



Emergency Service Response Times



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Victorian
Auditor-General

Emergency Service Response Times

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The Hon Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon Telmo Languiller MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my report on the audit *Emergency Service Response Times*.

The audit assessed how accountable emergency service organisations and the departments of Health & Human Services and Justice & Regulation are for their response time performance. All of the audited emergency service organisations measure and report on emergency response times, except for Victoria Police.

I found that while response time performance has been largely stable across the past three years, the limitations of emergency response time measures, targets, data and reporting prevent Parliament and the public from holding agencies fully to account. In particular, I found that emergency response time targets are outdated or not based on evidence. This means that the arrival of emergency services within their target times does not necessarily reflect better practice, optimal service efficiency or improved outcomes.

Although response times are a relevant component of performance measurement frameworks for emergency service delivery, I found that they are not appropriate stand-alone measures for overall emergency service performance, and should be considered alongside information on outcomes, service quality, efficiency and cost effectiveness.

Yours faithfully



John Doyle
Auditor-General

19 March 2015

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Auditor-General's comments



John Doyle
Auditor-General

We expect emergency services to attend the most urgent calls for help as quickly as possible. Sometimes arriving quickly can be the difference between life and death.

Comprehensive and reliable information about emergency response times should inform agency management in their operational and resourcing decisions. It should also provide a reliable basis to inform Government budget and policy decisions. Ultimately, the public look to information on emergency services' performance to gain confidence that they will get a timely response when needed, and that agencies will take action to improve performance where required.

This is why measuring, monitoring and reporting response times for our emergency services is so important—not only to drive performance but also provide assurance and confidence that these services are reliable.

Given the critical importance of emergency response times, this audit looked at the response time performance and measures for our key emergency services including Ambulance Victoria (AV), the Country Fire Authority, the Metropolitan Fire and Emergency Services Board (MFESB), the Victoria State Emergency Service and Victoria Police. In particular, the audit looked at whether the measures being used to report response times are relevant and appropriate, whether the data being used is reliable and what reported information actually tells us about performance.

I found that the emergency response time measures reported in State Budget Papers and agency annual reports do not provide useful performance information. Targets for the number of minutes to arrive are outdated or not based on evidence. Measures are often narrowly defined and exclude significant proportions of emergency response activity. Data quality is not assured in a number of instances, and Victoria Police does not measure its response times at all.

There is limited public reporting of performance measures. Only MFESB has routinely reported the actual number of minutes it takes to respond to urgent calls to the public. A focus on reporting high level statewide data only also means that there is little understanding of how performance varies across Victoria.

These findings echo those of a recent audit examining *Public Sector Performance Measurement and Reporting*, which found that performance reporting in budget papers and annual reports was impenetrable and lacked meaningful commentary on performance. Similarly, the limitations of emergency response time measures, targets, data and reporting make it impossible for the public and Parliament to fully and clearly understand response time performance.

Audit team

Renee Cassidy

Engagement Leader

Jacquie Stepanoff

Team Leader

Matthew Irons

Senior Analyst

Karen Ellingford

Jason Cullen

David Moore

Analysts

Engagement Quality Control Reviewer

Kate Kuring

Despite some weaknesses in how response time data is recorded and reported, it does fairly represent actual performance. The data indicates that emergency response times have remained relatively stable at the statewide level over the past three years, although there is variation in performance across different regions.

However, it is important to remember that response times are not an overall measure of emergency service performance. Other measures such as health outcomes for ambulance patients, containment of building fires, and community satisfaction are necessary to build a holistic view of effectiveness.

To represent the important work that emergency services perform fairly, response time measures and reporting need urgent review. I urge departments and emergency services to work together to develop evidence-based, appropriate response time measures and to report on these in a way that government, the Parliament and the public can understand, rely upon and use.



John Doyle
Auditor-General

March 2015

Audit summary

Background

The speed of response to an emergency, such as a fire or road accident, can have a significant effect on the outcome. A delayed response can have life-changing health, welfare and economic consequences that may otherwise have been avoided. Citizens expect a prompt response to an emergency call and want to know how long the response is likely to take. Emergency service response time information is therefore important to the community and is also necessary to inform government decision-making.

Four of Victoria's emergency service organisations (ESO)—Ambulance Victoria (AV), the Country Fire Authority (CFA), the Metropolitan Fire and Emergency Services Board (MFESB) and the Victoria State Emergency Service (SES)—have emergency response time performance measures. These measures include targets for the proportion of responses that will take place within specified time frames. Performance is published in agency annual reports and State Budget papers and underpins the funding provided to the Department of Health & Human Services (DHHS) and the Department of Justice & Regulation (DJR) that is passed on to ESOs.

The fifth ESO, Victoria Police does not have an emergency response time measure or report publicly on the timeliness of its responses to calls for assistance.



From left to right: Photographs courtesy of Ambulance Victoria, the Country Fire Authority, the Metropolitan Fire and Emergency Services Board, the Victoria State Emergency Service and ChameleonsEye / Shutterstock.com.

The objective of this audit was to determine whether agencies are accountable for emergency response time performance by considering whether they:

- understand response time performance—which included the assessment of the relevance of targets and the reliability of data
- use response time information to drive response time performance
- report response time performance to relevant stakeholders so they can understand agency performance.

A previous VAGO audit, *Emergency Response Times: ICT Systems*, examined the procedures and the information and communications technology systems used by the Emergency Services Telecommunications Authority (ESTA) to answer 000 calls and dispatch emergency response vehicles. In this audit we have focused on activity from the point of dispatch until arrival on the scene, and have not audited the performance of ESTA.

We have limited our examination of response time performance to Code 1 or Priority 1 responses, including Priority 0 for AV, and have referred to these as 'emergency responses' or 'responses' throughout this report. We examined agency response data from 1 January 2012 through to 30 June 2014.

Conclusion

The performance frameworks that ESOs use to monitor emergency response times do not allow Parliament and the public to hold agencies fully to account. There are multiple problems with the design of the measures and methods for calculating results and therefore the reported results fail to appropriately describe performance. This may distort the public and Parliament's understanding of how effectively these services are being delivered, and may affect the subsequent decisions government and ESOs make.

The current emergency response time targets are outdated or not based on evidence. This means that the arrival of an emergency service within, for example, 7.7 minutes for MFESB or 15 minutes for AV, does not necessarily reflect better practice, optimal service efficiency or improved outcomes.

Response time reporting does not appropriately represent the extent of emergency response activity. Some agencies exclude significant numbers of emergency responses, while others include lesser priority responses.

Reported response time performance fairly represents actual performance in most instances, but a number of control weaknesses and calculation inconsistencies have created minor inaccuracies and the risk of greater errors.

External reports do not have enough information to allow readers to understand response time performance. With the exception of MFESB's annual report, response time reports do not include:

- the actual time that agencies take to respond to most emergencies
- reports of performance at the regional level
- performance trends.

Ninety per cent of statewide emergencies are responded to by the five ESOs within a range of 7.8 minutes—for urban structure fire responses—to 27.0 minutes—for statewide road accident rescues. Our assessment of ESOs response times shows they have been relatively stable since January 2012.

The agencies that measure response times communicate this performance internally and can demonstrate the ways they have used this to drive improvement. However, agencies could strengthen their monitoring by also reviewing and acting on trends in response time performance over time.

Improving emergency response time measures is important as timely response is a relevant and crucial component of emergency service delivery. Victoria Police should improve its internal performance measurement by monitoring and analysing organisation-wide emergency response times.

Response times alone do not adequately describe emergency service performance and must be considered alongside information on outcomes, service quality, efficiency and cost effectiveness for emergency service performance to be understood.

Findings

Measuring response times

Response times are a relevant component of performance measurement frameworks for emergency service delivery. However, they are not appropriate stand-alone measures for overall emergency service performance. They do not measure the outcomes, quality, quantity or cost of emergency service delivery and do not cover other key emergency services such as prevention, investigation and education.

All audited ESOs except Victoria Police monitor and report on emergency response time measures. However, their targets for minutes to respond lack an up-to-date evidence base or clear rationale:

- agencies could not provide evidence or explain the rationale underpinning targets for ambulance, road accident rescue and emergency medical response
- targets for responses to structure fires were based on outdated scientific research and work MFESB undertook in 1987.

Without valid time targets current emergency response time measures fail to describe performance in any meaningful way.

Response time reporting does not provide a comprehensive picture of emergency services responses. Due to narrow definitions, DJR Budget Paper 3 (BP3) measures exclude 83 per cent of Code 1 emergency responses by CFA, MFESB and SES. Conversely, AV emergency response time measures include the majority of its responses to 000 calls, indicating many lesser priority responses are captured in reporting.

AV, MFESB and SES cannot be held fully accountable for their response time performance as reported by their current measures, as these include call-processing and dispatch activity not entirely within their control. This is in conflict with the Department of Treasury and Finance's *Budget and Financial Management Guidance* (BFMG) which require performance measures to be 'directly attributable to the actions of the organisation'.

DHHS and DJR have reviewed response time measures each year as part of the Budget Paper process and when setting funding agreements with ESOs. However, these reviews have not fulfilled the BFMG requirements to consider the ongoing relevance of the measures and targets. DHHS has also failed to review targets in light of consistent underperformance.

Accurate and reliable response time information

We found a number of weaknesses in the accuracy and reliability of reported emergency response time performance.

Despite more accurate data being available from ESTA's Computer Aided Dispatch (CAD) system since 2011, DHHS and AV used data for rural ambulance responses generated from a less reliable system. ESTA's CAD data shows rural ambulance response times that are, on average, approximately one minute slower than the times reported by DHHS and AV. This translates to a difference of close to 2 per cent in reported statewide performance. In December 2014, AV advised it plans to shift to using the ESTA CAD data in 2015 and to publicly release CAD-based rural response data quarterly.

AV has adequate overall controls over the accuracy of response time performance data, and is the only agency undertaking routine data audits. While MFESB's data for structure fires and emergency medical responses is sound, we found minor errors in road accident rescue reporting due to gaps in data controls. We found minor errors and inconsistencies in DJR, SES and CFA annual reports and Budget Papers—also due to weaknesses in data controls.

DJR has not provided sufficient guidance to agencies on calculation methods for BP3 reporting. As a result MFESB, CFA and SES are applying different counting methods for the same kinds of emergencies. Applying consistent methods for the shared measures would alter the performance results reported in BP3.

The Victoria Police response time data held in ESTA systems is not yet sufficiently reliable to use for external performance reporting as there are limited controls over the data input by police officers, and around a quarter of police responses are not currently recorded. However, this data could still be useful for internal performance management.

DJR and DHHS have not met BFMG requirements to ensure that the data underpinning their BP3 output performance measures is auditable and verified for accuracy. Both DJR and DHHS rely on ESOs to ensure data accuracy without checking agency data controls or undertaking their own audits.

Some audited agencies had already acknowledged the need to strengthen controls for response time data, prior to the audit commencing. DHHS and AV plan to strengthen data verification by introducing the Victorian Ambulance Data Set project in 2015. CFA commissioned a data quality review in 2014 and has accepted recommendations to strengthen data quality. SES has a project to introduce automated response time recording. Emergency Management Victoria, on behalf of DJR, is in the early stages of initiatives to improve the consistency of response time performance information. Implementing these initiatives will help strengthen the accuracy and reliability of reported response time performance.

Response time performance

Our analysis of response times shows that for each of the ESOs, the time taken for them to respond to 90 per cent of Code 1 or Priority 1 cases in 2013–14 was:

- AV statewide—22.4 minutes (including Priority 0)
- MFESB metropolitan Melbourne structure fire responses—7.8 minutes
- MFESB metropolitan Melbourne emergency medical responses—8.3 minutes
- MFESB metropolitan Melbourne road accident rescue responses—14.5 minutes
- CFA statewide structure fire responses—11.2 minutes
- CFA statewide road accident rescue responses—28.7 minutes
- SES statewide road accident rescue responses—31.0 minutes
- Victoria Police statewide Priority 1 cases—20.6 minutes.

We have calculated these times consistent with how the agencies treat call-processing time that involves ESTA. This means some of the times include call-processing time, and others do not.

For all ESOs, these performance levels have been relatively stable since January 2012.

Noting the lack of evidence supporting all emergency response time performance targets, all services except AV are performing at or close to targets. AV has consistently not met targets since the organisation was created in 2008.

Response time performance varies significantly at the regional level. This is not publicly reported, with the exception of information released by AV in December 2014. For example, the Hume region has the longest Code 1 ambulance response times in the state and in 2013–14 the MFESB's Western District of Melbourne consistently underperformed in comparison to other districts for MFESB Code 1 responses.

With the exception of Victoria Police, ESOs share response time performance information broadly with staff and volunteers. However, there are still opportunities for MFESB, CFA and SES to improve reporting to senior management by including trends and analysis of the factors driving underperformance.

With the exception of MFESB and until very recently AV, external reports of response time performance lack critical information such as times, trends, regional variation and analysis of the factors driving performance. This additional information would allow Parliament and the public to better assess emergency service performance, and help service users understand how long responses in their area are likely to take, and whether performance is improving or declining.

Recommendations

Number	Recommendation	Page
1.	That the Department of Health & Human Services and the Department of Justice & Regulation, in consultation with their portfolio emergency service agencies that have response time measures, determine relevant targets for these.	22
2.	That the Department of Justice & Regulation broadens Budget Paper 3 response time measures to more comprehensively cover emergency responses to fires, rescues and other emergencies.	22
3.	That the Department of Health & Human Services and Ambulance Victoria focus emergency response time reporting on highest priority cases.	22
4.	That the Department of Health & Human Services' and the Department of Justice & Regulation's public reporting of response time measures clearly attribute accountability for each phase of emergency response, including call-taking time involving the Emergency Services Telecommunications Authority.	22
5.	That the Department of Health & Human Services uses Emergency Services Telecommunications Authority Computer Aided Dispatch data to report ambulance emergency response time performance.	32
6.	That the Department of Health & Human Services and Department of Justice & Regulation verify that response time data used in their reports on output performance measures is accurate and auditable.	32
7.	That the Department of Justice & Regulation applies a consistent approach to emergency response time measures including data capture, calculation and reporting.	32
8.	That the Country Fire Authority, Victoria State Emergency Service and Metropolitan Fire and Emergency Services Board improve controls over response time data collection and reporting.	32
9.	That Victoria Police assesses and where practical addresses limitations to available data and trials the use of response times for internal performance measurement.	32
10.	That Ambulance Victoria, Country Fire Authority, Metropolitan Fire and Emergency Services Board and Victoria State Emergency Service improve the transparency of public reporting on response times by including regional performance, times, trends and analysis of the factors affecting performance.	47

Submissions and comments received

We have professionally engaged with the Department of Health & Human Services, the Department of Justice & Regulation, Ambulance Victoria, the Metropolitan Fire and Emergency Services Board, the Country Fire Authority, the Victoria State Emergency Service, Victoria Police and the Emergency Services Telecommunications Authority throughout the course of the audit. In accordance with section 16(3) of the *Audit Act 1994* we provided a copy of this report to those agencies and requested their submissions or comments.

We have considered those views in reaching our audit conclusions and have represented them to the extent relevant and warranted. Their full section 16(3) submissions and comments are included in Appendix B.

1

Background

1.1 Introduction

Emergency service organisations (ESO) respond to unplanned incidents that can threaten both property and public health and safety. Such incidents include fires, medical emergencies, road accidents and crime. These incidents range in severity from false alarms to major statewide emergencies such as bushfires or storms.

The majority of these emergency responses are triggered by calls from members of the public to Triple Zero. The Emergency Services Telecommunications Authority (ESTA) handles calls for emergency assistance and dispatches the appropriate ESO. The speed of an ESO response to an emergency incident can have a significant effect on the outcome. A delayed response can have life-changing health, welfare and economic consequences. Citizens expect a prompt response to an emergency call and want to know how long the response is likely to take. Therefore, the public takes a strong interest in the responsiveness of Victoria's emergency services.

Emergency response time information is valuable for identifying potential areas for improvement, informing agencies and government about performance to guide decisions, and providing the public with confidence in ESOs. The relevance and reliability of the performance measures, underpinning data and reporting systems is therefore critical.



Photograph courtesy of the Metropolitan Fire and Emergency Services Board.

1.2 Emergency responses

In 2013–14, the following ESOs—Victoria Police, Ambulance Victoria (AV), the Country Fire Authority (CFA), the Metropolitan Fire and Emergency Services Board (MFESB) and the Victoria State Emergency Service (SES)—responded to a total of 1 765 638 incidents. This included 469 297 Code 1 or Priority 1 cases, which represent the highest priority emergencies. Figure 1A shows the number of incidents by agency.

Figure 1A
Incidents responded to by ESOs in 2013–14

Agency	Code 1 and Priority 1 incidents	Other incidents	Total incidents
Victoria Police	84 792	726 827	811 619
AV ^(a)	321 839	522 222	844 061
CFA	29 661	12 256	41 917
MFESB	31 885	4 786	36 671
SES	1 120	30 250	31 370
Total	469 297	1 296 341	1 765 638

(a) The figures for AV only include road responses and exclude incidents responded to by air ambulance.

Source: Victorian Auditor-General's Office.

Code 1 or Priority 1 incidents are typically the highest priority cases responded to by ESOs, however, each ESO defines these differently. For example, CFA Code 1 incidents relate to an immediate threat to life or property, whereas AV classifies an incident as Code 1 where it is 'time critical' requiring a 'lights and sirens response'. Appendix A includes the definitions of Code 1 and Priority 1 used by each ESO.

1.3 Roles and responsibilities

Figure 1B outlines a range of government departments, agencies and ESOs that contribute to Victoria's emergency response capabilities, reporting and accountability framework. On 1 January 2015, a number of machinery of government changes came into effect, and consequently the Department of Justice (DOJ) became the Department of Justice & Regulation (DJR) and the Department of Health (DH) became the Department of Health & Human Services (DHHS). The responsibilities of the former departments transferred to the new entities.

Figure 1B
Agency roles and responsibilities

Agency	Roles and responsibilities
Department of Justice & Regulation	Overarching responsibility for delivering and monitoring the emergency responses of agencies within the justice portfolio. This includes MFESB, CFA, SES and Victoria Police. Emergency Management Victoria, both on behalf of DJR and under its own legislation, delivers the majority of these oversight responsibilities.
Emergency Management Victoria	A statutory body established on 1 July 2014 responsible for setting and maintaining performance standards and coordinating data collection for the emergency response times of CFA, MFESB and SES for inclusion in justice portfolio Budget Papers.
Department of Health & Human Services	Overarching responsibility for delivering and monitoring the emergency responses of the health portfolio, including ambulance services. The Secretary also has specific responsibilities under s.9 of the <i>Ambulance Services Act 1986</i> to 'monitor, evaluate and review ambulance services' and 'in consultation with ambulance services, to develop criteria or measures that enable comparisons to be made between the performance of ambulance services'.
Ambulance Victoria	Responsible for responding to medical emergencies and transporting patients to medical facilities by road and air. AV also transports people to medical facilities in non-emergency situations, and refers emergency calls to other services where appropriate.
Country Fire Authority	Responsible for preventing and suppressing fires on private land outside the Metropolitan District and some metropolitan areas such as Frankston and Dandenong. CFA has both volunteer and career firefighters, and along with SES is also responsible for road accident rescue operations outside the Metropolitan District.
Metropolitan Fire and Emergency Services Board	Responsible for providing firefighting, rescue, road accident rescue, marine response and hazardous material responses within the Metropolitan District. In addition, MFESB units act as emergency medical responders for urgent cases in the Metropolitan District, providing resuscitation and life support until AV paramedics arrive.
Victoria State Emergency Service	SES is the control agency for natural disasters and also responds to rescue incidents in conjunction with CFA and MFESB. All rescues are performed by the agency's volunteers. It also provides regular support to CFA, MFESB, AV and Victoria Police for search and rescue on land and inland waterways.
Victoria Police	Responds to calls for assistance, preventing, detecting and investigating offences and supporting the judicial process.
Emergency Services Telecommunications Authority	Receives all 000 emergency calls and dispatches the appropriate services to emergencies.

Source: Victorian Auditor-General's Office.

1.4 Response time measures

1.4.1 Responsibility for setting response time measures

Departments work with ESOs to set, review and report on response time measures.

In line with *Budget and Financial Management Guidance* issued by the Department of Treasury and Finance, it is the responsibility of DHHS and DJR to recommend their output performance measures and targets to government, to verify the accuracy of reported performance and to review the measures and targets annually for relevance and robustness.

ESOs contribute to DHHS and DJR's outputs. Different ESOs may have different targets for their contribution to the same output performance measure. ESOs agree to their contribution to output performance measures as conditions of their annual funding arrangements and may advise departments of any changes necessary to the measures. Departments and ESOs monitor ESO performance against their component of output performance measures. ESOs are required to publish their performance against these output performance measures in their annual reports and may publish additional performance information at their discretion.

1.4.2 Reporting on response time measures

Recognising the importance of timely responses to emergency incidents, the government monitors response times through output performance measures reported to Parliament in the Budget Papers.

Output performance measures currently capture:

- **ambulance responses**
- **emergency medical responses**—provided by MFESB in support of ambulance responses for cardiac arrests and non-breathing patients
- **structure fire responses**—inside a building or the structure of a building
- **road accident rescue responses**—freeing people trapped in motor vehicles.

DHHS reports on the performance of AV in ambulance response.

DJR reports the aggregated performance of CFA, MFESB and SES for emergency medical, structure fire and road accident rescue responses. DJR does not measure or report response time performance for Victoria Police.

The four ESOs who measure their response times also report their individual performance against output measures in their annual reports.

Figure 1C shows the relevant output performance measures and targets for each portfolio and agency.

Figure 1C
Response time output performance measures and targets

Output performance measures by agency/department	Target/benchmarks	
	Minutes	Percentage
DJR output performance measures		
Emergency medical response times meeting benchmarks (minutes)—applies to MFESB	As per agency targets below	90
Structure fire response times meeting benchmarks (minutes)—applies to CFA and MFESB	As per agency targets below	90
Road accident rescue response times meeting benchmarks (minutes)—applies to SES, CFA and MFESB	As per agency targets below	90
CFA component of DJR measures		
Structure fire response—medium urban (hazard classification 2 only—significant urban areas, involving commercial centres, clusters of industrial and/or institutional hazards)	8	90
Road accident rescue response—urban zone (the Melbourne Statistical Division plus the municipal districts of Greater Geelong, Greater Bendigo, Ballarat, Latrobe, Greater Shepparton)	20	90
Road accident rescue response—rural zone (rest of Victoria)	40	90
MFESB component of DJR measures		
Emergency medical response	9.2	90
Structure fire response	7.7	90
Road accident rescue response—urban zone (Metropolitan District)	13.5	90
SES component of DJR measures		
Road accident rescue response—urban zone (the Melbourne Statistical Division plus the municipal districts of Greater Geelong, Greater Bendigo, Ballarat, Latrobe, Greater Shepparton)	24	90
Road accident rescue response—rural zone (rest of Victoria)	44	90
Victoria Police		
Does not measure response times		
DHHS BP3 measures (includes AV only)		
Proportion of emergency (Code 1) incidents responded to within 15 minutes—statewide	15	85
Proportion of emergency (Code 1) incidents responded to within 15 minutes—centres with a population of more than 7 500	15	90

Source: Victorian Auditor-General's Office.

1.5 Previous relevant audits

There are three previous VAGO reports related to this audit.

1.5.1 *Emergency Response ICT Systems*

The October 2014 report, *Emergency Response ICT Systems*, found that ESTA is meeting its call-taking performance standards and its non-emergency dispatch standards. It is also meeting its required emergency dispatch standards for police and fire services, but has consistently failed to meet its ambulance emergency dispatch standards for the past three years.

1.5.2 *Public Sector Performance Measurement and Reporting*

The October 2014 report, *Public Sector Performance Measurement and Reporting*, found that the three sampled departments, including DHHS, were not effectively applying the government's performance measurement and reporting system. The audit found that the absence of meaningful commentary in annual reports and Budget Papers meant that output performance measures were impenetrable to the reader.

1.5.3 *Access to Ambulance Services*

The October 2010 report, *Access to Ambulance Services*, found that ambulances were taking longer to respond to Code 1 emergencies and had yet to meet targets set in 2008. Response times had worsened more in rural regions than in the metropolitan area, and varied significantly. The audit recommended that AV publish information on geographical variations in performance, so the public could better understand the expected ambulance response times in their district. The audit also recommended that AV publish measures of response times at the 50th and 90th percentiles, and that DHHS report on performance for total case time, broken down by the elements attributable to ESTA, AV and hospitals.



Photograph courtesy of Ambulance Victoria.

1.6 Audit objective and scope

The audit objective was to determine the extent to which agencies are accountable for emergency response time performance. To assess this objective, the audit examined whether agencies:

- understand response time performance
- use response time information to drive response time performance
- report response time performance to relevant stakeholders.

We determined whether agencies understand response time performance by assessing whether:

- response time measures are relevant, appropriate and fairly represent performance
- response time performance meets or exceeds expected performance
- agencies assess and monitor response time trends.

We determined whether agencies use response time information to drive response time performance by assessing whether:

- action is taken to address significant variation
- actions are monitored for effectiveness in improving response time and revised as needed.

We determined whether agencies report response time performance to relevant stakeholders by assessing whether:

- agencies report response time performance to relevant internal business units and senior management
- agencies inform the public about response time expectations and performance
- agencies inform the government of response time performance.

The audit examined DJR, DHHS, AV, Victoria Police, CFA, MFESB and SES.

We limited our examination of response time performance to Code 1 or Priority 1 responses—including Priority 0 for AV—and refer to these as 'emergency responses' or 'responses' throughout the report.

We tested response time data from 1 January 2012 through to 30 June 2014.

As ESTA's response time performance was the subject of a recent audit, it was not included in the scope of this audit. However, data collected by ESTA was analysed and compared against ESOs' data.

1.7 Audit method and cost

Methods for this audit included:

- examination of documents and interviews with staff at the audited agencies
- site visits to speak to frontline emergency response personnel
- observation of data capture and reporting systems
- examination of controls over data quality, such as guidance for staff, information technology systems and processes for checking accuracy
- analysis of response time data
- testing of response time data for accuracy
- review of publically available research and official documents.

We did not benchmark with other jurisdictions because of difficulties in comparing measures and data. The audit was performed in accordance with the Australian Auditing and Assurance Standards. Pursuant to section 20(3) of the *Audit Act 1994*, unless otherwise indicated any persons named in this report are not the subject of adverse comment or opinion.

The cost of the audit was \$485 000.

1.8 Structure of the report

The report is structured as follows:

- Part 2 examines the relevance and appropriateness of emergency service response time measures
 - Part 3 examines the accuracy and reliability of emergency response time information
 - Part 4 examines emergency response time performance.
-

2

Relevant measures and targets

At a glance

Background

Meaningful and comprehensive measures and targets are essential to understanding emergency response time performance. We assessed whether response time measures are relevant, appropriately cover activity and have targets based on evidence or a clear rationale.

Conclusion

Accountability for emergency response times is undermined by performance measures that do not cover the full range of emergencies and have targets that are outdated or not based on evidence. The departments of Health & Human Services (DHHS) and Justice & Regulation (DJR) have not appropriately reviewed measures to identify and address these issues.

Findings

- Response times are relevant measures of emergency service delivery when part of a broader set of performance measures.
- Agencies could not explain the basis for targets for ambulance, road accident rescue and emergency medical responses. Structure fire response time targets are based on outdated evidence.
- DJR response time measures excluded 83 per cent of 2013–14 emergency responses by the Metropolitan Fire and Emergency Services Board (MFESB), the Country Fire Authority (CFA) and the Victoria State Emergency Service (SES).
- Ambulance Victoria's (AV) response time measures no longer focus on the most urgent cases.
- Some measures include call-processing activity not entirely within agency control.
- DHHS and DJR annual reviews of measures do not consider ongoing relevance.

Recommendations

- That DHHS and DJR, in consultation with AV, CFA, MFESB and SES determine relevant targets for current response time measures.
- That DJR broadens response time measures to include a more comprehensive reflection of emergency responses to fires, rescues and other emergencies.
- That DHHS and AV focus response time reporting on highest priority cases.
- That DHHS' and DJR's public reporting attribute accountability for each phase of response, including call-taking time involving ESTA.

2.1 Introduction

Accountability for performance is a cornerstone of public sector management. Reporting performance against predetermined measures and targets sets clear expectations and is the principal mechanism by which agencies and departments are held to account.

The critical nature of emergency services to the community also means that the public has a keen interest in understanding how emergency service organisations (ESO) are performing. To achieve this, agencies must design meaningful performance measures that are relevant to their objectives and appropriately cover their key activities.

Meaningful performance measures are difficult to design. Agencies must decide:

- what activity the measure should include and exclude
- whether to measure the outcomes, quantity, quality, timeliness or cost of an activity
- the target to set for the measure.

The Victorian Government provides guidance to departments on how to create performance measures, for use in Budget Papers and annual reports, through its *Budget and Financial Management Guidance* (BFMG). The BFMG sets criteria for good quality performance measures.

Drawing on BFMG criteria, this audit has assessed whether emergency service response time measures and targets are:

- relevant to agency and departmental objectives
- based on evidence
- covering key aspects of performance
- directly attributable to the actions of the agencies
- annually reviewed
- reassessed where there is constant significant under or over performance
- verified for accuracy—addressed in Part 3.

2.2 Conclusion

All the audited ESOs except Victoria Police monitor and report on emergency response times. However, current performance measures undermine agency accountability for emergency response time performance.

Response times are a relevant component of performance measurement frameworks for emergency service delivery. However, they are not appropriate stand-alone measures for overall emergency service performance. Response time performance must be presented and understood in the context of outcome performance measures.

Emergency response time targets are outdated or not based on evidence. This means that the arrival of an emergency service within, for example, 7.7 minutes for Metropolitan Fire and Emergency Services Board (MFESB) or 15 minutes for Ambulance Victoria (AV), does not necessarily reflect better practice, optimal service efficiency or improved outcomes.

Response time reporting does not appropriately represent the extent of emergency response activity. In 2013–14, the Department of Justice & Regulation's (DJR) Budget Paper 3 (BP3) measures excluded 83 per cent of Priority 1 emergency responses by the Country Fire Authority (CFA), MFESB and the Victoria State Emergency Service (SES) due to narrow definitions. Conversely, AV response time measures included 58 per cent of all ambulance emergency responses, indicating many lesser priority responses were captured in reporting.

Current performance measures hold AV, SES and MFESB to account for response time performance that is not entirely within their control, as they include call-processing and dispatch activity managed by the Emergency Services Telecommunications Authority (ESTA). This contravenes the BFMG requirement that performance measures should be 'directly attributable to the actions of the organisation'.

Although the Department of Health & Human Services (DHHS) and DJR review response time measures each year as part of the Budget Paper process, these reviews have not considered the ongoing relevance of the measures and targets and have therefore failed to address these issues.

Response times alone do not adequately describe emergency service performance and must be considered alongside information on outcomes, service quality, efficiency and cost effectiveness for emergency service performance to be understood.

2.3 Relevant and evidence-based measures

2.3.1 Relevance to agency and departmental objectives

The overall performance of emergency services cannot be understood through response times alone. They do not provide insight into outcomes or quality, nor do they convey information about the effectiveness of other core emergency service functions such as prevention, mitigation, investigation and education.

Response times are, however, a relevant component of performance measurement frameworks for emergency service delivery. Response time measures align, to varying extents, with agency and departmental objectives and offer an assessment of the timeliness of key services ESOs provide.

Ambulance responses

Measuring emergency response times directly relates to an *Ambulance Services Act 1986* objective 'to respond rapidly to requests for help in a medical emergency'. It also is related, indirectly, to DHHS's BP3 priority of 'developing a system that is responsive to people's needs' and its objective to 'improve the quality, effectiveness and efficiency of health care services for Victorians'.

However, there is no clear correlation in research between faster ambulance response times and improved patient outcomes for all but a minority of acute cases such as cardiac arrest. This means that response times alone cannot provide a relevant overarching measure of AV's performance. To better account for its performance AV reports against outcomes for cardiac arrest patients and reports the percentage of major trauma and stroke patients transported to appropriate facilities within times known to improve clinical outcomes. DHHS BP3 and AV annual reports state that it has consistently met targets for these measures.

Emergency medical responses

In specific metropolitan locations, ESTA dispatches MFESB at the same time as AV to provide medical support for patients suffering cardiac arrest or who are not breathing. Measuring emergency medical response (EMR) times is relevant to the MFESB mission to protect life. MFESB attends more EMR cases than structure fires.

Structure fire responses

Minimising the time taken to respond to fires is a key component of effectively suppressing structure fires. Therefore, a response time measure is relevant to MFESB and CFA missions to protect life, property and the environment and to DJR's BP3 objectives of minimising injury and property loss and enhancing safety. The *Metropolitan Fire Brigades Act 1958* also requires MFESB to 'proceed with all practical speed to the scene of the alarm of the fire'.

However, CFA and MFESB meet their objective to protect lives in more ways than just a quick response. Some fires can escalate to a deadly stage quicker than a fire service can attend. As a result, fire services are placing increasing emphasis on prevention strategies—such as building modifications, sprinklers, extinguishers and community education—to prevent fatalities. To account for their performance of these prevention functions, CFA and MFESB report a range of other measures, including containment of fires to room of origin and fatalities.

Road accident rescue responses

SES, MFESB and CFA conduct road accident rescues. Response times for road accident rescue are directly relevant to the SES purpose outlined in its strategic plan to provide 'timely and effective emergency services'. A timely response to road accident rescues can help prevent fatalities and further accidents. Road accident rescue response times are therefore relevant to CFA and MFESB missions to protect life, and have a logical relationship to DJR's BP3 objectives of minimising injury and property loss, and enhancing safety.

Police responses

Victoria Police does not currently measure response times. Measuring response times to urgent calls for assistance would not be directly relevant to Victoria Police statutory objectives to protect life and property, as police require time to plan a safe and appropriate response and achieve the best possible outcome. Failure to apply appropriate safety principles, including taking time to plan before responding, was cited by the Office of Police Integrity as a key factor underpinning six fatal shootings between 2003 and 2006. For this reason, measuring response times is also not directly relevant to DJR's BP3 objective for Policing Services, 'Improving community safety through policing, law enforcement and prevention activities'.

Our review of complaints about police responses and incident debriefs did not find any systemic issues with the timeliness of police responses to urgent calls. Nonetheless, response times would be relevant to monitoring the achievement of internal agency goals, specifically the Victoria Police 2013–14 to 2015–16 corporate plan outcome of providing 'responses to calls for assistance in a timely manner'.

2.3.2 Evidence base for targets

Response time measures include target times for agencies to attend emergencies. We expected agencies' response time targets to have been informed by either:

- available research
- applicable national or international standards
- historical performance trends
- assessment of resource capacity and expected demand or
- a combination of the above.

None of the response time targets we audited are based on up-to-date evidence or have a clear rationale. Neither DHHS or DJR, nor any of the ESOs, could explain how they had developed time targets for ambulance responses, road accident rescue responses or EMRs. Although the fire services initially used a sound rationale to develop the targets for structure fire responses, this work is now outdated as it used scientific research and standards that were in place in the United Kingdom 30 years ago.

Reporting the percentage of cases that meet a time indicator lacking evidence or rationale fails to describe agency performance in any meaningful way.

Ambulance responses

DHHS set targets for AV of 85 per cent (statewide) and 90 per cent (for centres with a population over 7 500) of Code 1 incidents to be responded to in 15 minutes.

The 15-minute ambulance response time target is not supported by clinical or operational evidence or a clear rationale.

The targets evolved from work undertaken in 2003 by a consultative committee for government, and are based on performance of the previous Metropolitan Ambulance Service and not the current statewide service. The 2003 report found that there were no international benchmarks for ambulance response time targets and did not provide an evidence base for the 15-minute target adopted.

Emergency medical responses

MFESB and DJR were unable to provide a rationale for the target of 90 per cent of EMRs to be attended within 9.2 minutes.

Structure fire responses

Budget Papers report response times for structure fires against two targets—7.7 minutes for MFESB and 8 minutes for CFA responses. CFA's target is based on MFESB's 7.7 minute target, rounded up to accommodate limitations in their data capture system at the time.

MFESB is the only ESO to have used a sound evidence base when setting time targets in 1987. However, this evidence base is now outdated.

The 7.7 minute target evolved from influential 1950's research from the United Kingdom that showed it took between 12 and 15 minutes for structure fires to 'flashover'. Flashover is when heat from a fire climbs to a point that surfaces in a confined space suddenly ignite, with rapid escalation of risk to property and life. In 1987, MFESB applied flashover research to its own data on response times and fire outcomes in Melbourne, finding that 90 per cent of cases where fires had been contained and flashover had been prevented had been responded to in under 7.8 minutes—approximately 10 minutes including call-processing time. MFESB therefore set a 7.7 minute target, as it was within the benchmark range suggested by United Kingdom research, and provided equitable outcomes across the majority of its territory.

This was a sound process as it balanced consideration of international research, analysis of local performance and Victorian Government service delivery expectations. However, MFESB has not revisited this process since 1987. MFESB reviewed this measure in 2009 but did not consider the currency of the evidence base for the target.

Key assumptions underpinning the 7.7 minute target may no longer be valid. For example:

- a 1994 Victorian Parliamentary inquiry found that flashover time had shortened and was likely to occur between 5 and 10 minutes
- a 2006 Emergency Services Commissioner review found that flashover times alone are no longer a robust basis for a response time target, as modern buildings can flashover too quickly for firefighters to suppress the fire, due to the increased presence of plastics in buildings.

The 7.7 minute target may no longer be relevant to MFESB and CFA structure fire responses and should be updated.

Road accident rescue responses

The response time targets introduced to BP3 in 2012–13 were based on the latest version of the *State Road Rescue Arrangements* (the Arrangements) produced by the Emergency Services Commissioner, on the advice of a working party made up of all five ESOs, and released in 2010. The Arrangements set response standards for road accident rescues as follows:

- call processing—4 minutes
- turnout time (the time between when an agency is notified of an incident until when the responder begins travelling to the incident)—8 minutes for volunteers, 1.5 minutes for paid on-station crews
- travel time—12 minutes for urban areas and 32 minutes for rural areas.

MFESB, CFA and SES then used these time standards to develop their respective targets. However, none of the agencies could provide any evidence or rationale to support the time standards set out in the Arrangements that underpin their response time targets.



Photograph courtesy of the Country Fire Authority.

Police responses

Victoria Police does not have targets for response times. Although some other Australian jurisdictions have set targets for police response times, there are no national or international benchmarks.

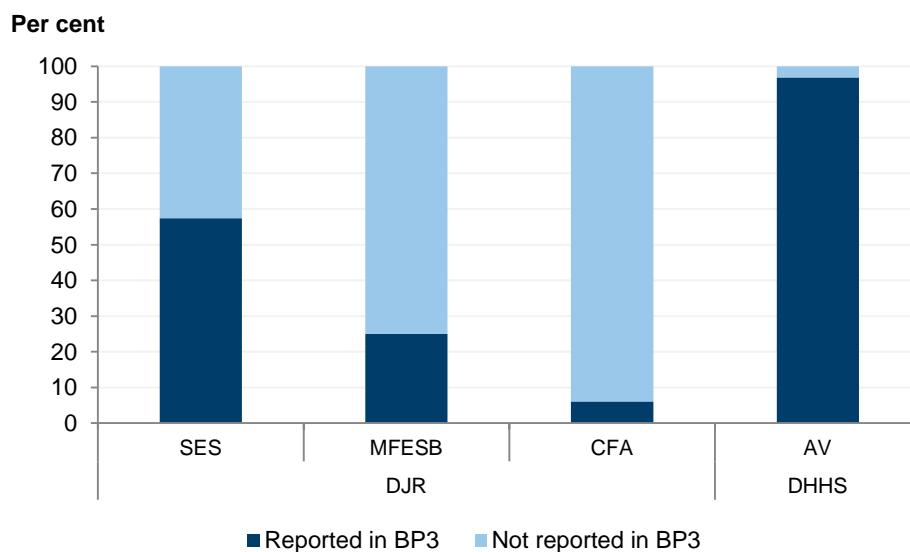
2.3.3 Comprehensive coverage of key activity

BFMG requires that performance measures cover key aspects of performance. However, current response time output performance measures do not appropriately represent the range of emergency responses—excluding significant numbers of emergency responses for some agencies and including lesser priority responses for others.

Emergencies excluded from response time reporting

External reports on response time performance do not include the majority of emergency responses. These significant exclusions, however, do not mask poor performance. We tested samples of excluded incidents and found that response times were either improved or stayed the same if they were included. Figure 2A shows the proportion of each ESO's emergency responses that were reported by DJR and DHHS.

Figure 2A
Proportion of emergency response incidents included in response time output performance measures, 2013–14



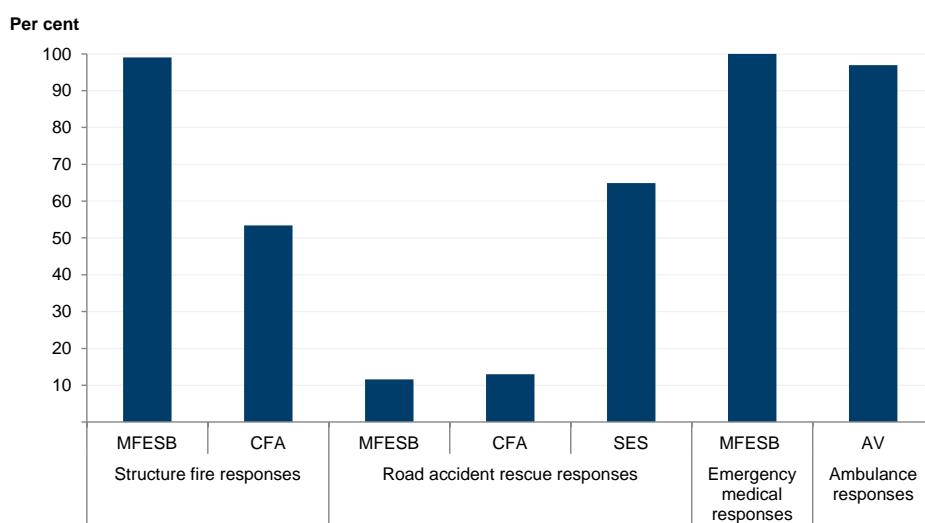
Source: Victorian Auditor-General's Office from data provided by agencies.

Although DHHS reported almost all of AV's Priority 1 responses, DJR's BP3 reporting for 2013–14 only included 17 per cent of the Code 1 and Priority 1 responses by SES, CFA and MFESB. This is because DJR chooses to measure and report only on selected categories of Code 1 and Priority 1 emergencies—structure fires, road accident rescues and EMRs. This excludes a wide range of other Code 1 and Priority 1 emergencies responded to by CFA, MFESB and SES, such as:

- fires in cars and other vehicles
- spills of hazardous materials

- rescues of people trapped in collapsed buildings, under fallen trees or in floodwater
- fires in parks and on nature strips
- fires that later turn out to be false alarms.

Figure 2B
Incidents included in BP3 reporting by incident category, 2013–14



Note: SES includes some non-Priority 0 or 1 road accident rescue incidents in its reporting.

Source: Victorian Auditor-General's Office from data provided by agencies.

DJR also applies further significant exclusions within those types of emergencies it selects for reporting. Figure 2B shows that while performance reports comprehensively capture ambulance and EMR response times, a significant proportion of responses to road accident rescues and CFA structure fires are excluded.

Structure fire responses

DJR's BP3 reports on response time performance do not fully reflect the extent of emergency responses to structure fires—excluding 23 per cent of responses to structure fires in 2013–14. Although DJR included 99 per cent of MFESB responses, it only included 53 per cent of CFA responses due to narrow definitions.

CFA responds to fires across a range of urban and rural locations. CFA classifies fires by the density and type of structures on the land, and by location. Figure 2C explains these hazard classifications. DJR only includes CFA responses to structure fire incidents in Hazard Classification 2.

Figure 2C
CFA's hazard classifications

Hazard classification	Definition
Classification 1— High urban	Discontinued in 1998. Prior to that Corio Petroleum Refinery was the only CFA recognised Classification 1 hazard in the state.
Classification 2— Medium urban	Significant urban areas, primarily residential areas involving commercial centres, clusters of industrial and/or institutional hazards.
Classification 3— Low urban	Encompasses all structural hazards in urban areas not falling into Classifications 1 and 2, and includes predominantly residential occupancies and small industries.
Classification 4— Rural	Primarily involves natural surroundings in terms of fuel, but also involves isolated dwellings and structures within those areas.
Classification 5— Remote rural	Structural and rural hazards similar to Classification 4, and for which the location of the hazard is geographically distant from a fire station.

Source: Victorian Auditor-General's Office from CFA documentation.

In contrast, CFA internal response time monitoring and reporting comprehensively covers all hazard classifications.

We checked to see if including CFA Hazard Classifications 3 and 4 responses in BP3 reporting would alter results and for 2013–14, and found it did not materially alter performance.

Road accident rescue responses

Significant numbers of road accident rescue response times are excluded from reporting in Budget Papers and annual reports. In 2013–14, SES excluded 35 per cent of the road accident rescue incidents it attended from its BP3 reporting, and CFA and MFESB both excluded just over 85 per cent of their rescues.

These exclusions were mostly due to agency interpretations of definitions in the Arrangements. The Arrangements define road accident rescues as incidents that were attended by the prescribed number of competent road accident rescue personnel in an appropriate vehicle. As outlined in Part 3 of this report, ESOs interpret the business rules in the Arrangements differently, which leads to inconsistency in the kinds of incidents excluded by each agency.

SES also excluded 8 per cent of responses due to members not completing incident reports for responses in time for the BP3 reporting deadline.

Inclusions in response time reporting

Ambulance responses

DHHS includes the majority of all its ambulance responses in BP3, as approximately 60 per cent of ambulance emergency responses to 000 calls in 2013–14 were classified as Code 1 and very few Code 1 incidents were excluded from reporting. The proportion of incidents classified as Code 1 has increased over time—from 54 per cent in 2007–08 to 58 per cent in 2013–4. Code 1 captures a broad range of incidents and does not represent only those incidents that are immediately life threatening. To enable the public and Parliament to understand AV performance for time-critical cases, DHHS should refocus emergency response time reporting on the highest priority cases.



Photograph courtesy of Ambulance Victoria.

2.3.4 Directly attributable to agency actions

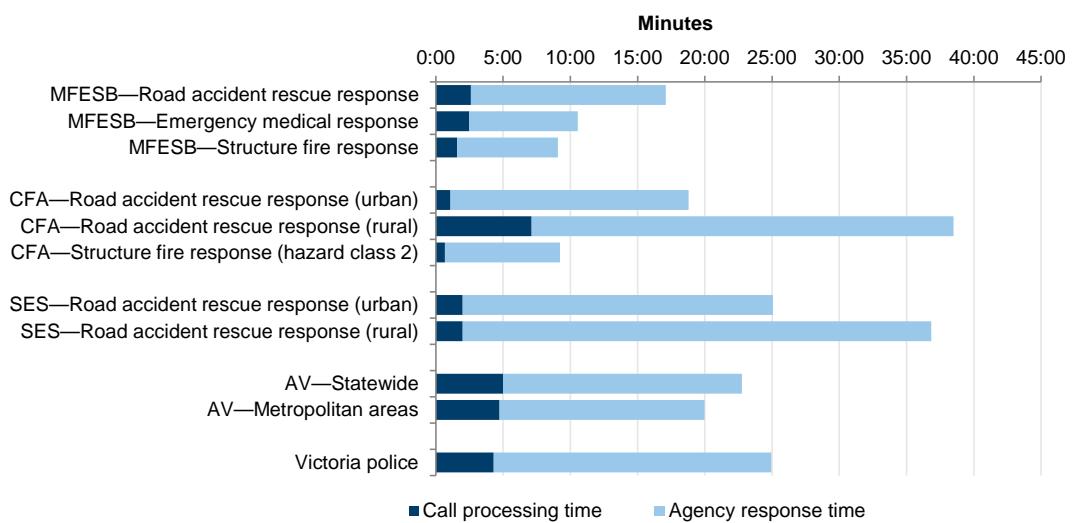
BFMG requires performance measures to be directly attributable to the actions of agencies, however, response time measures include some activity that is outside agencies' direct control.

Factors outside the control of ESOs can affect response time performance. For example, our 2014 *Emergency Response ICT Systems* audit found that ESTA's failure to meet its ambulance dispatch response time targets affected AV's response time performance. Similarly, if AV does not have sufficient available ambulances, this affects ESTA's ability to meet its own response time targets.

Nonetheless, where possible, the design of output performance measures should minimise the extent to which another agency can influence the measured activity.

Figure 2D shows how total emergency response time includes both call processing and agency response time. Response times across agencies are not directly comparable due to different definitions of when the call-processing phase finishes, and their varied operating models, resource levels and areas covered.

Figure 2D
Time that 90 per cent of emergency cases are responded to for incidents included in 2013–14 BP3 measures



Note: Data for road accident rescues in this chart is less reliable than other incidents due to smaller sample size.

Note: More information on phases of response is available in Figure A1 in Appendix A.

Source: Victorian Auditor-General's Office from data provided by agencies and ESTA.

Some agencies have designed their response time performance measures to exclude ESTA's call-processing and dispatch times, others include call-processing time:

- ESTA response time measures cover the period from ESTA answering the call to its dispatch of an ESO.
- CFA response time measures cover the period from receipt of dispatch from ESTA to arrival on the scene.
- MFESB response time measures overlap slightly with the period covered by ESTA's response time measures, as it includes a small amount of call-processing time in its structure fire and EMR time measures—on average 12–15 seconds in 2013–14.
- AV and SES response time measures include all of ESTA's call-processing and dispatch times. This can be a significant proportion of total response time.

Therefore, AV, SES and to a lesser extent MFESB include activity in their current response time measures that is not directly in their control and is in conflict with BFMG requirements.

It is useful for citizens to understand the total time taken for response to an emergency, however, when providing public reports on response time performance, departments and agencies should show the contribution that each agency makes to the total response time to clearly identify where improvements may be needed. If accountability for performance is shared, then public reporting should also reflect this.

2.4 Frequency of review and reassessment

Under BFMG, portfolio departments are responsible for reviewing measures annually to ensure ongoing relevance to department objectives and to reassess targets where there is constant significant over or underperformance. Neither DJR nor DHHS has fully complied with these requirements.

Department of Justice & Regulation

DJR reviews all BP3 measures annually but does not consider the relevance or evidence base of these in its review—it only considers changes to measures if there is over or underperformance. Reported times for structure fire responses, road accident rescue responses and EMRs have been close to targets, or achieved better than the targets, and therefore DJR has not considered any changes to the measures. This practice does not ensure that emergency response time measures remain relevant.

CFA and MFESB could have recommended to DJR that it review their measures. Both agencies have undertaken ad hoc internal reviews of the measures and targets during the past five years, finding limitations and problems. However, neither agency recommended any changes to DJR.

DJR reviews of output measures for Victoria Police across the past four years have not considered introducing response time measures, despite their use by police services in other Australian jurisdictions and consideration by the Productivity Commission for inclusion in their Report on Government Services.

Department of Health & Human Services

DHHS, in consultation with AV, considers response time measures each year as part of setting BP3 outputs and negotiating AV's funding and performance agreement with the Minister for Health. However, DHHS acknowledges that these reviews do not consider whether output performance measures, including the response time measures that apply to AV, fully comply with BFMG requirements.

Over time DHHS has revised AV's indicators, particularly to add new clinical outcome measures. However, DHHS has never reviewed the response time measure despite acknowledging the lack of supporting evidence in ministerial briefings since 2004, and despite AV never meeting the target. DHHS also provided advice to the Minister for Health in 2013 and 2014 about the lack of evidence for the AV response time target, but did not recommend any alternative targets or measures for consideration.

Although they were also aware of the lack of evidence for the response time measures, AV had not formally recommended any changes to DHHS—it did, however express concern with the targets during discussions on its annual service agreement.

Recommendations

1. That the Department of Health & Human Services and the Department of Justice & Regulation, in consultation with their portfolio emergency service agencies that have response time measures, determine relevant targets for these.
 2. That the Department of Justice & Regulation broadens Budget Paper 3 response time measures to more comprehensively cover emergency responses to fires, rescues and other emergencies.
 3. That the Department of Health & Human Services and Ambulance Victoria focus emergency response time reporting on highest priority cases.
 4. That the Department of Health & Human Services' and the Department of Justice & Regulation's public reporting of response time measures clearly attribute accountability for each phase of emergency response, including call-taking time involving the Emergency Services Telecommunications Authority.
-

3

Accurate and reliable response time information

At a glance

Background

Public reports should fairly represent an agency's actual performance. We therefore expect agencies to use reliable and consistent data and calculation methods.

Conclusion

While our testing found that reported emergency response time performance fairly represented actual performance in most instances, weaknesses in controls within justice portfolio agencies, and the use of a less reliable data system for rural responses by Ambulance Victoria (AV) and Department of Health & Human Services (DHHS), created minor inaccuracies and the risk of greater errors.

Findings

- DHHS and AV have used less reliable rural response time data for public reporting that slightly improves reported statewide performance.
- The Department of Justice & Regulation (DJR) and DHHS have not met requirements to ensure data is auditable and verified.
- The Country Fire Authority (CFA), the Victoria State Emergency Service (SES) and the Metropolitan Fire and Emergency Services Board (MFESB) count and measure road accident rescue and structure fire responses differently.
- CFA, SES and MFESB have not undertaken routine data audits and we found various deficiencies in data capture and calculation.
- Victoria Police response time data is not currently suitable for external reporting.

Recommendations

- That DHHS use Emergency Services Telecommunications Authority Computer Aided Dispatch data to report ambulance emergency response times.
- That DHHS and DJR verify the accuracy of response time data used in their reports on output performance measures.
- That DJR applies a consistent approach to emergency response time measures including data capture, calculation and reporting.
- That CFA, SES and MFESB improve controls over response time data collection and reporting.
- That Victoria Police, where practical, addresses limitations to response time data and trials use in internal performance measurement.

3.1 Introduction

Agency response time data is used for a range of purposes including resource allocation, internal performance monitoring and the measurement of agency outputs against government spending. Reported emergency response time information should therefore fairly represent actual performance.

To ensure the accuracy and reliability of their data, agencies need to have strong internal controls in place. Internal controls are systems, policies and procedures for managing data such as:

- reliable software
- automated capture systems
- clear definitions
- periodic audits
- appropriate access rights for users
- processes for error checking
- systems to ensure timely input.

According to the Department of Treasury and Finance's (DTF) *Budget and Financial Management Guidance* (BFMG), the Department of Health & Human Services (DHHS) and the Department of Justice & Regulation (DJR) are required to ensure that agency data and the methodology underpinning reports on performance measures are auditible and verified for accuracy.

To determine accuracy and reliability we:

- examined agency internal data controls
- undertook error and completeness tests on agency data
- attempted to reproduce the figures reported by agencies using agency data.

While agencies report against individual emergency response time measures in their annual reports, some also contribute to aggregated results in Budget Paper 3 (BP3). For example, DJR combines results for the Metropolitan Fire and Emergency Services Board (MFESB) and the Country Fire Authority (CFA) in its BP3 reporting on performance in responding to structure fires. Where agency results are going to be combined there should be consistency in how agencies record and calculate their performance against the measure. We performed consistency checks by examining agency targets, counting rules and reporting.

3.2 Conclusion

Reported performance for emergency response time measures fairly represented actual performance in most instances. The minor errors and misreporting that we identified were the result of a number of control weaknesses, in particular poor calculation methods and lack of data auditing. These weaknesses need to be addressed to provide greater assurance of the accuracy of reported results, and to prevent the risk of more significant errors in the future.

Despite more reliable data being available since 2011, Ambulance Victoria (AV) and DHHS did not use the most accurate data for rural responses, leading to statewide performance likely being overstated by 1 to 2 per cent.

Neither DHHS nor DJR have fulfilled their obligations under BFMG to ensure that the data and methodology underpinning reports on emergency response time measures is auditable and verified for accuracy. This is consistent with our 2014 *Public Sector Performance Measurement and Reporting* audit, which also found that the audited departments had not fulfilled this requirement.

3.3 Accurate and reliable

3.3.1 Department of Health & Human Services

DHHS requires AV to attest to the accuracy and reliability of its data when submitting it for use in DHHS performance reports. DHHS does not undertake regular audits of AV data and has not reviewed AV's own auditing process.

In 2010, DHHS commissioned a one-off audit of AV data from an external contractor. The audit found no material errors or inaccuracies in the samples it tested but still recommended improved review and monitoring processes. Although DHHS has not yet implemented any changes to its monitoring of AV data quality, it acknowledges this issue and is working with AV to strengthen data verification through the Victorian Ambulance Data Set project, due for implementation in 2015.

3.3.2 Ambulance Victoria



Photograph courtesy of Ambulance Victoria.

While we found AV's response time data to be accurate and reliable, it has not used best available data to calculate rural response times. This means the statewide performance results for 2013–14 are likely overstated by 1 to 2 per cent.

AV provides its response time data to DHHS for inclusion in BP3, and reports performance in its annual report and internal management reports. AV derives its response time data from two sources—the

Emergency Services Telecommunications Authority's (ESTA) Computer Aided Dispatch (CAD) system statewide, and the Patient Care Record (PCR) for rural locations.

PCR data is less robust than ESTA's CAD data, because:

- it is generated by paramedics using their own watches
- times are entered after the incident response is complete and therefore may be an estimate
- response times are recorded in whole minutes only.

In comparison, CAD uses real-time date/time stamping to record when each phase of the response occurred, in increments of one second.

Performance against response time targets is consistently worse according to CAD data than PCR data. For example, according to PCR data, AV achieved 67.1 per cent of its responses in the target time for rural locations in the last quarter of 2013–14, but CAD data showed this as only 59.6 per cent. For 2013–14, CAD data shows rural ambulance response times that are, on average, approximately one minute slower than the times recorded in the PCR system, translating to a drop in statewide performance of close to 2 per cent from what was publicly reported.

CAD data has been available for all rural locations since August 2011. Despite AV advice given both internally and to DHHS, both AV and DHHS have continued to report performance externally using rural PCR data. However, AV advised that from December 2014 it will use CAD data for rural locations as well as urban and will publicly release CAD-based rural response data on a quarterly basis. A report on response times published on AV's website in January 2015 uses CAD data.

With the exception of the PCR system, AV's data systems have sufficient controls. AV has a robust data governance framework in place, as well as a monthly audit process to check the accuracy of data. AV is currently working on improving its data governance framework further by strengthening its data governance committee, drafting reporting rules and calculation methods, and creating a reports register and data dictionary.

AV's business rules are clear and easy to understand, and we were able to reproduce figures consistent with those DHHS has reported in BP3 using AV's rules and datasets. Our tests for completeness found that AV response time data used for performance reports was a comprehensive record of incidents responded to, and our accuracy checks did not identify any errors.

3.3.3 Department of Justice & Regulation

DJR does not have sufficient controls to assure the accuracy of the emergency response time performance reported in BP3. This has led to minor errors.

DJR is responsible for collecting and collating performance data from Justice portfolio agencies for inclusion in BP3. The Justice BP3 response time measures include structure fire responses (CFA and MFESB), road accident rescue responses (SES, CFA and MFESB) and emergency medical responses (MFESB).

Prior to this audit, DJR had very few controls over the data it collected from agencies for BP3 reporting. DJR has not provided sufficient guidance to agencies on how to count and report response time results, or checked agency submissions thoroughly for consistency and errors.

We found a number of errors in DJR's treatment of agency data for response time performance that have led to minor inaccuracies of 1 to 2 per cent in reported response time performance in BP3:

- DJR did not follow its own guidance for collating joint agency measures, which states that it should weight agency performance according to the volume of activity undertaken.

- DJR did not notice that agencies sometimes reported figures as year-to-date, and sometimes only for the relevant quarter.
- DJR incorrectly recorded MFESB's emergency medical response performance for the fourth quarter of 2013–14 as 89 per cent, rather than 95 per cent. As a result, DJR understated MFESB's total performance for 2013–14 to DTF as 93.5 per cent, rather than 95 per cent.

DJR knew of its control weaknesses prior to this audit. A 2011 internal audit report by DJR identified significant control weaknesses around BP3 data, including inaccuracies in the data provided by agencies for other measures. There is no evidence that DJR implemented any department-wide improvements in response.

DJR has advised that it will work with its portfolio agencies to improve the quality of response time performance information provided for use in BP3, and strengthen controls over the data. DJR commenced these improvements in 2014 by:

- creating new templates with prompts to check for common errors
- producing improved guidance for agencies
- forming a working group under Emergency Management Victoria to engage with data-related issues.

3.3.4 Metropolitan Fire and Emergency Services Board



We found MFESB's structure fire response and emergency medical response data to be accurate and reliable. However, MFESB road accident rescue response data was less accurate.

MFESB derives all of its response time data from ESTA's CAD system. It reports its response time performance to DJR for inclusion in BP3. It also reports its response time performance in its annual report and internal management reports.

Photograph courtesy of the Metropolitan Fire and Emergency Services Board.

MFESB has controls over its response time data and systems to identify errors, such as reporting on incidents with unlikely response times. Our tests for completeness found that MFESB response time data was a comprehensive record of emergencies it responded to. Using MFESB's data and business rules we were also able to replicate MFESB's reported performance for structure fire response and emergency medical response.

However, we identified several issues with MFESB's road accident rescue response performance reporting:

- MFESB changed its counting methodology halfway through 2013–14, meaning results could not be compared across the year.
- A technical issue in 2013–14 led to minor errors in its internal and external reports—MFESB advised that this has been rectified.
- MFESB incorrectly used a target of 13 minutes rather than 13.5 minutes, meaning its road accident rescue response time performance was approximately 3 per cent better than was publically reported.

In addition, we were unable to replicate MFESB's reported performance for road accident rescue response using its data and business rules.

MFESB does not undertake data quality audits. MFESB commissioned a one-off review in 2012 that did not identify any problems with response time data but recommended the introduction of routine data audits to guard against error.

3.3.5 Country Fire Authority



Photograph courtesy of the Country Fire Authority.

While we found CFA's response time data to be generally accurate and reliable, there are weaknesses in controls which led to some minor inaccuracies, and create the risk of greater errors in the future. In particular, CFA should strengthen controls over the calculation of response time performance for external reports.

CFA derives its response time performance data from CAD and other ESTA systems and manages the data in its Fire and Incident Reporting System. reports on structure fire responses and road accident rescue responses to DJR for inclusion in BP3, and in its annual report and internal management reports.

CFA's data system is relatively reliable and comprehensive. Our tests for completeness found that CFA response time data was a comprehensive record of emergencies it responded to. A 2014 external review found that CFA had high quality data systems, but identified a lack of controls over the response time data held in the system.

We identified a number of areas where CFA could improve controls over the accuracy of response time data held in its Fire and Incident Reporting System:

- CFA officers record 'hazard classification' information for each response manually. This determines the time target for the response. While we found no evidence that CFA staff are deliberately manipulating this field to improve results, the lack of controls increases the risk of misreporting. Some CFA regions have implemented controls over which classifications staff can select for specific locations. Broader adoption of this control would improve the overall reliability of response time data.
- CFA systems do not currently record when CFA officers alter CAD response time data. Manual overwriting is necessary when CAD data is missing or faulty. In the past year, CFA has manually entered incident start times for at least half of all emergency responses, due to a technical fault leaving this field blank in CAD.
- CFA does not undertake regular audits of the response time data used for internal and external reporting.

Although the response time data in CFA's system was generally accurate, the use of this data to create external reports has been inconsistent and flawed.

CFA did not have documented business rules for calculating results against BP3 measures until after this audit commenced, and only a few CFA staff members understood how results were calculated. Even after CFA developed business rules we could not easily audit or fully replicate CFA's BP3 reporting on response times by applying those rules to agency data.

In particular, CFA has not been consistent in its selection of the structure fire and road accident rescue incidents that it includes in reports on response times. For example, BP3 results published in the CFA Annual Report incorrectly included 968 structure fire responses that had been excluded from BP3 reports provided to DJR—leading to an error of 1 per cent in reported performance. Although the lack of controls in the reporting process did not cause material errors in this instance, they do highlight the potential for greater misreporting. CFA has recognised these issues and has begun codifying its business rules and reporting practices.

3.3.6 Victoria State Emergency Service



Photograph courtesy of the Victoria State Emergency Service.

SES response time data is lacking in sufficient controls to provide adequate assurance of accuracy. While SES derives some of its data from the ESTA CAD system, it generates response time data from manual reporting by staff and volunteers. SES reports on its road accident rescue response times to DJR for inclusion in the BP3 report, and in its annual report and internal management reports.

The CAD system can only track and record the status of entire SES units rather than individual vehicles, which means that response times are not accurately recorded. In addition, responders do not have access to real time date/time stamping or automated time-capture technology that is available, for example, in ambulance vehicles. They therefore have to rely on their own timepieces such as pagers, watches and mobile phones, which are not necessarily synchronised. As a result, recorded times are in whole minutes only, and reports may be filled in weeks or months after an incident. In 2013–14, 56 per cent of road accident rescue reports were completed within a week, and 80 per cent within a month.

SES has recognised this as an issue and worked proactively with regional staff and volunteers to improve both the time capture systems available and the reporting activities of its staff and volunteers. The rate of incident reports completed within 28 days has improved from 63 per cent in 2010–11 to 77 per cent in 2013–14. In addition, SES is continuing work started in 2011 to enable the tracking of individual vehicles and their response times through the CAD system. This could improve data controls significantly, as SES could potentially then use CAD data rather than manually recorded data.

SES has systems in place to identify whether incidents that do not achieve response time targets are correctly recorded. However, it has never undertaken audits of the quality of response time data.

Our testing to match SES data against ESTA CAD data found only minimal cases missing from the SES data. Further testing found two minor issues with the SES response time data:

- in 2013–14 data, 2 per cent of recorded incidents had response times and locations that indicated vehicles had travelled at average speeds of over 150 km/h
- a further 4 per cent of incidents in the same dataset recorded incorrect travel distances.

Although these issues are unlikely to have significantly changed the reported performance, they are illustrative of the types of errors that can occur in the absence of sufficient controls.

3.3.7 Victoria Police



As with other ESOs, ESTA's CAD system records response time information for Victoria Police. Around one-third of frontline operational police cars have mobile data terminals, like those used in ambulances, which allow for automatic capture of arrival times. While Victoria Police has policies and processes requiring members to report their status when responding to an incident, it does not apply quality assurance controls to the data, such as data audits or error checking.

Photograph courtesy of ChameleonsEye / Shutterstock.com.

Due to the lack of controls, Victoria Police response time data is not currently reliable enough for external reporting. Victoria Police has not undertaken in-depth analysis of the shortcomings in the data, as it does not currently use the data for either internal or external reporting. Limitations to existing response time data include:

- police members do not always notify ESTA when they arrive at an incident as required by Victoria Police policy
- radio congestion can prevent police members without access to mobile data terminals from being able to report their status to ESTA promptly and easily.

However, our testing of the data found that it was complete enough to be useful for internal reporting and monitoring:

- In 2012–13 and 2013–14, 75 per cent of Priority 1 responses—excluding those which the police member was unable to locate, or which were cancelled en route—had dispatch and arrival times recorded.
- The distribution of the Priority 1 response times followed the expected pattern.
- Average response times appear to be relatively consistent over the period analysed—2012–13 to 2013–14.

3.4 Consistency across agencies

DJR aggregates performance from different agencies in BP3 reporting for two response types—structure fire responses and road accident rescue responses. ESOs that contribute to these shared measures use significantly different methods to calculate how long their responses to the same kinds of emergencies take. This can make some agencies appear faster, and others slower, simply because of the counting methods they use.

Structure fire responses

Structure fire response is a joint CFA and MFESB measure and they are largely consistent in how they calculate their performance. CFA and MFESB have slightly different approaches to when they start counting their response times, but these have a negligible impact on performance. CFA starts counting its response time from when a brigade successfully receives a dispatch notice from ESTA. MFESB starts counting slightly earlier, including a small portion of the time taken by ESTA to process Triple Zero calls—15 seconds on average in 2013–14.

Road accident rescue responses

Road accident rescue response is a joint CFA, MFESB and SES measure. As outlined in Part 2 of this report, targets and measures are defined under the *State Road Rescue Arrangements* (the Arrangements). However, as these Arrangements lack detail, ESOs have set their own business rules for what incidents to include, what targets they should apply and how to calculate response times. This has led to significant differences in the way CFA, MFESB and SES measure their road accident rescue performance:

- MFESB excludes road accident rescue responses where there are no fatalities or injuries, or where no rescue ends up being required, while the other agencies do not.
- Until 2013–14, MFESB counted all responses to road accident rescue incidents attended by all vehicles, but now counts only those attended by a vehicle approved for road accident rescue. CFA and SES have always counted only those attended by a vehicle approved for road accident rescue.
- CFA and MFESB count all unit responses—both primary and support—while SES counts only primary responses.
- The Arrangements provide different target times for volunteers and paid staff:
 - MFESB's target allows one-and-a-half-minutes for staff to receive a dispatch notification and begin travelling to the incident, on the basis that it has paid staff, not volunteers
 - SES, as a volunteer organisation, allows eight minutes
 - CFA allows eight minutes for both volunteers and paid staff but has not provided a rationale for this decision.
- MFESB and CFA exclude call-processing time from their response time targets, while SES includes call-processing time of four minutes.

These differences mean that response time performance results change depending on which agency's methodology is used. For example, if SES excluded ESTA's call-processing component from its response time target, consistent with CFA and MFESB, its 2013–14 performance would drop from 91 to 88 per cent.

It is important that calculation methods used for shared measures are consistent, so that the aggregated result is meaningful.

Recommendations

5. That the Department of Health & Human Services uses Emergency Services Telecommunications Authority Computer Aided Dispatch data to report ambulance emergency response time performance.
 6. That the Department of Health & Human Services and Department of Justice & Regulation verify that response time data used in their reports on output performance measures is accurate and auditable.
 7. That the Department of Justice & Regulation applies a consistent approach to emergency response time measures including data capture, calculation and reporting.
 8. That the Country Fire Authority, Victoria State Emergency Service and Metropolitan Fire and Emergency Services Board improve controls over response time data collection and reporting.
 9. That Victoria Police assesses and where practical addresses limitations to available data and trials the use of response times for internal performance measurement.
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4

Understanding response time performance

At a glance

Background

We examined the extent to which agencies met targets for response times. To provide Parliament and the public with a better understanding of response time performance, we also assessed how long actual responses have taken. In addition, we examined how agencies use response time information to drive improvement and inform government and the public.

Conclusion

Emergency service organisations have generally met response time targets, except for Ambulance Victoria (AV), and statewide performance has been relatively stable over the past three years. The agencies that measure response times use this information to drive improvement, although some do not report sufficient detail to senior management. External reporting is too limited to provide a true understanding of performance.

Findings

- Response times for 90 per cent of statewide emergencies range from 7.8 minutes for urban structure fires to 27.0 minutes for statewide road accident rescues.
- Response time performance varies between regions.
- With the exception of Victoria Police, agencies use response time information to inform improvements but there are still opportunities to improve trend reporting and analysis of results.
- External reports on response time performance lack times, trends, regional variation and analysis of the factors driving performance.

Recommendation

That AV, the Country Fire Authority, Metropolitan Fire and Emergency Services Board and Victoria State Emergency Service improve transparency of public reporting on response times by including regional performance, times, trends and analysis on factors affecting performance.

4.1 Introduction

State Budget Paper 3 (BP3) sets out response time expectations for Victorian emergency service organisations (ESO) through timeliness output measures and targets. Part 2 of this report discusses the quality of these measures and targets in detail. This Part assesses the extent to which ESOs have met those expectations and provides an analysis of recent response time performance.

As outlined in Part 2, current response time measures and targets do not offer meaningful insight into response time performance. Therefore, in addition to assessing agencies against their targets, we also examined the actual time it takes ESOs to respond to 50 and 90 per cent of Code 1 or Priority 1 emergency cases and how this performance has trended over the past three years.

Response time performance reports should help agencies identify areas for improvement and inform resource and operational decisions. This information also helps the public to understand how long emergency responses are taking. We therefore examined how agencies report response time performance both internally and externally, the extent to which reported information allows the user to assess the agency's actual performance, and how agencies act on response time performance information.

4.2 Conclusion

With the exception of Ambulance Victoria (AV), which has not met its BP3 response time targets since it was created in 2008, all the other audited ESOs have consistently met or nearly met their targets. However, given the lack of evidence supporting these targets, it is not clear whether these results show 'good' or 'poor' performance.

Although statewide performance has been relatively stable over the past three years, response time performance varies significantly between regions.

Public reports on emergency response times do not provide enough information for the public and Parliament to understand performance. They are almost entirely limited to stating the proportion of cases that met targets and lack critical information such as actual response times, trends in performance, regional variation and analysis of the factors driving performance. This represents a missed opportunity to respond to public concern about response times and for ESOs to help citizens understand how long a response to their emergency is likely to take.

Although agencies that measure response times generally communicate this performance well internally, there are opportunities to improve the information provided to senior management and to take further action on trends in performance. Victoria Police would benefit from a better understanding of response time performance to inform its improvement initiatives.

4.3 Response time performance

To provide Parliament and the public with a better understanding of how long ESOs take to respond to emergencies we used Emergency Services Telecommunications Authority (ESTA) Computer Aided Dispatch (CAD) data to calculate response times at the 50th and 90th percentiles. This information is useful as it shows the actual number of minutes it takes agencies to respond to 50 and 90 per cent of all Code 1 or Priority 1 cases, allowing users to understand how long a response is likely to take.

Performance for each agency and measure has remained relatively stable between 1 January 2012 and 30 June 2014.

Figure 4A shows agencies' performance against BP3 targets as well as urban and rural subcategories for road accident rescues that contribute to the statewide BP3 measures, but are not separately reported. Figure 4A also shows agency performance for 50 and 90 per cent of cases for 2013–14. With the exception of AV, all other agencies met or were close to target in 2013–14.

Figure 4A
Emergency response time performance 2013–14

Type of emergency response	Target	Per cent within target	50th percentile (mins)	90th percentile (mins)
Department of Justice & Regulation (DJR)				
Structure fire response—applies to Country Fire Authority (CFA) and Metropolitan Fire and Emergency Services Board (MFESB) ^(a)	90% meeting agency time targets	89	5.4	7.8
Road accident rescue response—applies to Victoria State Emergency Service (SES), CFA and MFESB ^(a)	90% meeting agency time targets	91	13.1	27.0
Emergency medical response—applies to MFESB	90% meeting agency time targets	95	5.8	8.3
Country Fire Authority				
Structure fire response—medium urban, hazard classification 2	90% within 8 minutes	87	5.6	8.6
Road accident rescue response—statewide	90% meeting benchmarks	93	13.0	28.7
Road accident rescue response—urban	90% within 20 minutes	93	10.6	17.7
Road accident rescue response—rural	90% within 40 minutes	93	16.6	31.3
Metropolitan Fire and Emergency Services Board				
Structure fire response	90% within 7.7 minutes	89	5.6	7.8
Road accident rescue response	90% within 13.5 minutes	89	9.5	14.5
Emergency medical response	90% within 9.2 minutes	95	5.8	8.3

Figure 4A
Emergency response time performance 2013–14 – continued

Type of emergency response	Target	Per cent within target	50th percentile (mins)	90th percentile (mins)
Victoria State Emergency Service				
Road accident rescue response—statewide	90% meeting benchmarks	91	16.0	31.0
Road accident rescue response—urban	90% within 24 minutes	88	14.0	25.0
Road accident rescue response—rural	90% within 44 minutes	94	18.5	36.0
Victoria Police				
Code 1 incidents	No target	No target	7.3	20.6
Department of Health & Human Services (DHHS) and AV				
Code 1 incidents—statewide	85% within 15 minutes	74	11.1	22.4
Code 1 incidents—in centres with a population greater than 7 500	90% within 15 minutes	79	10.8	19.6

(a) For consistency, DJR-collated figures exclude call-processing time, as per CFA's counting methodology.

Note: Times across different agencies are not directly comparable due to differences in resourcing, regions serviced, operating models and whether agency measures include call-processing time that involves ESTA.

Note: Some figures in Figure 4A differ from those publicly reported because of counting errors in the publicly-reported figures, as outlined in Part 3 of this report.

Note: Performance within target is drawn from ESO annual reports, agency datasets and, for DJR, from reporting to Department of Treasury and Finance

Source: Victorian Auditor-General's Office.

Time taken to respond

Response times vary widely depending on agency, location and type of emergency, for example:

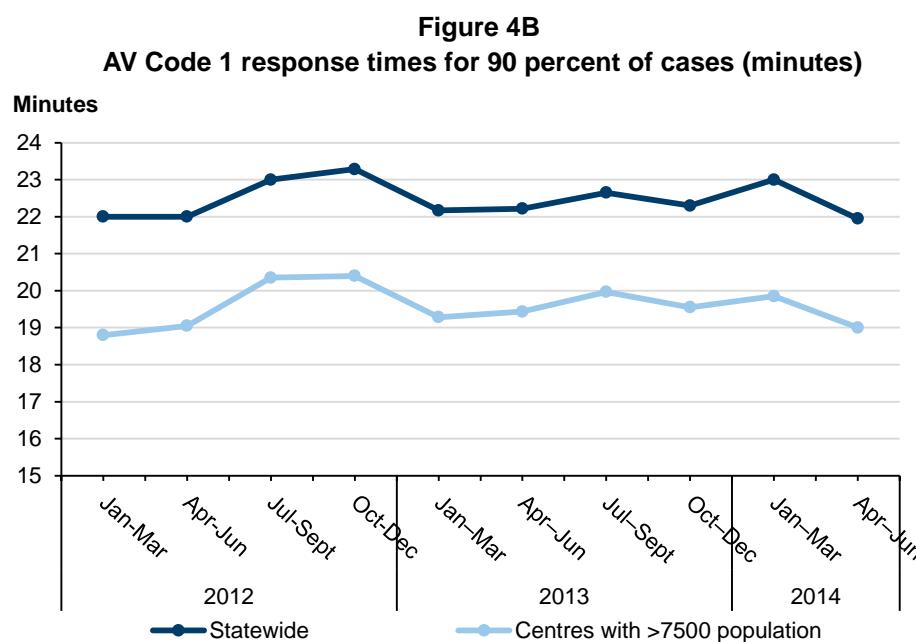
- results for agency response times to 50 and 90 per cent of Code 1 and Priority 1 emergencies show longer times for rural responses, reflecting the greater distances travelled
- responses to structure fires are significantly faster than other emergency types
- statewide road rescue responses for 90 per cent of cases are slower than responses to other emergency types.

These variations may be due to factors other than simply performance of the task, such as differences in resourcing, agency size and use of volunteer or paid staff.

4.4 Agency response time performance

4.4.1 Ambulance Victoria

AV response times for Code 1 emergencies are consistently longer than the target of 15 minutes. Its performance has been stable since January 2012, fluctuating around 22 minutes for 90 per cent of cases statewide after an increase from around 19 minutes in July 2009. Performance for centres with a population greater than 7 500 has also been stable since January 2012, at around 19 minutes.



Source: Victorian Auditor-General's Office from ESTA CAD data and applying AV business rules.

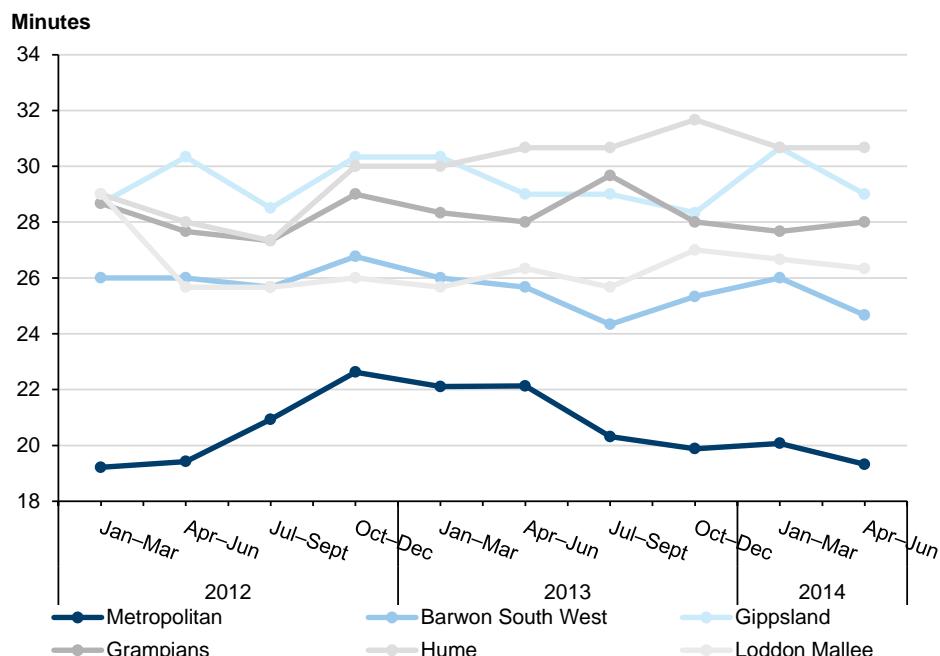
AV's Code 1 response time varies between regional areas. Figure 4C shows, for example, that Loddon Mallee and Barwon South West outperform Hume and Gippsland. Hume's response times in particular, have increased since January 2012.

Response times also vary significantly between urban centre locations. For example, 2013–14 results show that:

- 50 per cent of Code 1 emergencies in Wallan and Drouin waited more than 15 minutes for an ambulance to arrive
- 90 per cent of Code 1 emergencies in Drouin, Castlemaine, Benalla and Colac waited 30 minutes or more.

These examples of variation across Victoria demonstrate the need for regional level reporting to allow Victorians to understand response time performance in their area.

Figure 4C
AV Code 1 response times for 90 per cent of cases by region (minutes)



Source: Victorian Auditor-General's Office from AV performance reports to DHHS.

Using response time performance to drive improvement

AV uses response time information to drive organisational and local level performance and shares detailed performance information throughout the organisation.

AV undertakes detailed analysis of its response performance and thoroughly understands the drivers of its response times, which include:

- ambulance supply
- increasing demand
- travel time and time spent at the scene
- turnaround time between ambulance arrival at and departure from a hospital emergency department.

Industrial issues also affect AV's response time, particularly the timing of shifts and meal breaks which cause performance dips at particular times of the day.

AV uses response time information to inform resourcing decisions and service improvements. AV, together with DHHS is implementing a range of measures to improve AV operations and response times including:

- a new funding model
- governance improvements
- plans to revise the call-taking script to enable better patient prioritisation
- diversion strategies such as better use of non-emergency transport.

These initiatives are too recent to have had an impact on response times at the time of publication of this report.

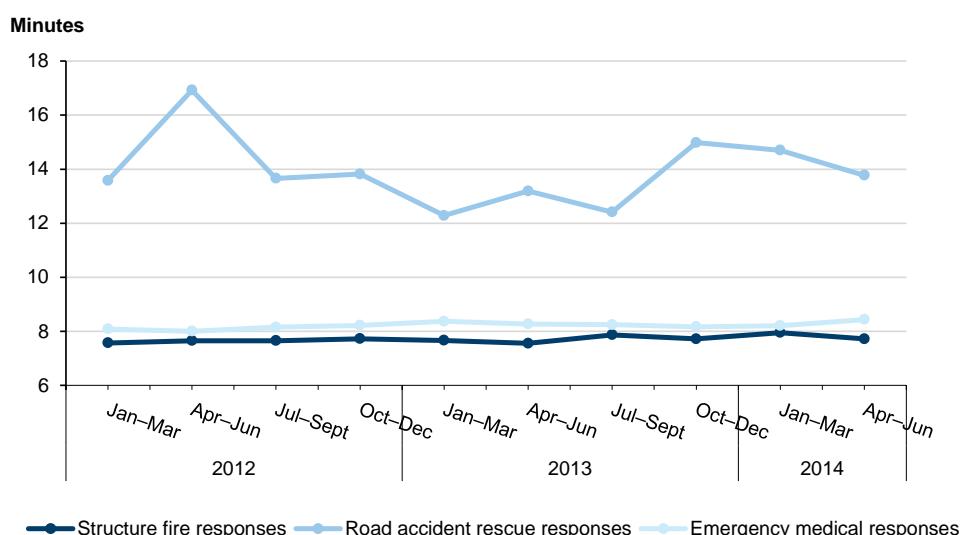
One joint AV and DHHS initiative—the Hospital Transfer Taskforce—designed to improve hospital turnaround time, is having some positive effect. At July 2012, the turnaround time for Code 1 emergencies was around 60 minutes on average. The initiative involves setting guidelines and expectations for hospital staff to encourage them to support ambulances to leave the emergency department within 40 minutes. DHHS monitors performance of this measure closely, and performance has improved from 75 per cent of transfers occurring within 40 minutes in July 2012, to 89 per cent in June 2014.

In regards to local and regional level performance, AV advised that resourcing is the main cause of variation. AV's 2015–16 Emergency Operations Plan, produced in 2012–13, proposes additional resources to support areas requiring response time improvements, however, AV advises it has not yet been able to put these in place.

4.4.2 Metropolitan Fire and Emergency Services Board

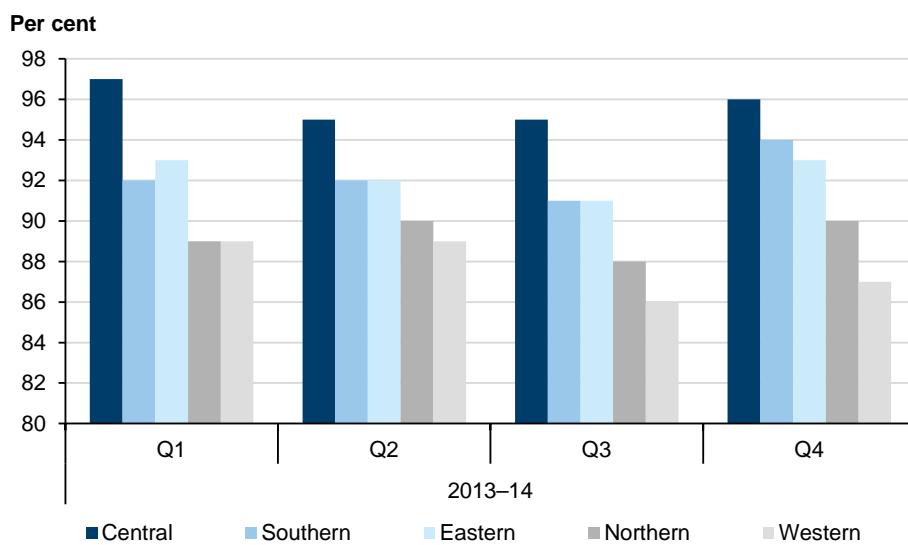
MFESB has consistently met or come close to meeting its target for Code 1 structure fire response and emergency medical response performance measures, the targets being 7.7 and 9.2 minutes respectively. However, response times to road accident rescues show greater levels of variation against the target of 13.5 minutes, with MFESB failing to meet that target by over a minute in two quarters of 2013–14. Figure 4D shows MFESB response times for 90 per cent of Code 1 cases across its three measures—structure fires, road accident rescues and emergency medical responses.

Figure 4D
MFESB Code 1 response times for 90 per cent of cases (minutes)



Source: Victorian Auditor-General's Office from ESTA CAD data and applying MFESB business rules.

Figure 4E
**Per cent of Code 1 responses by MFESB meeting target
 by metropolitan district, 2013–14**



Note: Includes all Code 1 responses such as structure fires, road accident rescues, explosions and hazardous material spills. MFESB measures emergency medical responses and road accident rescues against their BP3 targets, and all other responses against the 7.7 minute target for structure fires.

Source: Victorian Auditor-General's Office from MFESB internal performance reports.

Figure 4E shows that MFESB response times for all Code 1 incidents, which include structure fires and road accident rescues, vary between metropolitan regions. The central district was consistently the best performing in 2013–14, achieving target for well over 90 per cent of responses. However, the northern and in particular, the western district have performed significantly worse since at least January 2012.

Using response time performance to drive improvement

MFESB uses response time information to inform organisation-level improvement initiatives and communicates performance information well internally. However, MFESB is not undertaking work to address regional variation.

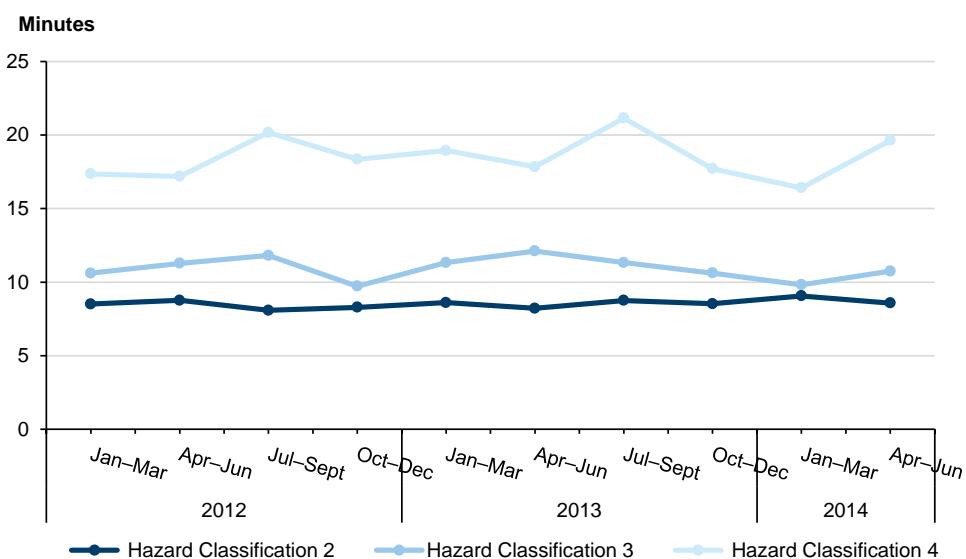
MFESB reports on emergency response times for structure fires at an executive level quarterly, including trend data and regional and station level data. MFESB also reports response time performance to regional staff and management, and firefighters have access to live broadcasting of real time countdowns against response time targets. This was a 2010 initiative to improve turnout times. Emergency response times improved as a result of the project, rising from 84.1 per cent meeting MFESB's internal targets in 2009–10 to 87.3 per cent in 2010–11.

MFESB acknowledges the variation in performance across districts and as a result of the audit has begun implementing a number of actions aimed at better understanding the reasons for the variation and targeting areas for improvement.

4.4.3 Country Fire Authority

CFA responds to emergencies at, or close to, target response times. Figure 4F shows that since January 2012, responses to structure fires in urban areas—Hazard Classification 2—have fluctuated just above the eight minute BP3 target. Figure 4F also shows performance for types of fires that are not included in BP3 reporting—Hazard Classifications 3 'low urban' and 4 'rural'—which have internal CFA targets of 10 and 20 minutes respectively. Performance for Hazard Classification 3 fluctuates just above the 10 minute target and Hazard Classification 4 responses usually meet the 20-minute target.

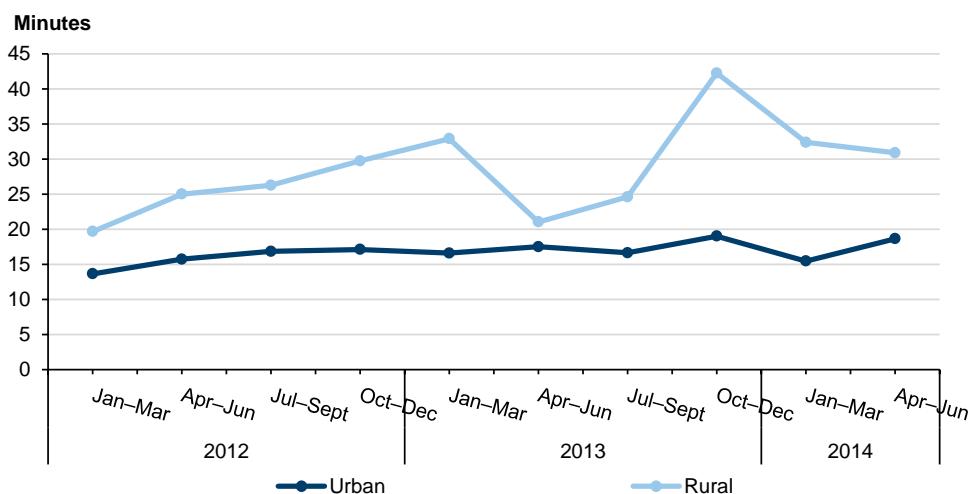
Figure 4F
CFA Code 1 response times for 90 per cent of structure fires (minutes)



Source: Victorian Auditor-General's Office from ESTA CAD data and applying CFA business rules.

For road accident rescues, CFA consistently arrives within targets of 20 minutes in urban areas and 40 minutes in rural areas. Figure 4G shows that response times are increasing, with the urban response trend nearing the target time.

Figure 4G
CFA Code 1 response times for 90 per cent of road accident rescues (minutes)



Source: Victorian Auditor-General's Office from ESTA CAD data and applying CFA business rules.

Using response time performance to drive improvement

CFA uses response time information effectively to inform action on performance variations at the local level.

However, CFA has done little reporting or analysis of statewide response time trends or organisation-level reasons for underperformance. This lack of regular organisation-wide analysis makes it harder for CFA to identify performance trends, such as the increase in road accident rescue response times. In February 2015, CFA introduced new Board-level reporting that now contains analysis of response time performance.

In contrast, CFA analyses local and regional response times and acts on results. CFA examines brigade-level response times thoroughly as part of operational planning and performance monitoring, including detailed reporting on performance variations. Management uses this response time data in conjunction with other performance and resource metrics to produce annual reports on brigade viability for senior management. Individual brigades and regions also use response time performance to inform resourcing, rostering or volunteer recruitment.

Based on its understanding of response time performance, CFA has undertaken targeted interventions including:

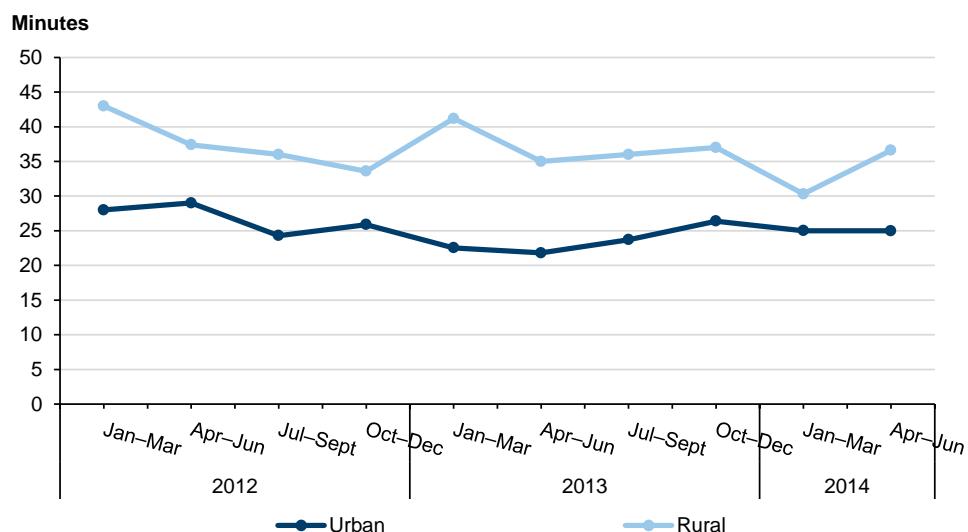
- adjusting ESTA protocols in specific regions to ensure the most appropriate brigades are dispatched
- planning for new station locations
- adjusting the balance of career firefighters and volunteer personnel in particular brigades.

In February 2014, CFA commissioned an external review of its internal and external performance framework. This has included seeking better alignment between agency objectives and performance measures and targets, and is also considering what role response time information should play in both internal and external reporting.

4.4.4 Victoria State Emergency Service

SES has achieved its external response time targets since the road accident rescue BP3 measure was introduced in 2012–13. SES response times for road accident rescues consistently meet the 44 minute target for rural responses, and fluctuate around the 24 minute target for urban responses. Performance has been reasonably consistent from January 2012 to June 2014.

Figure 4H
SES Code 1 response times for 90 per cent of road accident rescues (minutes)



Source: Victorian Auditor-General's Office from ESTA CAD data and applying SES business rules.

Using response time performance to drive improvement

SES uses response time information to drive improvements at a local level, but could use it more effectively to drive organisation-level strategies and initiatives.

SES has two ongoing initiatives to drive response time improvement at a local level:

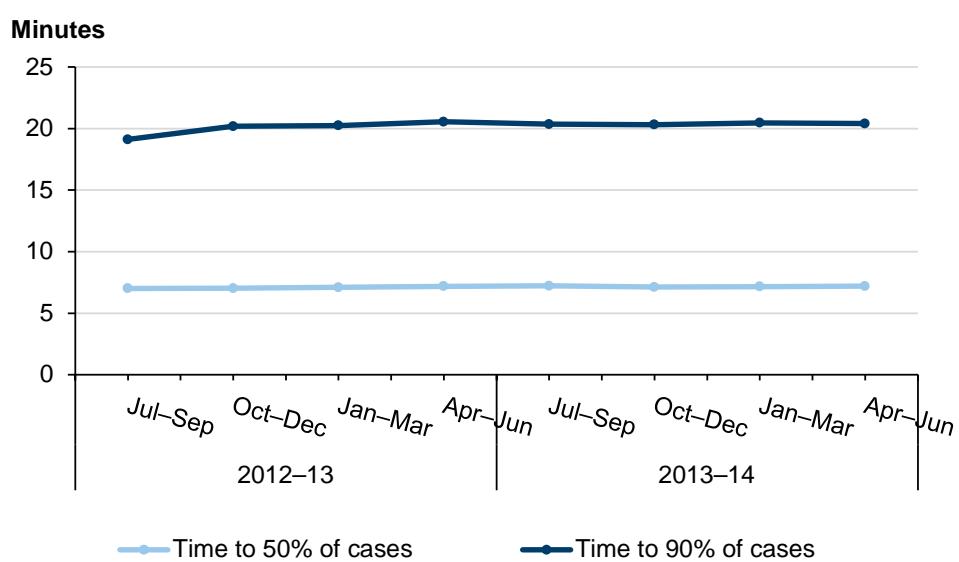
- a partnership with CFA where the two agencies jointly review unit response times on a six-monthly basis to consider the best dispatch options for road accident rescue
- monthly exception reporting to regional staff identifies units that have failed to achieve response time targets—SES then puts plans in place for units that fail consistently, and monitors the plans for effectiveness.

SES regularly reports to the board, executive and regional staff on performance against the BP3 road accident rescue target. However, it does not undertake trend analysis to allow for the assessment of performance and factors driving underperformance over time.

4.4.5 Victoria Police

Victoria Police has no response time targets, therefore we cannot assess whether it is meeting expectations. However, our analysis of ESTA CAD data capturing police dispatch and arrival times shows that the Victoria Police response time of 7.3 minutes to 50 per cent of Priority 1 cases is comparable to the other ESOs, as shown in Figure 4A. Figure 4I shows Victoria Police response times to 50 and 90 per cent of Priority 1 cases.

Figure 4I
Victoria Police Priority 1 response times for 50 and 90 per cent of cases (minutes)



Note: Excludes response times for Wangaratta from July until November 2012.

Source: Victorian Auditor-General's Office from ESTA CAD data.

CAD data for Victoria Police shows a large number of responses recorded as taking over 60 minutes. This may reflect poor data capture, but may also support Victoria Police advice that responding units have discretion to re-prioritise cases categorised as Priority 1 by ESTA, based on their own assessment of urgency. As Victoria Police does not specifically collect response time data for reporting, and does not have systems to support accurate data capture, the response times reported here are only a broad guide to performance and may not accurately represent actual performance.

Using response time performance to drive improvement

Although Victoria Police records arrival times, it does not collate this information or undertake any analysis of it across the organisation. Therefore, it cannot use the information to inform improvement initiatives or resourcing decisions. This is despite a number of strategic and corporate documents referring to improved response times as a desired outcome. As discussed in Part 2 of this report, Victoria Police should make better use of existing response time data to inform internal understanding of response time performance, and to identify and implement improvement initiatives and resourcing decisions.

4.5 Reporting response times transparently

Solely reporting a percentage of statewide cases meeting an annual target does not provide readers with enough information to understand actual performance. It does not explain whether this performance is improving or declining, what the actual performance was or what factors underpin performance variations. VAGO has developed good practice criteria for use in our audits of agency performance reports. We used these criteria to assess both departmental and ESO public reports on response time performance.

Information showing how long ESOs take to respond to most emergencies, regional variations and trends over time is not publicly available. MFESB is an exception and in December 2014, AV released regional and local-level response times. BP3 and agency annual reports do not explain what reported data includes or excludes, provide sufficient explanations of the reasons for results, and do not always reveal what the actual target times are. Reports do not allow the reader to understand how long a response might take in their area or whether performance is stable, improving or declining. Such information is necessary for Parliament and the public to gain a transparent understanding of ESO response time performance.

4.5.1 Budget Paper 3

DHHS and DJR annually publish ESO emergency response time performance in BP3. These reports show the percentage of Code 1 or Priority 1 cases meeting the response time target. Figure 4J shows the response time information from the 2014–15 BP3.

Figure 4J
2014–15 BP3 emergency response time reporting (per cent)

Response time measure	2014–15 target	2013–14 expected outcome	2013–14 target	2012–13 actual
Department of Justice & Regulation				
Structure fire response	90	89.2	90	90
Road accident rescue response	90	89.8	90	90
Emergency medical response	90	95.4 ^(a)	90	95
Department of Health & Human Services				
Proportion of Code 1 emergency incidents responded to within 15 minutes – statewide	85	73.4 ^(b)	85	73
Proportion of Code 1 emergency incidents responded to within 15 minutes in centres with more than 7 500 population	90	78.2 ^(b)	90	78.1

- (a) The 2013–14 expected outcome is higher than the 2013–14 target due to the MFESB exceeding its required benchmark targets for emergency medical responses.
- (b) The 2013–14 expected outcome is lower than the 2013–14 target due to a range of interrelated factors including growing incident demand, case complexity and hospital transfer times.

Source: Victorian Auditor-General's Office from 2014–15 Budget Paper 3.

As Figure 4J shows, BP3 reporting does not show:

- which agencies contribute to DJR emergency response time measures
- what the targets are for MFESB, CFA and SES that underpin the DJR measures
- which 'levels' of responses are included—for example reporting against structure fires excludes CFA Hazard Classifications 3 and 4
- what the response times are for the majority of cases
- a comparison over time beyond the previous year.



Photograph courtesy of the Country Fire Authority.

4.5.2 Agency public reporting

Annual reports and websites are important tools for agencies to communicate their performance to the public. However, we found that they are not providing sufficient detail to allow the public to understand emergency response time performance. This is a missed opportunity to communicate expectations and explain the context of response time results.

With the exception of MFESB, none of the agencies provide information on the actual time they take to respond to the majority of emergency cases. MFESB does this by reporting the time taken to respond to 50 and 90 per cent of Code 1 cases. This allows the public to understand, for example, that a response to a house fire in Melbourne will most likely arrive in under eight minutes.

Only MFESB and AV report how their performance against target has trended over time. This is important information as it places current performance in context, revealing whether performance is stable, improving or declining.

Agency annual reports and websites also do not report on regional level performance. Transparent reporting should make clear to the public the different response time expectations and results across Victoria. In December 2014, AV released regional-level response times for the first time, despite VAGO recommending this approach in its 2010 audit of *Access to Ambulance Services*.

Finally, agency annual reports and websites provide limited detail, if any, to explain reported performance, such as:

- how results are calculated
- inclusions or exclusions
- major factors affecting results.

This information would allow Parliament and the public to better assess emergency service performance, and help service users understand how long responses in their area are likely to take and whether performance is improving or declining.

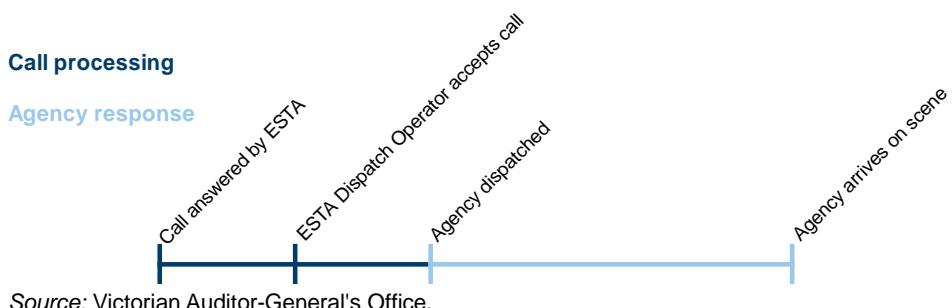
Recommendation

10. That Ambulance Victoria, Country Fire Authority, Metropolitan Fire and Emergency Services Board and Victoria State Emergency Service improve the transparency of public reporting on response times by including regional performance, times, trends and analysis of the factors affecting performance.
-

Appendix A.

Definitions of measures

Figure A1
Dispatch and response process



Source: Victorian Auditor-General's Office.

Figure A1 shows the main phases in the dispatch and response process. Different agencies begin counting their response time at different points in the process, as outlined in Figure A2.

Figure A2
Definition of measures

Measure	Definition	Target		
		Minutes	Per cent	
Justice portfolio				
Department of Justice & Regulation Budget Paper 3 measures				
Structure fire response—applies to the Country Fire Authority (CFA) and the Metropolitan Fire and Emergency Services Board (MFESB)	Statewide. Fires inside a building or structure. Business rules for calculating response times vary between agencies.	Varies by agency	90	
Road accident rescue response—applies to the Victoria State Emergency Service (SES), CFA and MFESB	Statewide. The release and extrication of trapped people from motor vehicles. Business rules for calculating response times vary between agencies.	Varies by agency	90	
Emergency medical response—applies to MFESB	Metropolitan District. Provided by MFESB in support of ambulance responses for cardiac arrests and non-breathing patients. Response time is calculated from the ESTA dispatch operator accepting the call to arrival on scene of the first vehicle.	9.2	90	

Figure A2
Definition of measures – *continued*

Measure	Definition	Target		
		Minutes	Per cent	
Justice Portfolio – <i>continued</i>				
CFA benchmarks and agency-level measures				
Structure fire response—Hazard Classification 2 ^(a)	Outside the Metropolitan District. Medium urban hazard: significant urban areas, primarily residential areas involving commercial centres, clusters of industrial and/or institutional hazards. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	8	90	
Structure fire response—Hazard Classification 3 ^(b)	Outside the Metropolitan District. Low urban hazard: all structural hazards in urban areas not falling into Hazard Classification 2 and includes predominantly residential occupancies and small industries. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	10	90	
Structure fire response—Hazard Classification 4 ^(b)	Outside the Metropolitan District. Rural hazard: primarily involves natural surroundings in terms of fuel, but also involves isolated dwellings and structures within those areas. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	20	90	
Structure fire response—Hazard Classification 5 ^(b)	Outside the Metropolitan District. Remote rural hazard: structural and rural hazards similar to Classification 4 and for which the location of the hazard is geographically distant from a fire station. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	No target	No target	
Road accident rescue response—urban zone	The Melbourne Statistical Division, plus the municipal districts of Greater Geelong, Greater Bendigo, Ballarat, Latrobe and Greater Shepparton. A road vehicle accident in CFA territory, which the CFA attended, and there was a rescue performed. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	20	90	
Road accident rescue response—rural zone	The part of Victoria not in the urban zone. A road vehicle accident in CFA territory, which the CFA attended, and there was a rescue performed. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	40	90	

Figure A2
Definition of measures – *continued*

Measure	Definition	Target		
		Minutes	Per cent	
Justice Portfolio – <i>continued</i>				
MFESB benchmarks and agency-level measures				
Structure fire response	The Metropolitan District. Fires inside a building or structure. Response time is calculated from the ESTA dispatch operator accepting the call to arrival on scene of the first vehicle.	7.7	90	
Emergency medical response	The Metropolitan District. Provided by MFESB in support of ambulance responses for cardiac arrests and non-breathing patients. Response time is calculated from the ESTA dispatch operator accepting the call to arrival on scene of the first vehicle.	9.2	90	
Road accident rescue response	The Metropolitan District. An accident or incident involving a motor vehicle and in which there are injuries or assistance is required from emergency services organisations. Response time is calculated from dispatch of agency to arrival on scene of the first vehicle.	13.5	90	
SES benchmarks and agency-level measures				
Road accident rescue response—urban zone	The Melbourne Statistical Division, plus the municipal districts of Greater Geelong, Greater Bendigo, Ballarat, La Trobe and Greater Shepparton. Response time is calculated from the time ESTA receives the call until the arrival on scene by two trained crew and an appropriately equipped road rescue vehicle.	20	90	
Road accident rescue response—rural zone	The part of Victoria not in the urban zone. Response time is calculated from the time ESTA receives the call until the arrival on scene by two trained crew and an appropriately equipped road rescue vehicle.	40	90	
Victoria Police				
No external measures of response times			No target	

Figure A2
Definition of measures – continued

Measure	Definition	Target	
		Minutes	Per cent
Health portfolio			
Department of Health & Human Services Budget Paper 3 measures—reporting Ambulance Victoria (AV) performance			
Proportion of emergency (Code 1) incidents responded to within 15 minutes—statewide	Time from call being answered by ESTA to the time of the first arrival at the incident scene of an AV paramedic, a Community Emergency Response Team or an Ambulance Community Officer.	15	85
Proportion of emergency (Code 1) incidents responded to within 15 minutes—centres with population greater than 7 500	As above.	15	90

(a) CFA Hazard Classification 1 was discontinued in 1998. Activity previously included in Hazard Classification 1—high urban is now reported in Hazard Classification 2.

(b) These measures are monitored internally but not reported in Budget Paper 3.

Source: Justice agencies: MFESB, CFA and SES correspondence to VAGO.

Ambulance Victoria: Victorian Health Service Performance Monitoring Framework 2013–14.

Figure A3
Agency definitions of Code 1 or Priority 1 incidents

Agency	Definition
CFA	Incidents requiring time critical attendance as there is an immediate threat to life or property.
MFESB	Incidents requiring a lights and sirens response.
SES	Life-threatening incidents such as rescues requiring an immediate response.
Victoria Police	Urgent response involving threat to life or serious injury, real or imminent danger, violence or any incident on freeways.
AV	Time-critical cases with a lights and sirens ambulance response. Priority 0 is a subset of Code 1 cases that are potentially life-threatening, such as cardiac arrests.

Source: Victorian Auditor-General's Office from correspondence with agencies.

Appendix B.

Audit Act 1994 section 16— submissions and comments

Introduction

In accordance with section 16A and 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to the Department of Health & Human Services, the Department of Justice & Regulation, Ambulance Victoria, the Metropolitan Fire and Emergency Services Board, the Country Fire Authority, the Victoria State Emergency Service, Victoria Police and the Emergency Services Telecommunications Authority with a request for submissions or comments.

The submissions and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Responses were received as follows:

Department of Health & Human Services	54
Department of Justice & Regulation.....	57
Ambulance Victoria	60
Metropolitan Fire and Emergency Services Board.....	62
Country Fire Authority	63
Victoria State Emergency Service.....	65
Victoria Police	71

RESPONSE provided by the Secretary, Department of Health & Human Services



Department of
Health & Human Services

04 MAR 2015

Mr John Doyle
Auditor-General
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Solm
Dear Mr Doyle



GPO Box 4057
Melbourne Victoria 3001
Telephone: 1300 253 942
www.dhhs.vic.gov.au

Office of the Secretary

e3740641

Thank you for the opportunity to provide comment on your office's Proposed Draft Report of the performance audit of *Emergency Service Response Times* performance.

I understand that representatives from the Victorian Auditor General's Office (VAGO), led by Manager, Performance Audit, Ms Jacque Stepanoff, have discussed with Ms Nicola Reinders, Acting Director, Ambulance Branch and received final feedback from the Department.

Consistent with section 16(3)(b) of the Audit Act 1994, please find attached the Department of Health and Human Services' response to the relevant recommendations for inclusion in the report.

Should you require further information please do not hesitate to contact Ms Reinders via email at nicola.reinders@health.vic.gov.au or by phone on (03) 9096 1301.

I look forward to receiving the final report.

Yours sincerely

Dr Pradeep Philip
Secretary



RESPONSE provided by the Secretary, Department of Health & Human Services
—continued

Response provided by the Department of Health and Human Services

Victorian Auditor-General's Office (VAGO) Performance Audit of Emergency Service Response Times

The Department of Health and Human Services (the Department) notes the audit's objectives are to determine:

- whether agencies are accountable for response time performance;
- whether response measures and targets are meaningful, accurate and data is reliable;
- whether agencies understand and use response time performance to drive improvement; and
- whether agencies are reporting response time information to relevant stakeholders.

The Department notes VAGO's comments regarding the Department of Treasury and Finance (DTF) Budget and Finance Management Guidelines. In line with the Department's response to VAGO's Public Sector Performance Measurement and Reporting Audit (October 2014) which raised similar concerns, the Department is working with DTF to design performance measurement systems that achieve consensus on the appropriate vehicles for performance reporting, and support improved guidance to enable agencies to fully meet the government's requirements.

The Department notes VAGO's assessment that ambulance response time targets lack an up-to-date evidence base or clear rationale. The Department is progressively working with Ambulance Victoria on a number of response time improvement strategies which will also be informed by the work of the newly established Ambulance Performance and Policy Consultative Committee.

These initiatives include new financing arrangements for Ambulance Victoria, review of ambulance call taking and dispatch systems and the submission by Ambulance Victoria of unit-level data to the Department through the implementation of the Victorian Ambulance Dataset. In addition, in line with the new Government's policy, ambulance response time performance at the local level will be publicly reported.

With respect to the variability of local ambulance response times and response time performance, the Department notes that the work of the Ambulance Performance and Policy Consultative Committee will inform policy development and make recommendations to improve Ambulance Victoria's service performance, workforce flexibility and culture including reviewing call taking and dispatch and initiatives to improve ambulance response.

The Department provides the following response with regard to specific recommendations relating to the Department and Ambulance Victoria:

Recommendation 1: That the Department of Health and Human Services and the Department of Justice and Regulation, in consultation with their portfolio emergency service agencies, determine relevant targets for response time measures.

Department response: Accept. The Department supports ongoing consultation with Ambulance Victoria on ensuring response time measures and targets are relevant and appropriate.

Recommendation 3: That the Department of Health and Human Services and Ambulance Victoria focus emergency response time reporting on highest priority cases.

Department response: Accept. The Ambulance Performance and Policy Consultative Committee has been established to contribute to policy development and make recommendations to improve Ambulance Victoria's service performance, workforce flexibility and culture.

***RESPONSE provided by the Secretary, Department of Health & Human Services
– continued***

Recommendation 4: That the Department of Health and Human Services and the Department of Justice and Regulation public reporting clearly attribute accountability for each phase of emergency response, including call-taking time by the Emergency Services Telecommunications Authority.

Department response: Accept in Principle. The Department will consider appropriate reporting of the call-taking and dispatch component in light of any review of response time measures and targets. The Department notes that there is a strong inter-dependency between the Emergency Services Telecommunications Authority and Ambulance Victoria in achieving dispatch and response time performance measures.

Recommendation 5: That the Department of Health and Human Services uses Emergency Services Telecommunications Authority data to report ambulance emergency response time measures.

Department response: Accept. State-wide ambulance response times are reported using Computer Aided Dispatch data from 1 January 2015.

Recommendation 6: That the Department of Health and Human Services and the Department of Justice and Regulation verify that response time data underpinning output performance measures is accurate and auditable.

Department response: Accept. The Department is working closely with Ambulance Victoria to ensure the most robust possible data is available, verified and reported through the Department's data reporting systems, in line with the requirement for health services.

Recommendation 10: That Emergency Service Organisations improve transparency of public reporting on response times by including regional performance, times, trends and analysis on factors affecting performance.

Department response: Accept. The Department supports improved public reporting and transparency of local response times. The Department notes Ambulance Victoria has released regional response times in December 2014 and proposes further routine release of more localized response time information. In line with the new government's policy, the improved reporting of ambulance performance will be legislated as part of the proposed Transparency in Government Bill.

RESPONSE provided by the Secretary, Department of Justice & Regulation



Department of Justice & Regulation

Secretary

12 MAR 2015

Mr John Doyle
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000



121 Exhibition Street
Melbourne Victoria 3000
GPO Box 4356
Melbourne Victoria 3001
Telephone: (03) 8684 0500
Facsimile: (03) 8684 0525
greg.a.wilson@justice.vic.gov.au
www.justice.vic.gov.au
DX 210220

Our ref: CD/15/88818

Dear Mr Doyle

Audit of Emergency Service Response Times

Thank you for your letter dated 23 February 2015 enclosing the audit report *Emergency Service Response Times* and the invitation to provide a formal response.

The Department of Justice & Regulation (the department) recognises the need for the state to have efficient and effective emergency services and that emergency response time performance is understood and accurately reported to stakeholders.

The department welcomes the findings articulated in the report and accepts all recommendations. A proposed action plan for the implementation of the recommendations is provided at Attachment 1.

Completion of actions addressing the recommendations will be monitored via the department's Audit Tracking Register, which is updated and attested to by Deputy Secretaries, and reviewed by the department's Audit and Risk Management Committee, on a quarterly basis.

Thank you for the opportunity to comment on the report.

Yours sincerely

Handwritten signature of Greg Wilson.
Greg Wilson
Secretary

Encl. Proposed Action Plan – Emergency Service Response Times



RESPONSE provided by the Secretary, Department of Justice & Regulation – continued

Attachment 1: Proposed Action Plan – *Emergency Service Response Times*

Department of Justice & Regulation response to VAGO recommendations

Recommendation	Proposed Action	Completion Date
<u>Recommendation 1</u> That the Department of Health & Human Services and the Department of Justice & Regulation, in consultation with their portfolio emergency service agencies that have response time measures, determine relevant targets for these.	The department accepts this recommendation. The department is pursuing improvements in performance assessment through a new Emergency Management Performance Framework. This work includes a review of all BP3 measures, efficiency and effectiveness based measures (including Response Times) and once developed, will form the basis of all community and government reporting across the Responder Agency Sector.	BP3 measures will be reviewed for the FY16-17 Budget. The department anticipates further measures will be developed as the Emergency Management Performance Framework matures.
<u>Recommendation 2</u> That the Department of Justice & Regulation broaden Budget Paper 3 response time measures to more comprehensively cover responses to fires, rescues and other emergencies.	As above.	To be implemented for the FY16-17 Budget.
<u>Recommendation 4</u> That the Department of Health and Human Services and the Department of Justice & Regulation's public reporting of response time measures clearly attribute accountability for each phase of emergency responses, including call-taking time involving the Emergency Services Telecommunications Authority.	As above.	To be implemented for the FY16-17 Budget.

RESPONSE provided by the Secretary, Department of Justice & Regulation – continued

Recommendation	Proposed Action	Completion Date
<u>Recommendation 6</u> That the Department of Health and Human Services and the Department of Justice & Regulation verify that response time data used in their reports on output performance measures is accurate and auditable.	As part of the review noted against recommendations 1, 2 and 4, the department will pursue the introduction of a quality assurance mechanism that enhances the validation and accuracy of data. The process will include attestation of completeness and quality by respective agency executives and a review and validation process by the department.	To be implemented for the FY16-17 Budget.
<u>Recommendation 7</u> That the Department of Justice & Regulation applies a consistent approach to emergency response time measures including data capture, calculation and reporting.	As part of the review noted against recommendations 1, 2 and 4, the department will work with the responder agencies to define an approach for response time measurement which is consistent across all agencies. In undertaking the review, the department will be mindful that data collection should not be overly onerous or time consuming, particularly for volunteers; this translates to ensuring a reasonable number of measures are in place to sufficiently capture service delivery performance	To be implemented for the FY16-17 Budget.

TRIM ID: CD/15/77923

RESPONSE provided by the Administrator, Ambulance Victoria



4 March 2015

Mr John Doyle
Auditor-General
Victorian Auditor General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Doyle

Re: Victorian Auditor General's Report on Emergency Service Response Times 2015

Thank you for providing Ambulance Victoria (AV) with the opportunity to comment on the recommendations relating to our organisation in the Victorian Auditor General's Report on Emergency Service Response Times.

AV has considered the report, and offers the following comments in relation to the recommendations you have made that are relevant to AV:

Recommendation 1

That the Department of Health & Human Services and the Department of Justice & Regulation, in consultation with their portfolio emergency service agencies that have response time measures, determine relevant targets for these.

AV Response

AV supports a review of our response time target (in conjunction with a review of our response time measure) being undertaken to ensure that the target is relevant, appropriate and meaningful.

To support the review process, AV will propose possible targets (taking into account the evidence framework outlined in VAGO's report) as part of our response to Recommendation 3.

Recommendation 3

That the Department of Health & Human Services and Ambulance Victoria focus emergency response time reporting on highest priority cases.

AV Response

AV supports this recommendation. AV will propose alternative response time measures to the Department of Health & Human Services to ensure we are focussed on delivering an appropriate response in an appropriate timeframe based on the patient's needs.



Ambulance Victoria

ABN 50 373 327 705

375 Manningham Road
P.O. Box 2000
Doncaster Victoria 3108

T 03 9840 3500
F 03 9840 3583

www.ambulance.vic.gov.au



RESPONSE provided by the Administrator, Ambulance Victoria – continued

2.

Recommendation 4

That the Department of Health & Human Services' and the Department of Justice & Regulation's public reporting of response time measures clearly attribute accountability for each phase of emergency responses, including call-taking time involving the Emergency Services Telecommunications Authority.

AV Response

AV supports this recommendation.

Recommendation 5:

That the Department of Health & Human Services uses Emergency Services Telecommunications Authority Computer Aided Dispatch data to report ambulance emergency response time performance.

AV Response

In 2014-15, AV is transitioning to using Computer Aided Dispatch (CAD) data to report all of our response time data, CAD based data will be released on our website and in our Annual Report.

Recommendation 10

That Ambulance Victoria, Country Fire Authority, Metropolitan Fire and Emergency Services Board and Victoria State Emergency Service improve the transparency of public reporting on response times by including regional performance, times, trends and analysis of the factors affecting performance.

AV Response

AV currently reports response time performance including historical trends in its Annual Report, and has recently made regional level response time performance data available via the AV website. AV will review the information it makes available via the Annual Report and AV website to ensure increased transparency of public reporting, including regional performance.

Please do not hesitate to contact Sue Cunningham, General Manager Strategy, Research and Innovation on 9896 6081 or email sue.cunningham@ambulance.vic.gov.au if you would like to discuss our comments or require any additional information.

Yours sincerely



HOWARD RONALDSON
Administrator
Ambulance Victoria

cc: Associate Professor Tony Walker, Acting Chief Executive Officer
Ms Sue Cunningham, General Manager Strategy, Research & Innovation

RESPONSE provided by the Chief Executive Officer, Metropolitan Fire and Emergency Services Board



11 March 2015

Mr John Doyle
Auditor-General
Level 24, 35 Collins Street
Melbourne VIC 3000



Metropolitan Fire and Emergency Services Board
ABN 28 598 558 561

456 Albert Street
East Melbourne
Victoria Australia 3002

Telephone: +61 3 9662 2311
Facsimile: +61 3 9665 4522
www.mfb.vic.gov.au

Dear Mr Doyle,

Performance Audit - Emergency Service Response Times

Metropolitan Fire and Emergency Services Board (MFESB) welcomes the report on emergency service response times and appreciates the opportunity to comment.

MFESB is committed to continuously improving service delivery to the community and welcomes the recommendations that support greater transparency of reporting.

MFESB accepts all the recommendations in the report and will collaborate with the other stakeholders to implement these directions as a matter of priority.

Yours sincerely,


Jim Higgins ASM
Chief Executive Officer

RESPONSE provided by the Chief Executive Officer, Country Fire Authority

Patron: The Honourable Alex Chernov AC QC, Governor of Victoria

Office of the CEO
Headquarters
8 Lakeside Drive, Burwood East Vic 3151
Phone: 9262 8605 Fax: 9262 8322



Ref: MW:cp

11 March 2015



Ms Jacquie Stepanoff
Manager Performance Audit
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Ms Stepanoff

EMERGENCY RESPONSE TIMES AUDIT

Please find attached CFA's final response advice to the VAGO Emergency Response Times Audit as per your request.

Yours sincerely



Michael Wootten
Chief Executive Officer

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RESPONSE provided by the Chief Executive Officer, Country Fire Authority – continued



Section	Page	Country Fire Authority (CFA) response
General Statement		<p>Country Fire Authority (CFA) is committed to response time performance standards and the part they play in keeping Victorians safe. Whilst response time targets are significant in protecting life and property, CFA believes a combination of measures is critical in keeping Victorians safe.</p> <p>CFA concedes that current response time performance measures are based on outdated rationale and we are addressing this concern through developing tools which also measure performance outcomes, efficiency and public value. CFA sees measuring both methods will provide greater ability to mitigate public risk.</p> <p>CFA also recognises that fire services are under pressure from increasing demands for services. This change in demand is driven by major trends including:</p> <ul style="list-style-type: none"> • Community: the changing demographics of Victoria (e.g. ageing population, overseas migration) as well as urban growth and rural decline are changing the types of risk in communities. • Collaborative approach: Victorian emergency service organisations are broadening their focus to become more collaborative and unified in their effort. Traditional models of service delivery are challenged by the need to be a more agile and mobile resource. • Severe weather: Climate change means we are responding to more incidents, more often, for longer. The consequences of severe weather events are having greater impact on communities and there is less time between events to recover. <p>These drivers create continued pressure on traditional response activities including response performance. A greater understanding of these pressures on response time performance and outcomes is where CFA is investing its efforts. CFA is committed to a number of work programs which may enhance service delivery performance including service strategy, service delivery model, data improvement and performance framework.</p>
Findings	x	<p>CFA commissioned a review in February 2014 by Monash University to understand data quality and opportunities for improvement. CFA is continuing to work closely with Monash University to establish suitable performance measures and the most appropriate framework for data management, performance reporting and performance improvement. The final reports from Monash University are expected in October 2015.</p> <p>Despite its response time performance remaining stable across the State, CFA with support of Monash University is working to understand the most appropriate set of measures which includes qualified response time, the incidence of emergencies and the effectiveness of the service provided.</p> <p>CFA acknowledges in reporting its response performance there are improvement opportunities in the capture, control and reporting of performance data. CFA is committed to building a performance framework that will enable the organisation to understand performance from target measures, to performance outcomes and to report on improvement. Supporting this work CFA has a number of technology initiatives underway which will complement this work. These include improvement of radio despatch of regional brigades, enhancement of the FIRS Reporting system and a Business and Reporting system.</p> <p>Performance reporting currently includes service delivery performance information for the CFA Board, CFA Management, Regions, Districts and Directorates. CFA will work to enhance reporting to the community, Government and with our Sector partners.</p>

CFA VAGO Emergency Response Times Audit Final 1

RESPONSE provided by the Chief Executive Officer, Country Fire Authority – continued



Section	Page	Country Fire Authority (CFA) response
Recommendations	xiii	<p>Recommendation 8 – CFA accepts this recommendation and will remain committed to its data and performance improvement program with expected completion in 2016.</p> <p>Recommendation 10 – CFA accepts this recommendation. CFA recognises that performance data is valuable in the continual improvement of services to the community of Victoria. CFA will utilise current work programs on data and performance improvement to ensure greater availability of accurate performance statistics and trend information to Government, the community and Sector partners.</p>
Relevant Measures and Targets	9	Comments expressed in Findings above apply also to this Section.
	11	Section 2.2, 2.3 – CFA provides Department of Justice and Regulation (DOJR) data and information on Code 1 emergencies as required within the Budget Paper 3 Framework. CFA reports on and analyses all other Code 1 emergencies through its internal reporting. CFA is continuing to implement service improvement opportunities as a result of performance trends and information.
	21	Section 2.4 – CFA has identified and recommended some improvement actions specifically around consistency of measures, definitions and Budget Paper reporting processes. CFA is working closely with DOJR and Sector partners to understand and define more appropriate outcome based performance measures and improve depth of reporting and review.
Accurate and Reliable Response Time Information	28	<p>3.3.5 – Through its data improvement and performance framework work programs, CFA will ensure the most effective controls are applied consistently across the State. A detailed review of data governance and controls is underway through the data improvement work program.</p> <p>CFA has an established internal audit program within which broader organisational governance is assessed. CFA is in the process of better aligning the internal audit program and response time performance reporting and review.</p>
Understanding Response Time Performance	33	<p>4.4.3 – CFA is building a performance framework that will enable the organisation to understand performance from target measures, outcomes and to report on improvement. CFA is committed to improving data collection, business rules and quality assurance of all performance data.</p> <p>Performance reporting currently includes service delivery performance information for the CFA Board, CFA Executive Management, Regions, Districts and Directorates. CFA's performance improvement work program will ensure performance response times; performance trends and data will continue to inform Management decisions.</p>
	47	<p>4.5.2 – CFA understands the importance of improving the depth of its external performance reporting to Government, the community and Sector partners and is committed to transparent and extensive performance reporting.</p> <p>CFA will adopt the use of additional tools in communicating service delivery performance to external sources.</p>

CFA VAGO Emergency Response Times Audit Final 2

RESPONSE provided by the Chair, Victoria State Emergency Service



File Ref: DG/15/796
Letter Code: CD/15/14484

11 March 2015

Mr John Doyle
Auditor-General
Victorian Auditor General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Doyle

Proposed Performance Audit Report - Emergency Services Response Times

Thank you for inviting the Victoria State Emergency Service Authority to provide a submission and comments in response to the Proposed Performance Audit Report in regards to the Victoria Auditor General's Office (VAGO) Emergency Services Response Times performance audit.

General comments

The Victoria State Emergency Service (VICSES) acknowledges and is generally supportive of the findings and recommendations within the Proposed Performance Audit Report and has assessed that they are practically achievable. VICSES has limited capacity to internally reprioritise existing funds and resources to fully achieve all the objectives as outlined in the proposed action plan.

VICSES appreciates the scope of any audit cannot be completely exhaustive in terms of reviewing all factors contributing to response times. As highlighted with your office during the engagement for this audit, there are inferences and/or references to where VICSES differs from other like agencies. The depth of data and information that may be seen as best practice directly correlates to limitations with agency capability (e.g. systems) and capacity (e.g. resources).

Agencies have different levels of sophistication based on funding and associated resources. 'Practice' has been to ensure that standards and requirements established in legislation and/or through departmental/government determinations have been met.

VICSES would acknowledge that the aim should be for consistency and continuing to improve what is reported to the public, however, VICSES operates within a significantly smaller budget and continues to be limited by current systems and technology to an extent that differs significantly from other like agencies (although many of their systems also have limitations), and is reliant on a volunteer workforce to capture its response data. Arming volunteers with systems and technology that make it easier for volunteers to achieve what is otherwise regarded as an administrative burden is the key moving forward. VICSES has been able to demonstrate through this audit that it is aware of its system limitations and associated accuracies and has sought additional funding to address these, and where this has been provided has been making progress towards improving the situation since 2009.



RESPONSE provided by the Chair, Victoria State Emergency Service – continued

Similarly, in terms of providing further data to the public, VICSES has already committed to and is continuing to progress implementation of the *DataVic Access Policy*, having provided an initial 10 datasets to the Department of Treasury and Finance (DTF) Data Directory in December 2014. Over time further data sets will be assessed against this policy and provided as capacity exists.

Agencies also have different models of service delivery that are influenced by the agencies funding model. Specifically in case of VICSES, one of the most significant factors influencing response times is the location of our volunteer Unit Headquarters relative to where the available volunteers are.

In the vast majority of cases, volunteer Unit Headquarters are funded by and subsequently located by a Local Government Authority (LGA) often where it best fits the LGA service delivery (e.g. collocated with Council depots, or spare land parcels on the outskirts of communities) rather than being best located for timely volunteer response as is the case with the Country Fire Authority (CFA). There is also no mechanism to enforce the standard of facilities required and as such, some facilities do not have building smarts such as swipe card access and automated roller doors and gates to enable a more timely response.

We highlight these items to you as the Auditor-General for consideration in terms of the messages that are communicated with the release of the report and what we see as a need for appropriate references with regards to response time performance in the context of an understood value for money discussion (i.e. with a limited budget, the capacity to advance is often a priority at odds with providing basic service delivery) and with regard to the context in which VICSES operates (i.e. small number of staff, reliant on volunteers, limitations with current systems and technology, etc.). As the proposed report highlights, it is important to acknowledge that our volunteers continue to deliver a quality service within the current response time measures.

Proposed action in relation to each of the recommendations

As noted in the Proposed Performance Audit Report VICSES had already commenced activities that will support addressing some of the recommendations.

VICSES has reviewed each of the actions contained in the Proposed Performance Audit Report, and noting earlier comments about agency capacity and funding, provides the following:

Recommendation	Proposed Action	Proposed completion date
1. That the Department of Health & Human Services and the Department of Justice & Regulation, in consultation with their portfolio emergency service agencies that have response time measures, determine relevant targets for these.	VICSES agrees with the recommendation and welcomes the opportunity to participate and contribute. VICSES would be keen to ensure in determining the measures that resources are committed to ensuring they are research and evidence based.	To be determined in liaison with the Department of Justice & Regulation. Timeframes need to be considerate of agency resource capacity, so may require a year or two if funding is not provided for dedicated resources to enable VICSES to fully contribute to

RESPONSE provided by the Chair, Victoria State Emergency Service – continued

Recommendation	Proposed Action	Proposed completion date
		the review
2. That the Department of Justice & Regulation broaden Budget Paper 3 response time measures to more comprehensively cover responses to emergencies.	SES agrees with the recommendation and welcomes the opportunity to participate and contribute to a more comprehensive suite of measures that best reflect the valuable services that VICSES volunteers provide to their community.	To be determined in liaison with the Department of Justice & Regulation. Timeframes need to be considerate of agency resource capacity, so may require a year or two if funding is not provided for dedicated resources to enable VICSES to fully contribute to the review
3. That the Department of Health & Human Services and Ambulance Victoria focus emergency response time reporting on highest priority cases	Not applicable to VICSES	
4. That the Department of Health & Human Services' and the Department of Justice & Regulation's public reporting of response time measures clearly attribute accountability for each phase of emergency responses, including call-taking time involving the Emergency Services Telecommunications Authority.	VICSES agrees with the recommendation and welcome the opportunity to contribute to have a common standard and approach. VICSES has already commenced a review of its measures, definitions and standards to contribute to this recommendation. VICSES will adjust our internal systems and controls accordingly, starting with the separation of the ESTA call taking times.	To be determined in liaison with the Department of Justice & Regulation. December 2015
5. That the Department of Health & Human Services uses Emergency Services Telecommunications Authority Computer Aided Dispatch data to report ambulance emergency response time performance	Not applicable to VICSES	

RESPONSE provided by the Chair, Victoria State Emergency Service – continued

Recommendation	Proposed Action	Proposed completion date
6. That the Department of Health & Human Services and Department of Justice & Regulation verify that response time data used in their reports on output performance measures is accurate and auditable.	Not applicable to VICSES	
7. That the Department of Justice & Regulation applies a consistent approach to emergency response time measures including data capture, calculation and reporting.	<p>VICSES agrees with the recommendation.</p> <p>VICSES sees its greatest gap in being data capture and has a radio and CAD enhancement project underway that will contribute to improving data capture.</p> <p>Consistent with the sector Long Term Strategic Communications plan, and subject to further funding being made available, VICSES will explore opportunities to collaborate with other ESOs on the standards that need to be developed and technology options that are user friendly to responders and which support timely and accurate data capture.</p>	<p>December 2016</p> <p>December 2017</p>
8. That the Country Fire Authority, Victoria State Emergency Service and Metropolitan Fire and Emergency Services Board improve controls over response time data collection and reporting.	<p>VICSES agrees with the recommendation.</p> <p>VICSES has a number of activities underway that are contributing to improving controls.</p> <p>Subject to funding being available, VICSES will continue to scope and prioritise enhancements to governance, systems, processes and review that are undertaken at local and organisational level.</p> <p>A change request has been lodged with ESTA and our Incident Management System hosting agency to scope incorporating seconds into existing systems.</p> <p>VICSES also has a Data Integrity project and Measures, Definitions and Standards project that will support consistency in reporting.</p> <p>VICSES has released an OIMS Lite promotional video to volunteers on the benefits of using this data capture tool.</p>	<p>December 2015</p> <p>December 2016</p>

RESPONSE provided by the Chair, Victoria State Emergency Service – continued

Recommendation	Proposed Action	Proposed completion date
9. That Victoria Police assess and where practical address limitations to available data and trial the use of response times for internal performance measurement.	Not applicable to VICSES	
10. That Ambulance Victoria, Country Fire Authority, Metropolitan Fire and Emergency Services Board and Victoria State Emergency Service improve the transparency of public reporting on response times by including regional performance, times, trends and analysis of the factors affecting performance.	VICSES supports this recommendation. VICSES has commenced reviewing its reporting suite and will scope and prioritise improvements to reporting made available to the public over the next two years.	March 2017

I am confident that changes able to be implemented will result in improved response times and the transparency of how these are reported to the public.

Thank you once again for providing the opportunity for the Victoria State Emergency Service Authority to provide feedback and comment on the Proposed Performance Audit Report.

Should you require any further information or data, please contact Mr John Casey, Director Corporate Services on (03) 9256 9005 or Tim Wiebusch, Deputy Chief Officer Operations on (03) 9256 9101.

Yours sincerely



Peter Akers
Chair
Victoria State Emergency Service Authority

CC: Stephen Griffin – Chief Executive Officer
 John Casey – Director Corporate Services
 Trevor White – Chief Officer Operations
 Tim Wiebusch – Deputy Chief Officer Operations
 Leanne Simpson – Manager Operational Performance

RESPONSE provided by the Acting Chief Commissioner, Victoria Police



VICTORIA POLICE

Our Ref: FF-087946



Chief Commissioner's Office

Victoria Police Centre
637 Flinders Street
Docklands 3008
Victoria Australia
Telephone (61 3) 9247 6890
Facsimile (61 3) 9247 6869

PO Box 913
Melbourne 3001
Victoria Australia

Mr John Doyle
Auditor General
Victorian Auditor-General's Office
Level 23, 35 Collins St
Melbourne, 3000

Dear Mr Doyle,

VAGO Performance Audit Proposed Report – Emergency Services Response Times

Thank you for your letter of 23 February 2015 enclosing the proposed report on Emergency Services Response Times and the invitation to provide a response.

Victoria Police recognise that whilst the other emergency services have a time critical response component as a fundamental part of their service delivery, initial response time may not always be the critical measure of success for police, as the arrival of police prematurely may actually make a given situation worse.

Victoria Police manages emergency responses with an active supervision model that is applied on a State-wide basis in respect to the individual circumstances of each call for assistance. This model takes into account all aspects of the police response, such as risk to the community, risk to the attending police, impacts of urgent duty driving, the need to preserve evidence, the investigation, delivering the best outcome possible and the timing of the police response where relevant.

I concur that there is an opportunity to further enhance Victoria Police's strategic management by understanding and analysing data associated with response times, generally to identify trends within the organisation, rather than meeting defined external benchmarks potentially impacting safety and outcomes. Victoria Police accepts in principle *Recommendation 9* in the proposed report that is specific to Victoria Police. Victoria Police commits to work with the Emergency Services Telecommunications Authority over the next 12 months to explore data quality for response times to define and implement appropriate and robust classification of calls for police assistance, especially Code 1 calls. In addition Victoria Police will examine internal processes for opportunities to address response time data quality and collection. Please refer to *Attachment A* for our detailed response in relation to the recommendation.

RESPONSE provided by the Acting Chief Commissioner, Victoria Police – continued

I thank you and your team on producing a quality audit report and for effective consultation to ensure the Victoria Police service model was represented accurately. I look forward to engaging further with your office as the actions outlined in our response are progressed.

Yours sincerely,



Tim Cartwright APM
Acting Chief Commissioner
6/3/15

Attachment A

<i>Recommendation 9</i>	<i>Victoria Police response and proposed actions</i>
<i>'Victoria Police assess and where practical address limitations to available data and trial use of response times for internal performance measurement.'</i>	Victoria Police accepts the recommendation in principle and commits in the following 12 months to explore internal processes for opportunities to address response time data quality and collection, this will require undertaking substantial work with the Emergency Services Telecommunications Authority (ESTA) to define and implement appropriate and robust classification of calls for police assistance, especially Code 1 calls. Based on the results and subject to availability of funding and resources, we will consider trial use of response time data for internal performance measurement at local levels.

Auditor-General's reports

Reports tabled during 2014–15

Report title	Date tabled
Technical and Further Education Institutes: Results of the 2013 Audits (2014–15:1)	August 2014
Coordinating Public Transport (2014–15:2)	August 2014
Managing the Environmental Impacts of Transport (2014–15:3)	August 2014
Access to Legal Aid (2014–15:4)	August 2014
Managing Landfills (2014–15:5)	September 2014
Management and Oversight of the Caulfield Racecourse Reserve (2014–15:6)	September 2014
Effectiveness of Catchment Management Authorities (2014–15:7)	September 2014
Heatwave Management: Reducing the Risk to Public Health (2014–15:8)	October 2014
Emergency Response ICT Systems (2014–15:9)	October 2014
Public Sector Performance Measurement and Reporting (2014–15:10)	October 2014
Mental Health Strategies for the Justice System (2014–15:11)	October 2014
Information and Communications Technology Controls Report 2013–14 (2014–15:12)	October 2014
Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2013–14 (2014–15:13)	October 2014
Additional School Costs for Families (2014–15:14)	February 2015
Responses to 2012–13 Performance Audit Recommendations (2014–15:15)	February 2015
Water Entities: Results of the 2013–14 Audits (2014–15:16)	February 2015
Portfolio Departments and Associated Entities: Results of the 2013–14 Audits (2014–15:17)	February 2015
Public Hospitals: Results of the 2013–14 Audits (2014–15:18)	February 2015
Efficiency and Effectiveness of Hospital Services: High-value Equipment (2014–15:19)	February 2015
Effectiveness of Support for Local Government (2014–15:20)	February 2015
Local Government: Results of the 2013–14 Audits (2014–15:21)	February 2015
Managing Regulator Performance (2014–15:22)	March 2015
Education Transitions (2014–15:23)	March 2015

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Victorian Auditor-General's Office
Level 24, 35 Collins Street
Melbourne Vic. 3000
AUSTRALIA

Phone: +61 3 8601 7000
Fax: +61 3 8601 7010
Email: comments@audit.vic.gov.au
