performance indicator framework is expected to be reported against more fully in the future.

Other event-type services for which performance reporting has yet to be developed include: rescues (other than road rescues); natural events (other than landscape fires); technological and hazardous material incidents; emergency relief and recovery; and quarantine and disease control.

Improving data comparability and completeness

Work to improve the comparability and accuracy of data is underway. Performance indicators for fire, ambulance and road rescue service organisations are being improved with the assistance of Australasian Fire Authorities Council, the CAA and the Australian Council for State/Territory Emergency Services. These organisations will continue to expand the scope of the road rescue data collected, and to refine data items and data definitions.

8.7 Jurisdictions' comments

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

New South Wales Government comments

“ The NSW Government continues its commitment to enhancing community safety, quality of life and confidence, by minimising the impact of hazards and emergency incidents on the people, environment and economy of NSW. In support of this commitment emergency service organisations in 2003-04 undertook the following:

- introduced a phone-in online reporting system for SES Road Crash Rescue accredited units to report call-out details and ensure the collection of timely and quality data
- introduced a Critical Incident Support Program to provide counselling support to all SES volunteers but primarily Road Crash Rescue Teams
- continued implementation of the reforms arising from the *Rural Fires and Environmental Assessment Legislation Amendment Act 2002* which requires the NSW Rural Fire Service to advise on and in some circumstances approve development applications in bush fire prone areas, and streamlining the approval process for hazard reduction activities
- implemented a further 25 community fire units taking the total to 250 units operated by 4200 volunteer members, and
- the Ambulance Service of NSW, which comes within the Health portfolio, strengthened systems to improve the safety and quality of pre-hospital emergency clinical practice and established over 100 new ambulance officer and clinical training positions.

The recommendations from the national Review of Natural Disaster Relief and Mitigation Arrangements are welcomed and supported by the emergency service organisations, and will ensure that Australia has a world-class national framework for natural disaster management thus achieving safer, more sustainable communities, and reduced risk, damage and losses.

The Federal Government’s commitment to fund, in partnership with the states and territories, the National Aerial Fire-fighting Strategy will also contribute to the achievement of emergency management outcomes. The strategy establishes a national aerial fire fighting response resource to ensure fire-fighting aircraft are strategically located across Australia according to the prevailing fire conditions, and that these resources are deployed more effectively around the nation.

A decline in the rate of fire incidents per 100 000 persons in NSW over recent times parallels increased investment in prevention and risk management. Each incident averted represents a reduction in the loss and cost borne by people and businesses in NSW. However, emergency service organisations need better information to assess these social costs and to identify which prevention and risk management activities work best. To improve this information, NSW emergency service organisations and the NSW Office of the Australian Bureau of Statistics have initiated development of a national Information Development Plan for Emergency Management, and all other jurisdictions are now actively participating in this initiative. ”

Victorian Government comments

“ The Report of the Inquiry into the 2002–2003 Victorian Bushfire was published in October 2003. This independent inquiry that was chaired by the Emergency Services Commissioner Bruce Esplin made 148 separate recommendations, all of which have been accepted by Government. Initiatives include; extra fuel reduction burning, increased fire fighting capacity and general forest stewardship, fire road upgrades, new equipment, fire trucks and fire stations as well as a number of other projects to be delivered by a range of emergency management agencies. The 2004-05 Victorian State Budget allocated $168 million over the next four years to fund the recommendations of the Esplin Inquiry.

A new independent statutory Emergency Services Telecommunications Authority (ESTA) is being established to improve Victoria’s emergency call taking and dispatch services. ESTA will have legislative responsibility for handling emergency calls referred from Telstra’s ‘000’ call system and dispatching police, fire and ambulance, formerly the function of Emergency Communications Victoria (ECV), a state owned enterprise.

ESTA will also support phase one of the government’s $400 million Statewide Integrated Public Safety and Communications Strategy (SIPSaCS) that includes deploying data terminals in emergency services vehicles, a digital radio network and a new emergency alerting system for Victoria’s emergency services volunteers. ESTA will commence operations in early 2005 and provide a single point of responsibility for the management of emergency services telecommunications ensuring increased accountability and transparency in service delivery. ESTA will be subject to performance monitoring by the Office of the Emergency Services Commissioner as well as the Auditor-General.

2003-04 saw the expansion of Victorian ambulance services. In rural Victoria this included the provision of additional professional paramedics in major urban centres and the upgrade of a number of regional stations from one to two officer crews. The Metropolitan area saw the establishment of two new 24-hour teams, with four additional teams to be fully operational in new locations in 2004-05.

Following the successful implementation of four Community Emergency Response Teams (CERT’s) in 2002-03 (a volunteer-based basic life support service in isolated Victorian townships), the program was further expanded throughout Victoria. A Non-emergency Patient Transport Act was passed which provides for the licensing of non-emergency providers’ accreditation of public duty attendance services. In consultation with the patient care transport industry and statutory bodies, work has commenced on the development of draft standards as the basis for the regulation of the non-emergency patient transport sector.

Amendments were also made to the *Ambulance Services Act 1986* to strengthen the governance provisions, increase the protection of paramedics from assault and to improve the ability of the ambulance services to collect fees for services provided. ”

Queensland Government comments

“ The Queensland Government continues its commitment to ensuring safer and more secure Queensland communities through the delivery of cost effective, coordinated and integrated emergency services, and the further strengthening of governance arrangements.

Demand for ambulance services continued to escalate at a rate consistent with the trend of previous years. In response, Queensland Ambulance Service (QAS) employed an additional 110 paramedics during 2003-04, and will recruit a further 240 paramedics over the following three financial years to enhance operational service delivery. QAS is also addressing roster reform, review of station work practices and further developing the Patient Transport Service. QAS has continued to establish and support Community First Responders to enhance service delivery in rural and remote areas. QAS is also continuing its work, in conjunction with other agencies, to develop strategies that increase community awareness of injury and illness prevention and increase individual and community capacity to intervene appropriately should injury or sudden illness occur.

Queensland Fire and Rescue Service (QFRS) spent approximately 162 000 hours carrying out fire safety, safety promotion and public education activities in 2003-04, including 11 161 building fire safety inspections of premises (other than private dwellings). Following the Childers incident in 2000, fire safety laws in Queensland were reviewed. Consequently the *Building and Other Legislation Amendment Act 2002* (BOLA) was established and commenced in July 2002 to ensure assessment and compliance of a range of fire safety criteria for budget accommodation. The second upgrade to budget accommodation is due by 1 July 2005. For some buildings this may involve structural alterations or additional fire safe features to comply with the remaining fire safety requirements.

In 2003 the Queensland Government endorsed a whole-of-Government approach to counter terrorism measures. A State Counter Terrorism Plan will follow the endorsement of a State Counter Terrorism Strategy. The Strategy and the Plan are supported by the newly proclaimed *Disaster Management Act 2003*, which provides the structures, functions and powers required to facilitate the prevention of, preparedness for, response to and recovery from disaster events, including those caused by human acts or omissions. QFRS has established the Special Operations Unit to manage and coordinate counter terrorism related issues on behalf of the Queensland Department of Emergency Services. This includes technical rescue, hazardous materials management and major event planning. In addition, QFRS continues to develop urban/rural interface (iZone) initiatives, including community awareness initiatives, to build readiness, response and recovery capabilities, which will mitigate the risk of bushfire in these areas. ”

Western Australian Government comments

“ The WA Government works with the people of Western Australia to improve community safety practices and to provide timely, quality and effective emergency services to a state with an area of over 2.5 million square kilometres and 12 000 kilometres of coastline. Over 500 000 people live outside the Perth metropolitan area, but populations are widely scattered with only 149 settlements having over 200 people. Increasingly multi-skilled and multifunctional emergency services units are being introduced to address the problem of declining volunteers in rural and remote areas.

A major success this year has been the further enhancement of the State's counter terrorism capability. Many firefighters in WA received varying levels of training for chemical, biological, radiological and explosive hazards as well as urban search and rescue. New protective suits, other sensing equipment and specialist rescue gear were provided through State and Federal funding.

2003-04 was the transitional year for the new property-based Emergency Services Levy (ESL). Although the ESL was introduced on 1 July 2003, for the first six months funding was also still received via the old insurance fire levy. Despite the complicated nature of the reform, the introduction was remarkably smooth. The messages of greater transparency, accountability and more emphasis on resource allocation based on need, rather than ability to pay, were successfully conveyed to the community. Generally the new arrangements have met with a positive response from emergency services volunteers and the majority of local governments.

This year also marked the launch of a dedicated emergency rescue helicopter service, primarily operating in a 200 km radius of Perth, servicing 90 per cent of the State's population of 2 million people. However, with refuelling en route, rescues have also been undertaken in Esperance, Carnarvon and Albany. A critical care paramedic is onboard to support the primary use of the helicopter in providing the best specialist medical care in the shortest possible time following an emergency. The helicopter can be used for other emergencies such as fire, but the preservation of life always takes precedence over any other mission.

Ambulance services in Western Australia are comprised of road and fixed wing air ambulance services. As in a number of other states, the Royal Flying Doctor Service provides air ambulance services. Non-government providers supply road ambulance services for most of the State. St John Ambulance Australia — WA Ambulance Service is the principal provider of ambulance services in WA. Three smaller private providers also deliver non-emergency ambulance services. Data included in this report relate only to the activities of St John Ambulance. Metropolitan road ambulance services are provided almost entirely by paid ambulance officers and paramedics. Outer metropolitan and country services are provided by nearly 3000 volunteers who contribute over 3 million hours of service annually, a much greater contribution than in other jurisdictions. ”

South Australian Government comments

“ To improve Public Safety the South Australian Government’s vision is for emergency services:

- Comprising dedicated, highly trained people;
- Using modern technology and equipment;
- Providing a community focus for positioning and aligning emergency services across Prevention, Preparedness, Response and Recovery;
- Efficiently working together and with the community;
- Efficiently managed and supported; and
- Efficiently meeting modern challenges.

The Government is establishing a Fire and Emergency Services Commission (SAFECOM) to enhance community safety and make the best possible use of resources.

SA Ambulance Service (SAAS) transferred from the SA Department of Justice to the SA Department of Health in April 2004 following a review of SAAS in 2003. SAAS's transfer facilitates collaboration and coordination with health service agencies. SAAS continues to work closely with the other emergency service agencies to ensure effective management of incidents. SAAS conducts and is party to, state disaster planning and regular exercises involving all emergency agencies and is heavily involved in a number of multi-agency projects.

Major emergency management initiatives for 2004–2005 include:

- Preparing to implement the recommendations of the COAG Reviews of Natural Disaster Management and Bushfires;
- Implementing arrangements under the *Emergency Management Act 2004*;
- Planning SAAS’s ambulance service delivery model, including: a new service delivery model through a review of SAAS’s clinical governance, strategy and operational development; identifying opportunities for linkages and involvement with government and health agencies from the Generational Health Review; and implementing improved and integrated out-of-hospital patient care services;
- The SA Computer Aided Dispatch (SACAD) project to replace computer aided despatch systems for Police, Ambulance and SAFECOM (comprising the SA Metropolitan Fire Service, the Country Fire Service and the State Emergency Service);
- Promoting long-term retention and recruitment of volunteers, including volunteer induction, recruitment and selection, reward and recognition, flexible learning and conflict resolution; and
- Working closely with the Convention of Ambulance Authorities and the Australasian Fire Authorities Councils’ initiatives for service excellence. ”

Tasmanian Government Comments

“ Tasmania has a number of key issues which impact on the provision of emergency services throughout the State. These issues include the small population (and subsequent lack of economies of scale), the reliance on a network of dedicated volunteers in rural and remote areas (affecting turnout times) and the State's rugged topography which also impacts on response times and infrastructure costs (for example, the radio system).

Unlike some other jurisdictions, Tasmania includes both urban and rural response times for both fire and ambulance data. As Tasmania has the largest proportion of rural population of all jurisdictions this affects response time comparisons significantly.

Tasmania Fire Service (TFS) is comprised of four career brigades and 234 volunteer brigades that respond to fires in all metropolitan and rural areas. All incidents attended by these brigades are reported, and the TFS bears the full cost of funding both the operating and capital costs of its brigades.

Despite a widespread wet spring, significant bushfires occurred from mid-November 2003. Many of these occurred in the remote west coast region on Crown Land under the control of the Parks Service and Forestry Tasmania, and did not threaten private tenures. The TFS participated in many of these fires. Rain early in 2004 fore-shortened the fire season on the normally volatile east coast.

TFS continues to deliver a broad range of programs to assist at-risk sectors of the community to prevent fires and minimise the impact of fires when they occur. Figures indicate that fire prevention programs targeting at-risk households are particularly effective, with significant decreases in residential fires experienced over the last ten years.

Tasmania is the only State that provides free ambulance services to the general public, and as a consequence there is a far greater reliance on government funding for ambulance services than in all other jurisdictions.

Unlike most other jurisdictions expenditure on ambulance service provision in Tasmania does not include expenditure on operating an ambulance subscription scheme but it does include operating an aeromedical service.

Tasmania continues to train a far greater proportion of its salaried ambulance personnel to paramedic level than most jurisdictions, with up to 70 per cent of all emergencies in Tasmania responded to at paramedic level. The government announced a major increase in ambulance staffing in the north west which will impact in next years report.

The road accident rescue role is shared by the Tasmanian Ambulance Service (urban areas) and the State Emergency service (rural areas), with TFS doing one area. ”

Australian Capital Territory Government Comments

“The ACT is unique and fundamentally different to other jurisdictions in a number of aspects relevant to Emergency Management. The relatively small geographic size of the Territory, it combines city/state functions and contains a high proportion of urban area. These elements all impact on the provision of emergency services to the Territory. There are no other counterparts in Australia that provide both territorial (state) and municipal functions from the one government structure. In addition the revenue raising capabilities of some other jurisdictions are greater and more flexible than those of the ACT.

In the ACT the focus in Emergency Management is on the delivery of outputs through cooperation of all emergency agencies in partnership with a prepared community. Output classes for the ACT Emergency Services Bureau are based on the national emergency management principles of Prevention/Mitigation, Preparedness, Response and Recovery and are not individually identified against the specific emergency agency. The Emergency Management arrangements in the ACT are such that the Emergency Services Bureau budget reflects both territorial (state) and municipal type contributions that in other states are not directly reflected in Service-wide budgets. The Bureau's Standards of Emergency Response are time and risk based and the positioning of resources affects the impact of the multiple town centres, 'greenbelts' and Commonwealth assets of National importance.

Emergency activities, that in other jurisdictions are spread across many agencies, are concentrated in the fewer agencies comprising the ACT Emergency Services Bureau. Consequently the expenditure per person in the ACT for the reported fire and ambulance agencies may be inflated by the cost of those activities not yet included for other jurisdictions.

Following the 2003 bushfire tragedy, The Emergency Services Bureau received an injection of funds from the ACT Government for both capability and response to meet the community's expectations. This report is reflective of a part year effect of this increased funding.”

Northern Territory Government comments

“ The Northern Territory Government continues to support its emergency service agencies through the commitment of funds for new equipment, facilities and additional staff.

The Northern Territory Government’s commitment to safer communities continues with the appointment of a Public Education / Fire Awareness Officer, and with a greater emphasis on community safety strategies.

Community safety strategies, such as hazard reduction programs and school-based fire education, have assisted in substantially reducing the number of grassfires and bushfires for the second consecutive year. Community education and fire awareness will play a major role in the Northern Territory Fire and Rescue Service’s fire reduction strategies in the future.

The continued threat of terrorist activities has focussed much of Government’s attention over the past twelve months. Planning and training for chemical, biological and radiological incidents continues, as does equipping and training staff in urban search and rescue.

In addition, the Northern Territory Fire and Rescue Service is in the final stages of implementing an organisational restructure, and recommendations from a review into the Fire Service last year. This will place the Fire Service in a much stronger position to tackle the challenges that the future holds. ”

8.8 Definitions of key terms and indicators

50th percentile ambulance service response times	The time within which 50 per cent of first ambulance resources respond.
50th percentile fire service response times	The time within which 50 per cent of first fire resources respond.
90th percentile ambulance service response times	The time within which 90 per cent of first ambulance resources respond.
90th percentile fire service response times	The time within which 90 per cent of first fire resources respond.
Alarm notification not involving fire	Fire alarm notification due to the accidental operation of an alarm, the failure to notify fire services of an incorrect test by service personnel or a storm induced voltage surge.
Ambulance expenditure	Includes salaries and payments in the nature of salaries to ambulance personnel, capital expenditure (such as depreciation and the user cost of capital) and other operating expenditure (such as running expenditure, contract expenditure, provision for losses and other recurrent expenditure). Excludes interest on borrowings.
Ambulance incident	An event that results in a demand for ambulance resources to respond.
Ambulance non-government revenue	Includes revenue from subscription fees, transport fees, donations and other non-government revenue. Excludes funding revenue from Australian, State and local governments.
Ambulance patient	A person assessed, treated or transported by the ambulance service.
Ambulance personnel	Any person employed by the ambulance service provider who delivers an ambulance service, manages the delivery of this service or provides support for the delivery of this service. Includes salaried ambulance personnel, remunerated volunteer and nonremunerated volunteer ambulance personnel.
Ambulance response	A vehicle or vehicles sent to an incident. There may be multiple responses/vehicles sent to a single incident.
Ambulance services	Pre-hospital care, treatment and transport services.
Emergency ambulance response	An emergency ambulance response to a pre-hospital medical incident or accident that necessitates the use of ambulance warning (lights and sirens) devices.
Events in which extrication(s) occurred	An event in which the assisted removal of a casualty occurs. An incident with multiple people extricated is counted the same as an incident with one person extricated.
Extrication	Assisted removal of a casualty.
False report	An incident in which the fire service responds to and investigates a site, and may restore a detection system.

Fire non-government revenue	Includes revenue from levies on insurance companies and property owners, user charges (such as subscriptions and other fees) and other non-government revenue (such as the sale of plant and equipment, donations and industry contributions). Excludes funding revenue from Australian, State and local governments.
Fire death	A fatality where fire is determined to be the underlying cause of death. This information is verified by coronial information.
Fire death rate	The number of fire deaths per 100 000 people in the total population.
Fire expenditure	Includes salaries and payments in the nature of salaries to fire personnel, capital expenditure (such as depreciation and the user cost of capital) and other operating expenditure (such as running expenditure, training expenditure, maintenance expenditure, communications expenditure, provision for losses and other recurrent expenditure). Excludes interest on borrowings.
Fire incident	A fire reported to a fire service that requires a response.
Fire injury	An injury resulting from a fire or flames, requiring admission to a hospital. Excludes emergency department outpatients.
Fire injury rate	The number of fire injuries per 100 000 people in the total population.
Fire personnel	• Any person employed by the fire service provider who delivers a firefighting or firefighting-related service, or manages the delivery of this service. Includes paid and volunteer firefighters and support personnel.
Fire safety measure	• Operational smoke alarm or detector • Fire sprinkler system • Safety switch or circuit breaker • Fire extinguisher • Fire blanket • Fire evacuation plan • External water supply • The removal of an external fuel source • External sprinkler • Other fire safety measure
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.
Landscape fires	Vegetation fires (for example, bush, grass, forest, orchard and harvest fires), regardless of the size of the area burnt.
Median dollar loss per structure fire	The median (middle number in a given sequence) value of the structure loss (in $'000) per structure fire incident.
Non-emergency ambulance response	A non-emergency ambulance response that does not necessitate the use of ambulance warning (lights and sirens) devices.
Non-structure fire	A fire outside a building or structure, including fires involving mobile properties (such as vehicles), a rubbish fire, a bushfire, grass fire and an explosion.

Other incident	An incident (other than fire) reported to a fire service that requires a response. This may include: • overpressure ruptures (for example, steam or gas), explosions or excess heat (no combustion) • rescues (for example, industrial accidents or vehicle accidents) • hazardous conditions (for example, the escape of hazardous materials) • salvages • storms or extreme weather.
Paramedic response	A level of emergency care categorised as advanced life support.
Response time	The interval between the receipt of the call at the dispatch centre and the arrival of the vehicle at the scene (that is, when the vehicle is stationary and the handbrake is applied).
Road rescue	An accident or incident involving a motor vehicle and the presumption that there are injuries or that assistance is required from emergency services organisations.
Structure fire	A fire inside a building or structure, whether or not there is damage to the structure.
Structure fire contained to object or room of origin	A fire where direct fire/flame is contained to the room of origin (that is, excludes wildfires and vehicle fire in unconfined spaces). A room is an enclosed space, regardless of its dimensions or configuration. This category includes fires in residential and non-residential structures.
Survival rate for out-of-hospital witnessed cardiac arrest incidents	The percentage of patients with cardiac arrest of presumed cardiac cause, who have vital signs on arrival at hospital. Excludes incidents to children (younger than 16 years), drownings, trauma and other cases where aetiology is known (for example, asthma).
Urgent ambulance response	An urgent ambulance response to a pre-hospital medical incident or accident that does not necessitate the use of ambulance warning devices.
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 noncurrent physical assets (including land, plant and equipment).

8.9 References

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