

# Western Australian Auditor General's Report



## Delivering Western Australia's Ambulance Services – Follow-up Audit



Report 3: 2019-20

31 July 2019

Office of the Auditor General  
Western Australia

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***The Office of the Auditor General acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders both past and present.***

WESTERN AUSTRALIAN AUDITOR GENERAL'S REPORT

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**Delivering  
Western Australia's  
Ambulance Services –  
Follow-up Audit**

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Report 3  
July 2019



**THE PRESIDENT  
LEGISLATIVE COUNCIL**

**THE SPEAKER  
LEGISLATIVE ASSEMBLY**

**DELIVERING WESTERN AUSTRALIA'S AMBULANCE SERVICES – FOLLOW-UP AUDIT**

This report has been prepared for submission to Parliament under the provisions of section 25 of the *Auditor General Act 2006*.

Performance audits are an integral part of my Office's overall program of audit and assurance for Parliament. They seek to provide Parliament and the people of WA with assessments of the effectiveness and efficiency of public sector programs and activities, and identify opportunities for improved performance.

This follow-up audit assessed if the Department of Health and St John Ambulance Western Australia have effectively implemented the recommendations from our 2013 audit to improve service management and delivery.

I wish to acknowledge the entities' staff for their cooperation with this report

A handwritten signature in black ink, appearing to read 'C Spencer'.

CAROLINE SPENCER  
AUDITOR GENERAL  
31 July 2019

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## Auditor General's overview

This report contains the findings from my Office's follow-up performance audit of the delivery of ambulance services.

The audit shows mixed results on the implementation of the Office's 2013 recommendations. Overall, the WA ambulance service is operating more efficiently and consistently meeting its highest priority emergency response targets. Many of our previous findings and recommendations have been addressed, strengthening clinical governance and improving support for country volunteers.



In other areas, however, there has been little progress. Specifically, in putting in place a funding model that links standards, performance and risk to cost, and a contract that creates direct accountability for ambulance performance, underpinned by strong data sharing and analysis. This continues to hamper the Department of Health and St John Ambulance WA in clearly demonstrating that the service offers best value for money to government and best possible clinical outcomes for patients.

The nature of the relationship between the Department and St John is in many ways unique, based on almost a century of history and deep roots in the Western Australian community. Services are delivered by highly trained and dedicated professionals, including a large volunteer workforce in country areas.

I acknowledge the work over the last 5 years by the Department and St John to continually improve the service to meet the evolving needs of Western Australians. Ongoing commitment and perseverance will be essential to address ambulance ramping at hospitals. The causes of ramping are not simple, nor are potential solutions. The entities need a shared understanding of both the nature of the problem and its impact, and what each might do to improve their parts of a patient's journey from the call for an ambulance to treatment in hospital.

# Executive summary

## Introduction

Our objective for this follow-up audit was to assess if the Department of Health (DoH) and St John Ambulance Western Australia (SJA) have effectively implemented the recommendations from our 2013 audit to improve ambulance service management and delivery.

We also looked closely at ambulance ramping which is the practice of leaving ambulances parked outside hospitals while crew wait with patients for admission to a hospital emergency department (ED), to assess its impact on patients and other parts of the health system.

## Background

The DoH contracts SJA to provide ambulance services throughout Western Australia (WA). SJA has operated ambulance services in WA since 1922. St John Ambulance (NT) provides ambulance services in the Northern Territory, while in other Australian jurisdictions those services are provided by government entities and regulated by legislation.

The DoH has 2 ambulance service contracts with SJA, one for emergency ambulance services, and one for inter-hospital patient transfers (IHPT). Emergency ambulance services cost the DoH almost \$100 million a year under a fixed price contract, and SJA also recovers ambulance fees from patients. The DoH also pays half the ambulance fees of patients over 65 years old, while SJA waives fees for pension card holders. Last year the DoH contributed \$45.7 million under this arrangement.

IHPT are provided exclusively by SJA in country WA but in the metropolitan area a panel of contractors, including SJA, provides it. The DoH estimates that the annual cost of IHPT was \$19.4 million in 2018-19.

SJA answered 592,079 calls to its State Operations Centre in 2017-18 and attended 335,609 cases: 249,804 cases in the metropolitan area and 67,746 in country areas. The balance were made up of IHPT, neonatal emergency transport and rescue helicopter cases. IHPTs and airport transfers totalled 33,840.

SJA crews ambulances with paid career paramedics in the greater metropolitan area and 15 country towns, but relies on volunteers supported by community paramedics in many country areas. Community paramedics are paid paramedics based in 27 country locations to support, advise and help train volunteers in surrounding sub-centres and occasionally attend major incidents and complex cases. While SJA is contracted for services throughout the state, the WA Country Health Service (WACHS) operates its own ambulance service in Derby, Fitzroy Crossing and Halls Creek.

In 2009 the Government held an inquiry into the ambulance service which endorsed many aspects of the service and SJA's arrangements with the DoH but made recommendations for improvement. In 2013, we followed up this inquiry with an audit report titled *Delivering Western Australia's Ambulance Services*.

The 2013 audit found:

- SJA's ambulance services had improved overall since the 2009 inquiry, supported by increased funding from the DoH, and despite increased demand across the state and ramping in the metropolitan area
- efforts to address ramping had so far been unsuccessful

- the DoH's contract management had been effective but inadequacies in the contract between the DoH and SJA needed to be addressed.

In 2013 we recommended that the DoH should improve effectiveness and accountability when contracting for ambulance services by focusing on standards, performance and allocation of risk in a new funding model. We also recommended that the DoH should engage with SJA to find long-term solutions to ambulance ramping. Ramping is the practice of ambulance crews waiting with their patients until there is capacity within the ED to accept the care of the patient and the ambulance is free to respond to another call. We further recommended that SJA should focus on performance targets, clinical governance and improving services in regional centres. The full list of 2013 recommendations and current implementation status is at Appendix 1.

## Audit conclusion

The ambulance service is more efficient than it was when we reported on it in 2013. It consistently meets emergency response time targets, and clinical governance and support for country volunteers has improved.

SJA has implemented all recommendations from our 2013 audit, with further work required for 1 recommendation related to engagement with regional services. The DoH has worked with SJA since our last audit to improve the contract but has made limited progress towards a new funding model, including a contract focused on standards, performance and risk, that links funding to performance.

Data collection is extensive, covering measures of SJA's activity, clinical compliance and incident reporting. The DoH and SJA share patient records for clinical handover. Data collected, however, is not analysed to assess clinical outcomes and how the ambulance service could change to improve them. This means the DoH is not able to assess the impact of ambulance performance on patient outcomes or assess if the ambulance contract makes best possible use of public funds.

SJA often misses targets for less urgent cases during busy periods and the level of service in country areas remains uneven. Resources for country areas have improved, while a small number struggle to maintain volunteer crews. SJA's response time targets cover around 90% of the state's population. This leaves around 270,000 people in country WA not covered by response targets. Services for these people depend on the best endeavours of volunteers and are not always timely. The DoH and WACHS need to determine what levels of service they require and work with SJA on the cost of delivering them, and to develop better indicators of country ambulance performance.

Ramping has persisted with a significant increase since mid-2017. To date, it has typically not affected emergency cases as these are given priority, however, response times for lower priority cases have been adversely impacted. The DoH and SJA are affected differently and concerned with different aspects of the ramping issue. SJA is concerned about its ambulances being unavailable to respond to calls while the DoH has focused more on managing patient flow inside EDs. Initiatives to reduce ramping, such as diverting patients from hospital EDs, have met with little success. Eliminating ramping completely requires system wide solutions.



## Key findings

### **WA's ambulance service is more efficient, but the DoH has made limited progress improving the contract and measuring performance**

#### **SJA's ambulance service has expanded since 2013 and become more efficient in order to meet rapidly increasing demand**

Growth in the number of cases attended by SJA ambulances has exceeded the increase in resources deployed by SJA. SJA has managed this by becoming more efficient. It has continued to achieve targets for the time it takes to respond to emergencies despite average cases per ambulance increasing by 27% from 552 in 2012-13 to 699 in 2017-18. However, SJA has not always been able to maintain response targets for lower priority cases.

#### **The DoH has made limited progress in implementing a new funding model and a contract focused on standards, performance and risk**

Our 2013 audit recommended developing a new funding model focusing on standards, performance and risk. The current contract, which was extended in 2018 to 2020, made no substantial changes to the funding model. It does not connect funding with performance or demand for services, or provide a clear view of the cost of services such as IHPT, or facilitate in-depth analysis of complex matters such as the impact of ramping on response times and patient outcomes. While SJA is motivated to perform well by its mission and culture, weaknesses in the contract mean the DoH does not have a clear view of how its funding is being used and if it's getting value for money.

#### **The contract sets target times for ambulances reaching patients but they don't apply everywhere and it is unclear how meaningful they are for less urgent cases**

The contract sets target times for ambulances reaching patients in major country towns and the metropolitan area where around 90% of WA residents live and work. They do not apply in country areas more than 10 kilometres from the town centres of the 15 country towns where career paramedics are based. Outside this range, ambulance crews are required to use their best endeavours but their performance is not assessed against targets.

The time it takes for ambulances to reach patients is important for emergency cases but there is little clinical evidence that these response time targets are the most useful measure of paramedic or volunteer performance for ambulance activity in less serious cases. However, there is no widely accepted alternative. The DoH and WACHS need to determine what levels of service they require and work with SJA on the cost of delivering them. They also need to develop better indicators of country ambulance performance. The DoH informed us that it is preparing a statewide policy on ambulance services that will address these issues.

#### **SJA has improved its clinical quality controls but the contract gives the DoH no visibility of cases that do not meet guidelines or ways to assess their significance**

SJA has substantially improved its internal clinical quality controls and in 2017-18 achieved 95% against its target of 90% compliance with the clinical guidelines agreed with the DoH. However, how individual cases comply with the guidelines is not independently audited and the contract does not give the DoH any visibility of the 5% of cases that did not comply. This contrasts with other jurisdictions where ambulance services are part of the government

health system and a single authority holds the data. WA patients can complain to the Health and Disability Services Complaints Office and the DoH has access to detailed clinical data for critical incidents. But the lack of broader access makes it harder for the DoH to assess the continuous improvement in patient care over time that is required by the contract.

### **SJA and the DoH collect patient data but neither has access to data covering the whole patient journey that they could use to improve services**

SJA and the DoH keep patient records and patient data is included in the clinical handover from ambulance to ED. However, SJA and the DoH do not combine their data to analyse all aspects of the patient journey from the call for an ambulance to when they leave hospital. This limits the ability of both the DoH and SJA to use patient-centred data to improve services.

### **SJA has improved clinical governance and support for volunteers but coordinating services in country areas remains a challenge**

#### **SJA and WACHS report difficulties coordinating services despite SJA's creation of regional offices to respond to local needs**

SJA's regionalisation project established offices in Albany, Bunbury, Northam, Kalgoorlie, Geraldton and Broome to support sub-centres and be more responsive to local needs. However, SJA and other local health services do not always coordinate effectively in country areas, and neither SJA nor WACHS have developed quantitative performance targets for community paramedics.

The coordination of IHPT in country areas is a concern to both WACHS and SJA. Timely availability of patient transport crews cannot always be guaranteed to coincide with the requests from country hospitals whose capacity to receive patients also cannot be guaranteed. Conversely, country hospitals may not always take account of the limitations of the country ambulance system when requesting IHPT services.

### **SJA has developed criteria with the DoH and WACHS for allocating career and community paramedics to country areas and employed more of them to support volunteers**

SJA uses a set of objective criteria to allocate career and paid community paramedics to volunteer ambulance stations. These include the number of cases in the previous year, volunteer capacity, geography and the proximity to a neighbouring community paramedic.

There are now 5 more community paramedics than there were in 2013-14, bringing the total to 27. Since 2013-14, 1 community paramedic in Kununurra and 2 in Karratha have been replaced by full-time career paramedics, reducing the total by 3. However, SJA has appointed 8 more, 1 each to Onslow, Paraburdoo, Denmark, Wundowie, Ravensthorpe, Coolgardie, Corrigin and Dalwallinu. This has increased the level of support and the quality of training provided to volunteers in the country.

### **SJA has strengthened the way it maintains standards of patient care in all its services, metropolitan and country**

SJA more effectively maintains standards of patient care in all its services, metropolitan and country, than we found in 2013. In addition to increasing the number of community paramedics to support country volunteers and monitor their performance, it has increased clinical audits in country areas and appointed 3 clinical quality managers to focus on clinical standards and carry out the audits. This means WA residents, including those in country towns, can have greater confidence in the quality of their ambulance services.

## **Ambulance ramping at hospitals has increased and there is no agreed plan to reduce it**

### **Ambulance ramping has increased**

Ambulance ramping has increased in recent years despite attempts by the DoH and SJA to reduce it. To date, ramping has not typically affected emergency cases because these are given priority, but it has reduced average response times for lower priority cases. SJA fell short of response time targets for lower priority cases more often and by a greater margin last year whenever total ramped time at all metropolitan hospitals exceeded 24 hours in a day.

### **There is little evidence of its impact on patients' health outcomes or system costs**

Despite the increase in ramping of lower priority patients and the potential for discomfort this may cause, there is no available research showing these patients suffer long-term health impacts as a result. There is also little available evidence that ramping imposes material costs on the health system.

### **The DoH and SJA do not have an agreed plan or strategy to reduce ramping**

The DoH and SJA have not found a way to reduce ramping. This is, at least in part, because the DoH and SJA are affected differently and are concerned with different aspects of the issue. Understanding the trigger point at which ramping will further affect ambulance response times and patient outcomes is important to help inform future capacity investment decisions, such as whether or when more ambulances and crews are required. This has not yet been done by the DoH and SJA. However, rather than focus on ramping as an isolated issue, it may be better to address it as a problem of managing patient flow into and through the hospital system. For example, hospitals we spoke to told us that delays in transport for mental health patients often led to them occupying ED beds for long periods.

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## Recommendations

The DoH (in consultation with SJA) should:

1. develop ways to better coordinate ambulance and hospital services in country areas, especially for IHPT, and reflect these in the contract.

### The DoH response

- The DoH supports the intent of this recommendation and will need to work closely with WACHS to achieve implementation.
- The implementation timeframe will be subject to finalisation of the Western Australian Government's position on The Country Ambulance Strategy (Driving Equity for Country Western Australia), and to timely provision of key data by SJA, including service metrics and financial data.

### Implementation timeframe: by December 2019

2. agree links between funding and performance in any future contract from July 2020 that makes SJA or other potential service provider more accountable for its performance and gives the DoH better information about how its funding is used.

### The DoH response

- The DoH supports the recommendation.

### Implementation timeframe: by June 2020

3. review performance targets in any future contract with a view to increasing them where actual performance indicates this is achievable and developing new ones to clarify or replace 'best endeavours' provisions in the current contract.

### The DoH response

- The DoH supports this recommendation, however notes that the 'best endeavours' provisions relate to country ambulance services. The DoH will need to work closely with WACHS in relation to the implementation of this recommendation having regard to finalisation of the Western Australian Government's position on The Country Ambulance Strategy (Driving Equity for Country Western Australia).

### Implementation timeframe: by June 2020

4. develop ways to share and analyse information covering the patient journey in order to improve services, having regard to data security, integrity and privacy, and reflect this in the contract.

### The DoH response

- The DoH supports this recommendation.

### Implementation timeframe: by June 2020

## Response from St John Ambulance Western Australia

St John Ambulance Western Australia (St John) welcomes the findings of the 2019 Follow-up Audit of the Delivering Western Australia's Ambulance Services 2013 audit.

In particular, St John is pleased to have completed all of its recommendations identified in the 2013 audit. We are proud that all recommendations are recognised as being implemented and only one is classed as more needed. Recognition of our motivation to perform well with due acknowledgement of our purpose and culture reflects well on our employees and volunteers without whom the service could not operate in the way it does.

Of the recommendations made in 2019, St John looks forward to the opportunity to work collaboratively with the DoH in order for them to deliver on the recommendations within the implementation timeframe suggested, and steps have already been taken in recent months to address these areas.

Of particular interest to St John were the conclusions on ramping, contract structure and data.

- Though ramping may not be an overall cost to the broader health system, the brunt is born by the ambulance service. In the absence of ramping being reduced its cost has to be returned to the ambulance service in order to maintain a sufficient capacity to respond to the community.
- We acknowledge it is not evidenced that, for the patient being ramped, waiting on the ramp causes adverse patient outcomes. However, a missed response to a patient in the community could well impact on that patient's outcome.
- St John is keen to work with the DoH to develop a contract structure that links funding and performance, as well as recognising increases in demand that differ from projected index linked increases. St John is of the opinion that this can be achieved within a fit for purpose long term contract that takes into account the interests of all parties across WA Health.
- St John believes that there is a significant opportunity to improve patient outcomes through the mutual sharing of data. An example of this is, through collaboration with Curtin University, St John having access to [anonymised] Out of Hospital Cardiac Arrest (OHCA) outcomes. This has enabled St John to double the number OHCA survivors over the last two years by using data to gain a better understanding of the many steps in the chain of survival and improving each one wherever possible. This is an exciting opportunity for both St John and WA Health.

## Response from the Department of Health

The Department of Health (DoH) notes the OAG's Summary of Findings and supports the recommendations, subject to review of implementation timeframes and finalisation of the Western Australian Government's position on The Country Ambulance Strategy (Driving Equity for Country Western Australia).

The nature of the procurement relationship between St John Ambulance (SJA) and the Government of Western Australia has evolved over time with DoH moving toward a modern commercial model with strengthened contract specifications and more robust contract management. DoH has end to end responsibility for the safety and quality of the patient journey, while SJA (and other contracted providers) deliver the patient transport

component of that journey. The relationship with SJA continues to evolve with both parties demonstrating increasing maturity.

DoH is committed to the continuous improvement of Western Australian ambulance services and is investing significant resources in initiatives aimed to increase the effectiveness and accountability of these services including:

- Developing an inaugural state-wide ambulance policy, in consultation with stakeholders, to articulate the expectations of the WA health system in achieving high quality, high performing, integrated and sustainable services that meet the needs of all Western Australians, and inform procurement and contract specifications accordingly
- Analysing pricing and costing structures
- Introducing expanded mental health patient transport services to address the situation where patients experiencing mental health issues occupy hospital emergency department beds while waiting for more appropriate definitive care
- Effecting contract variation to achieve greater value for money and increase non-emergency transport options (e.g. for transport of medically necessary planned transports for people over 65 years of age)
- Engaging with ambulance consumers and their carers about their lived experience to inform future contract development, focusing in particular on Aboriginal consumers and people experiencing mental health issues
- Implementing interventions to address ED congestion, based on a whole of system patient flow analysis.

## Response from the WA Country Health Service

WACHS has progressed the development of the Country Ambulance Strategy which was endorsed by the WACHS Board in October 2018. The priority recommendation within the Strategy recommends the establishment of a state-wide policy on ambulance services as a minimum, to consider enacting legislation in line with other states and territories. Western Australia remains the only Australian jurisdiction where there is no policy or legislation describing ambulance services as an essential emergency service.

Consistent with previous review findings, former OAG recommendations and the recommendations of the Country Ambulance Strategy, WACHS recommends that the OAG consider refining the audit recommendations and reinstate the previous [draft] recommendation to implement legislation or policy. This will define the ambulance service and the standards required to reflect the community's expectation of the Western Australian ambulance service.

WACHS supports the recommendation to develop ways to better coordinate ambulance and hospital services in country areas, especially for IHPT, and reflect these in the contract. This issue of better coordination and reflection of this in the contract is addressed in a number of the Country Ambulance Strategy recommendations.

In October 2018, the WACHS Board endorsed the development of the WACHS Command Centre. This development is derived from the natural expansion of the current Emergency Telehealth Service (ETS) to include services such as Inpatient Telehealth and Mental Health ETS. The WACHS Command Centre is also planned to provide more transparent patient transport coordination supported by innovative technology. The WACHS Command Centre will provide a 24/7 coordinated clinical support service for all patient transport



requirements for WACHS facilities and clinicians through a single point of entry. WACHS will be working collaboratively with SJA and Royal Flying Doctor Service to improve patient coordination across the State.

WACHS supports the recommendation to agree links between funding and performance in the future contract from July 2020 that makes SJA or other potential service provider more accountable for its performance and gives WA Health better information about how its funding is used. WA Country Health Service notes the need for much closer contract management and communications between individual health service providers (those who use the service), Department of Health (who manage the contract) and service providers. Through the recommendations in the Country Ambulance Strategy WACHS is specifically seeking to assume responsibility of contract management for country ambulance services, similar to its role contract managing RFDS services.

Future contracts should include performance measures that can be linked to funding and patient outcome, rather than simple KPIs relating only to response time, with regular contract meetings between those who use the service, those who contract the service and those who provide the service.

WACHS supports the recommendation to review performance targets in any future contract with a view to increasing them where actual performance indicates this is achievable and developing new ones to clarify or replace 'best endeavours' provisions. The current 'best endeavours' and non-evidenced-based response time indicators do not give an adequate picture of effectiveness of ambulance services nor value for money.

WACHS intends to use service demand information to assist with future definition and agreement on the level of ambulance services required in country towns and have this included in the contract.

WACHS is of the view that country ambulance performance measures need to include service availability and clinical indicators relating to evidence-based practice. The intention is to ensure these are supportive of volunteerism while also holding the service provider accountable. This is a delicate balance and can only be done with policy and contract support.

WACHS supports the recommendation to develop ways to share and analyse information covering the patient journey in order to improve services and to reflect this in the contract. WACHS highlights the need for improved data integration, communications and collaborating with all providers of clinical care across the entire patient journey. There needs to be a mandated and shared clinical governance framework within the policy and contract. A shared technology platform (with all health and service providers) will allow the secure transfer of information and support improvements to patient care as well as potentially increasing health services and efficiencies by tracking patient movement.

## Audit focus and scope

This follow-up audit assessed if the DoH and SJA have effectively implemented the recommendations from our 2013 audit *Delivering Western Australia's Ambulance Services*, and have improved service management and delivery.

We also looked closely at ambulance delays at EDs resulting in ramping to assess its impact on patients and other parts of the health system.

In conducting the audit, we:

- reviewed policies, procedures and key documents
- interviewed key staff in the DoH, WACHS and SJA
- visited 5 metropolitan hospitals, visited or spoke to 9 country hospitals, visited the SJA State Operations Centre and visited 5 SJA ambulance centres/sub-centres
- considered relevant academic research.

In addition, we analysed the DoH and SJA data from July 2012 to April 2019.

We did not analyse the economic impact and cost of ramping or of the contractual arrangements for IHPT in country and metropolitan areas.

This was a performance audit, conducted under section 18 of the *Auditor General Act 2006*, in accordance with the Australian Standard on Assurance Engagements ASAE 3500 *Performance Engagements*. This audit utilised 'follow-the-dollar powers' under section 18 of the *Auditor General Act 2006*. We complied with the independence and other ethical requirements related to assurance engagements. Performance audits focus primarily on the effective management and operations of entity programs and activities. The approximate cost of undertaking the audit and reporting was \$327,700.



## Audit findings

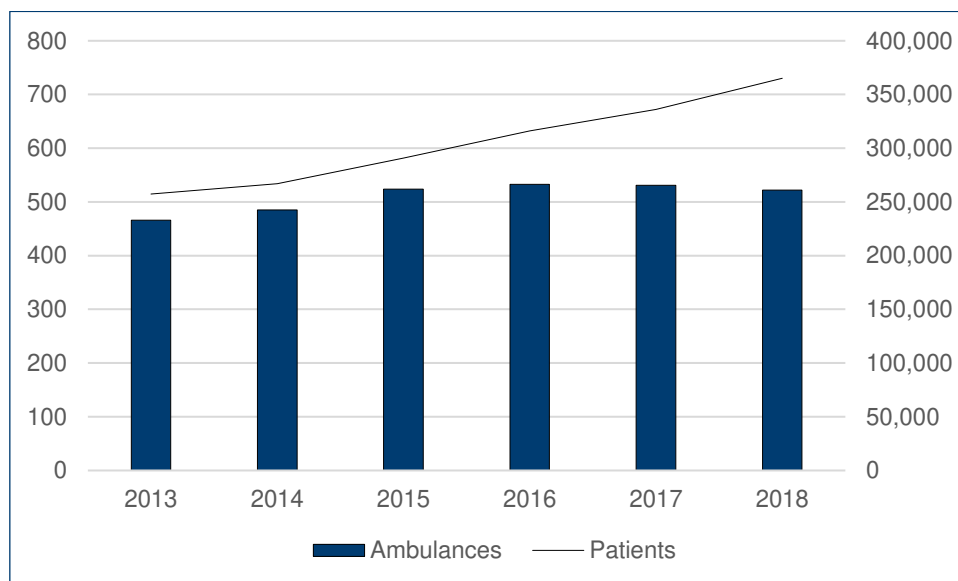
### WA's ambulance service is more efficient, but the DoH has made limited progress improving the contract and measuring performance

#### SJA's ambulance service has expanded since 2013 and become more efficient in order to meet rapidly increasing demand

Growth in the number of cases attended by SJA ambulances has exceeded the increase in resources deployed by SJA. SJA has managed this by becoming more efficient. It has continued to achieve targets for the time it takes to respond to emergencies despite the average number of cases per ambulance increasing by 27% from 552 in 2012-13 to 699 in 2017-18. However, SJA has not always been able to maintain response targets for lower priority cases.

According to its annual report, at 30 June 2018, SJA had 1,578 paid full time equivalent staff and 8,489 volunteers. In 2017-18, 522 ambulances across 30 metropolitan and 114 country sub-centres responded to 335,609 cases. This is an increase of 56 ambulances and 292 paid staff since 2013 to respond to an extra 83,442 cases. Around a third of cases in metropolitan areas and half those in country areas are emergencies assigned the highest priority.

This is a 12% increase in ambulance numbers and 23% increase in paid staff to handle a 33% increase in cases. Since 2014-15, case numbers have continued to rise while ambulance numbers have not to the same degree (Figure 1).



Source: OAG from SJA data

**Figure 1: Number of ambulance in WA (left axis) compared with number of cases (right axis), 2012-13 to 2017-18**

The Productivity Commission reported on 30 January 2019 that SJA's ambulance service is the lowest cost per person in Australia. The report defines ambulance cost per person as total ambulance service organisation expenditure per person in the population. The Productivity Commission reports both the total cost of ambulance services and the cost to government of funding them, because patient/health fund revenue from transport fees is

significant for a number of jurisdictions. The report warns, however, that the data should be interpreted with caution. Specifically, it notes that differences in geographic size, terrain, climate, and population dispersal may affect costs of infrastructure and numbers of service delivery locations per person.

The relatively low cost per person in part reflects use of volunteers by country ambulance services. WACHS and the DoH have highlighted the difficulty of comparing costs with other services given their geographical and organisational differences. WACHS has also expressed concern about the adequacy of country services given their reliance on volunteers and resulting lack of guarantees about service levels in some country areas. WACHS has sought to address this concern in its September 2018 Country Ambulance Strategy public consultation document and is currently considering feedback.



Source: OAG

**Figure 2: SJA WA is contracted by the DoH to provide ambulances for service delivery throughout WA**

### **The DoH has made limited progress in implementing a new funding model and a contract focused on standards, performance and risk**

The DoH and SJA agreed on a new contract for 2015-18 that improved on the contract we reviewed in 2013. This contract improved on the previous one by including standard terms and conditions used in WA public sector procurement but did not address some of our key concerns. Our 2013 audit recommended developing a new funding model focusing on standards, performance and risk but changes to the funding model in the new contract were minor. SJA is motivated to perform well by its mission and culture but weaknesses in the contract cause problems for the DoH, which does not have a clear view of how its funding is being used and if it is getting value for money. The current contract was extended in 2018 to 2020 while a new contract is negotiated.

Funding under the contract has increased annually by a total of \$7.6 million since 2012-13 based on projected population increases and indexation, reaching \$100.8 million this year. The funding will increase by 3.65% next year based on a projected population increase of 2.12% and indexation of 1.53%. The increase will happen without any link to performance or transparency of how SJA applies the funds or cost-effectively meets demand for services. Without links between funding, demand for services and performance, there are no financial incentives in the contract for SJA to improve performance and no consequences for missing targets. Nor does the contract provide more funds to cope with the impact of ramping or

increases in demand that may occur outside the forecast increases due to population growth. This means that SJA does not carry any risk to its funding if the ambulance service misses its targets.

For 2017-18, contract funding was \$97.7 million, making up one-third of revenue from ambulance services. SJA's revenue from fees paid by ambulance patients and health funds was \$116.0 million that year. Revenue from IHPT was \$23.6 million, with \$12.0 million coming from country IHPT. Revenues from country IHPT, which is an SJA monopoly, helps to pay for country ambulance services. The DoH also subsidised transporting patients over 65 years old in the amount of \$45.7 million.

While the contract includes key performance indicators (KPIs) and targets, they are separate from the rest of the contract and do not cover all services and service locations. KPIs focus on how quickly ambulances respond to a call, rather than outcomes such as the wellbeing of patients. Consequently, they measure activity but not its value. In addition, the contract does not require, and SJA has not adopted, financial reporting that would provide more transparency and allow assessment of value for money.

SJA uses statistical analysis of past performance to estimate how many ambulances it needs to maintain response times, which depend on the number of ambulances free to respond during busy periods and levels of surplus capacity in the system. The number of ambulances available to respond is being reduced by ramping, but SJA has been able to manage this while meeting its emergency response time targets.

The DoH has not independently assessed what resources SJA would need for a given level of service and what that would cost. Without this kind of insight into the funding model, the DoH cannot effectively assess if it is getting value for money and may not be alert to any reductions in ambulance reserve capacity that may be occurring over time but are not yet visible in response times.

Another concern for the DoH and WACHS is the funding model for IHPT. The contract gives SJA an IHPT monopoly in country WA and charges country hospitals for the service. It uses its income from this activity to subsidise its emergency response services in country areas. The extent of this cross-subsidy is not visible to the DoH or WACHS, making it hard for them to assess if it is an efficient way to fund country ambulance services.

### **The contract sets target times for ambulances reaching patients but they don't apply everywhere and it is unclear how meaningful they are for less urgent cases**

The time it takes for ambulances to reach patients is important for emergency cases but there is little clinical evidence to support the response time targets for less serious cases. Targets do not apply in country areas more than 10 kilometres from the town centres of the 15 country towns where career paramedics are based. Analysis of ambulance data together with patient data from hospitals could provide evidence for response time targets but this has not been done. In the absence of clinical evidence, response times may not be the most useful measure of paramedic or volunteer performance for ambulance activity that is not emergency response. However, there is no widely accepted alternative.

Ambulance response time is the main performance measure for ambulance services in Australia and internationally and the contract sets targets for this measure for SJA. The targets apply throughout the metropolitan service area and in country WA locations within 10 kilometres of the 15 major country towns where the ambulance sub-centre staff includes at least 1 career, that is paid, paramedic.

Outside these areas, ambulance crews are required to use their best endeavours but their performance is not assessed against targets. The DoH and WACHS need to determine what

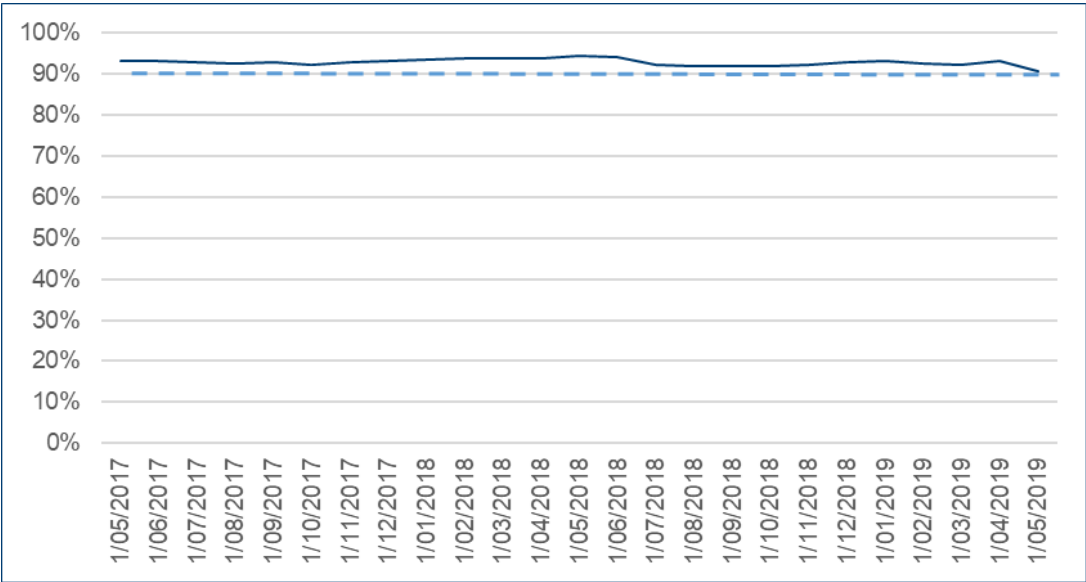
levels of service they require in country WA and work with SJA on the cost of delivering them. They also need to develop better indicators of country ambulance performance. The DoH informed us that it is preparing a state-wide policy on ambulance services to address these issues.

Country areas with performance targets, together with the metropolitan area, cover around 90% of the WA population. This leaves around 270,000 people not covered by response time targets. SJA data shows that responses to this population make up 6-7% of country ambulance responses. SJA uses ‘best endeavours’ to get to these people but response times can vary widely. Available data does not show if patient outcomes are worse overall for this group of people as might be expected because of longer response times caused by greater distances.

Response time is important for emergency cases such as out-of-hospital cardiac arrest where research shows it is critical for patient outcomes. However, there is little evidence that response time targets are a meaningful measure of ambulance performance in less serious cases. Our previous audit concluded such targets were arbitrary.

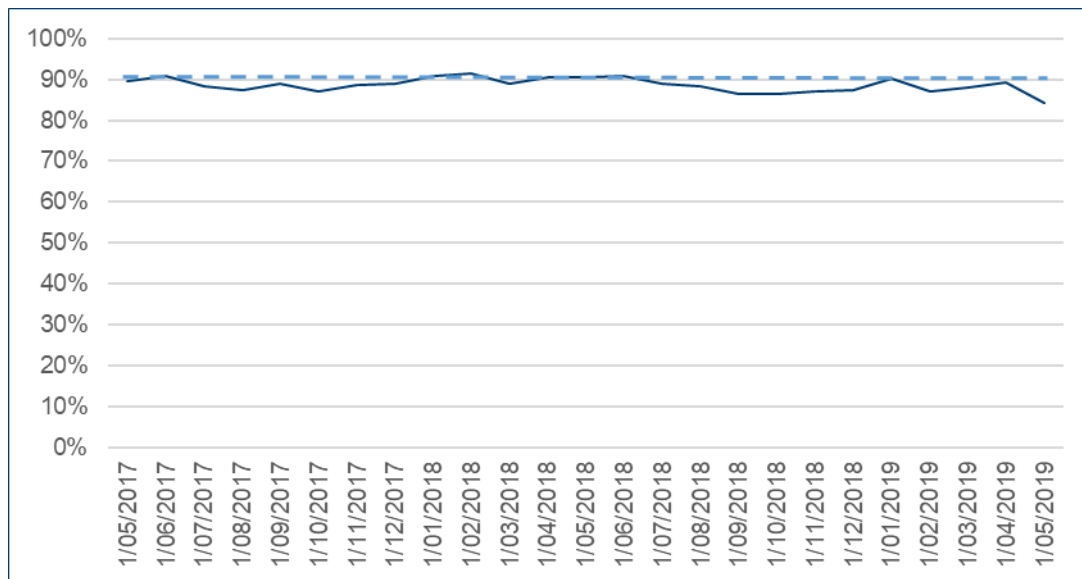
Analysis of ambulance data together with patient data from hospitals could provide evidence for response time targets. To do this, data security and integrity would need to be guaranteed and data from different sources, including clinical as well as response time data, would need to be linked. Response time targets are independently audited and reported to the DoH, but SJA does not currently share its clinical data because the contract does not require it.

Response time targets range from 15 minutes 90% of the time for emergencies in the metropolitan area to 60 minutes 90% of the time for non-urgent, pre-booked patient transfers in metropolitan and country locations (Appendix 2). SJA consistently meets its targets for Priority 1 cases (Figure 3). It also often misses targets for less urgent cases (Figure 4). Definitions of priority levels are at Appendix 3.



Source: OAG from SJA data

**Figure 3: Monthly ambulance response times (solid line) against target (broken line) in the most urgent cases (Priority 1) May 2017 – May 2019**



Source: OAG from SJA data

**Figure 4: Monthly ambulance response times (solid line) against target (broken line) in second most urgent (Priority 2) cases May 2017 – May 2019**

SJA meets its contractual requirements to report to the DoH monthly, quarterly and annually. Response times are reported monthly and annually. Reporting also includes activity, training, aged pensioners and senior service, IHPT, emergency management capacity and complaints.

### **SJA has improved its clinical quality controls but the contract gives the DoH no visibility of cases that do not meet guidelines or ways to assess their significance**

SJA has substantially improved its internal clinical quality controls and in 2017-18 achieved 95% against its target of 90% compliance with the clinical guidelines agreed with the DoH. However, how individual cases comply with guidelines is not independently audited and the contract does not give the DoH any visibility of cases that did not comply other than their total number. This contrasts with other jurisdictions where ambulance services are part of the government health system and a single authority holds the data. Patients can complain to the Health and Disability Services Complaints Office and the DoH has access to detailed clinical data for critical incidents. But its lack of broader access makes it harder for the DoH to assess the continuous improvement in patient care over time that is required by the contract.

SJA conducted 7,386 clinical audits in the paramedic sub-centres, and 11,580 clinical audits altogether in 2017-18 out of a total of 335,609 cases. This sample size should be sufficient to give a high level of confidence that it is representative. However, the audits are not independent of SJA and are also potentially skewed by audits being requested by paramedics and country volunteers.

With a target compliance rate of 90%, this system allows potentially 34,000 non-compliant cases a year without SJA missing the target. Actual performance is better than that at 95% in 2017-18, but this still implies around 17,000 non-compliant cases during the year. Higher levels of compliance or more information on non-compliant cases would give the DoH greater assurance that SJA is delivering good patient care.

The contract requires SJA to engage in continuous improvement and use evidence based data to review all policies and procedures. It must also assess its own performance against benchmarks for best practice. More generally, the contract requires SJA to aim for 'optimal

patient outcomes' but these are undefined and KPIs do not deal with paramedic performance specifically.

### **The DoH and SJA collect patient data but neither has access to data covering the whole patient journey that they could use to improve services**

SJA and the DoH keep patient records, and patient data is included in the clinical handover from ambulance to ED. However, SJA and the DoH do not combine their data to analyse all aspects of the patient journey from the call for an ambulance to when they leave hospital. This limits the ability of both the DoH and SJA to use patient-centred data to improve services.

SJA reports to the DoH include:

- response times
- ramping times
- results of SJA's clinical audits of paramedics and volunteers reported monthly as the percentage of cases that comply with clinical governance guidelines
- events leading to adverse patient outcomes, including fatalities
- aggregated results of patient satisfaction surveys
- revenue from ambulance services as a quarterly list of patient invoices billed to the DoH.

SJA reports other revenues annually. These are aggregated and not detailed enough to show costs of specific activities.

Curtin University independently analyses some of this (anonymised) data for academic research purposes and publishes the results, but this is confined to specific topics of defined duration. However, it shows that analysis of linked up data is possible and potentially valuable.

SJA has a comprehensive complaints process but does not share this information with the DoH. SJA's position is it is legally bound to protect the privacy of this information. This means the DoH does not have access to information that could improve feedback on SJA performance and assist with improving the patient journey.

### **SJA has improved clinical governance and support for volunteers but coordinating services in country areas remains a challenge**

#### **SJA and WACHS report difficulties coordinating services despite SJA's creation of regional offices to respond to local needs**

Between 2007 and 2015, SJA established regional offices in Albany, Bunbury, Northam, Kalgoorlie, Geraldton and Broome to support sub-centres and make administrative decisions locally that were previously made at head office. The aim of this project was to make the organisation more flexible and responsive. However, SJA and other local health services do not always work together efficiently and effectively in country areas. Neither SJA nor WACHS have developed better indicators of country ambulance performance that could be included in future contracts and might help them improve services in country areas.

Coordination between SJA and local health services in the regions is not always smooth. The coordination of IHPT is of concern to both WACHS and SJA. SJA's contract makes it the sole



provider of IHPT in country areas and it uses the income from this service to support its emergency services. Unlike in the metropolitan area, there is no system in place that shows country hospital and ambulance capacity in real time and that can be used to manage bookings. This makes planning IHPT in country areas more challenging. Also, IHPT is generally carried out by volunteers whose availability cannot always be guaranteed to coincide with requests from country hospitals. Conversely, country hospitals may not always take account of the limitations of the country ambulance system when requesting IHPT services.

The service is hard to manage for country hospitals. Small country hospitals may be staffed by only 6 nurses, rostered on 2 at a time and need to send very ill patients to larger regional hospitals for treatment. Nurses are often required to travel with the patient and may have to make their own arrangements for their return journey. In these circumstances, IHPT can impact the ability of these small hospitals to meet community needs. Staff at these small hospitals report that it can be hard to find a crew for IHPT when needed, creating uncertainty and taking up significant staff time.

SJA charges for IHPT the same way everywhere in country WA. The charge is based on a fixed fee plus a fee per kilometre.

Country IHPT to and from locations outside the 10 kilometre range operate without performance targets or a clear policy about service levels. SJA measures how timely IHPT is in the metropolitan area but only reports the number of transfers by country ambulances outside the 10 kilometre range.

### **SJA has developed criteria with the DoH and WACHS for allocating career and community paramedics to country areas and employed more of them to support volunteers**

SJA has developed a set of objective criteria to allocate paid career and community paramedics to volunteer ambulance stations. These are based on historical case volume and are included in the contract.

There are now 5 more paid community paramedics than there were in 2013-14, bringing the total to 27. Since 2013-14, 1 community paramedic in Kununurra and 2 in Karratha have been replaced by full-time career paramedics, reducing the total by 3. However, SJA has appointed 8 more, 1 each to Onslow, Paraburdoo, Denmark, Wundowie, Ravensthorpe, Coolgardie, Corrigin and Dalwallinu. This has increased the level of support and the quality of training provided to volunteers in the country.

Career and community paramedics are paid SJA employees. Community paramedics are career paramedics who provide support to country ambulance sub-centres and volunteers. Under the existing contract, SJA allocates career paramedics to country sub-centres based on the number of cases in the previous financial year. The number of paramedics assigned to a location ranges from 2 where case numbers are between 1,000 and 1,500, up to 9 where case numbers exceed 3,000. Where cases number between 250 and 1,000, SJA bases a community paramedic there. Community paramedics provide support to all locations with fewer than 1,000 cases a year.

New criteria for allocating community paramedics have been developed by WACHS and SJA but are yet to be formally adopted. These go beyond case load to include geographical and other considerations:

- cases per community paramedic area of coverage
- volunteer capacity, including numbers, experience and exposure, noting that in some areas community paramedics are allocated to boost recruitment and sustainability

- distances spanning community paramedic total area
- community paramedic fatigue management
- proximity to a neighbouring community paramedic, allowing for leave coverage and the need to make up a crew in case of emergency.

### **SJA has strengthened the way it maintains standards of patient care in all its services, metropolitan and country**

SJA more effectively maintains standards of patient care in all its services, metropolitan and country, than we found in 2013. In addition to increasing the number of community paramedics to support country volunteers and monitor their performance, it has increased clinical audits in country areas and appointed 3 Clinical Quality Managers to focus on clinical standards and carry out the audits. This means residents of country towns can have greater confidence in the quality of ambulance services in their area.

Other improvements include:

- random samples used for clinical audits have been adjusted to ensure there is a reasonable geographical distribution of audits
- in 2016-17, SJA appointed a Resuscitation Improvement Coordinator and an Infection Prevention and Control Officer to improve clinical performance throughout the state. These roles ensure crews stay up to date with clinical practices
- SJA reports to the DoH on training it delivers to country volunteer ambulance crew and how many staff enrol in continuing education. (Figure 5)



Source: OAG

**Figure 5: Demonstration of the Jaws of Life for car rescues at a regional ambulance sub-centre during our visit in April 2019**



# Ambulance ramping at hospitals has increased and there is no agreed plan to reduce it

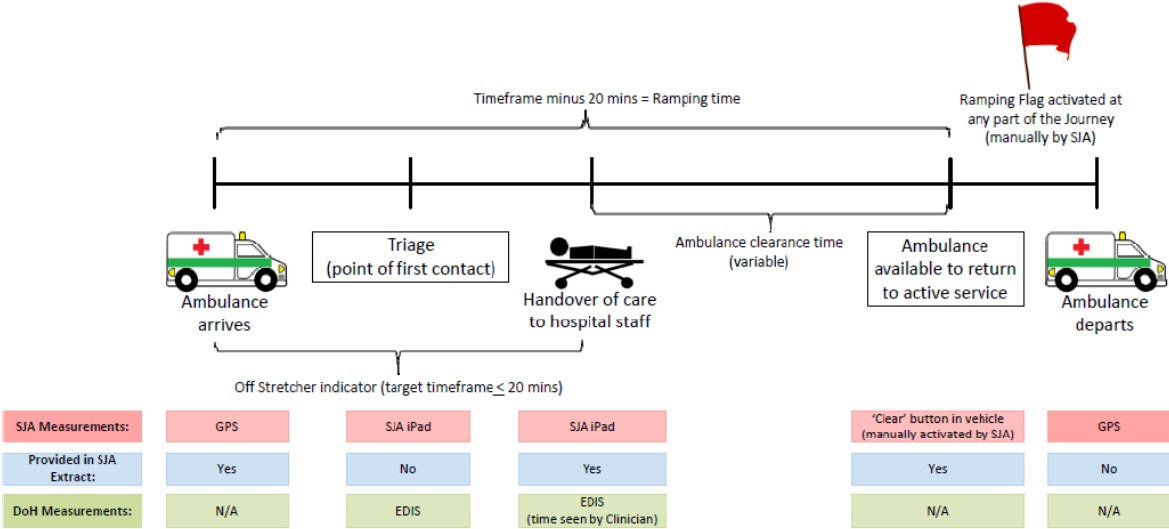
## Ambulance ramping has increased

Ambulance ramping has been increasing in recent years despite attempts by the DoH and SJA to reduce it. To date, ramping has not typically affected emergency cases because these are given highest priority but it has reduced average response times for lower priority cases, as ramping affects the number of ambulances available to respond to other calls. SJA fell short of response time targets for lower priority cases more often, and by a greater margin in 2017-18 whenever total ramped time of all ambulances at metropolitan hospitals added up to more than 24 hours in a day.

Ambulance ramping is the practice of leaving ambulances parked outside hospitals while crew wait with patients for admission to ED. Patients do not wait in ambulances but are taken on stretchers into the hospital where they are looked after by the ambulance crew until they can be handed over to the care of a nurse or doctor.

In SJA’s contract, ramping time is measured as the time elapsed from 20 minutes after the ambulance arrives at the ED to when the ambulance is cleared to respond to another call. Hospitals also record the time when they take over care of the patient. This is referred to as the ‘off stretcher’ time. Ramping time focuses on the ambulance while the off-stretcher time focuses on the patient. Both are recorded and reported to the DoH.

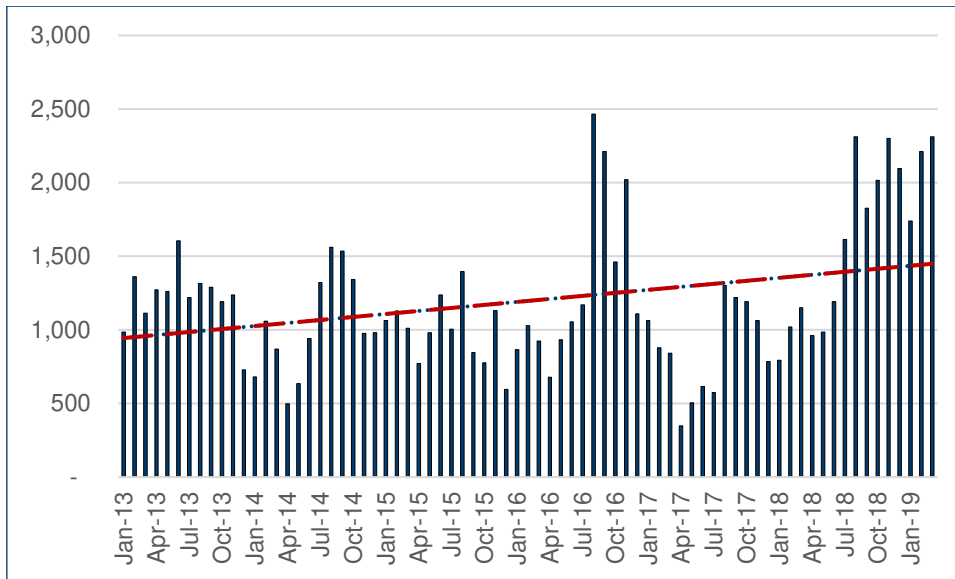
For both measures, the ambulance’s arrival is automatically recorded, while off-stretcher and clear times are manually recorded by the hospital or ambulance crew (Figure 6). Time to clear is almost always longer than the off-stretcher time because it includes time to clean-up and re-stock the ambulance. If the patient is left in the care of another ambulance crew then the off-stretcher time might exceed ramping time.



Source: Department of Health

**Figure 6: Ambulance ramping sequence and measurement from arrival to departure.** Note: EDIS stands for Emergency Department Information System.

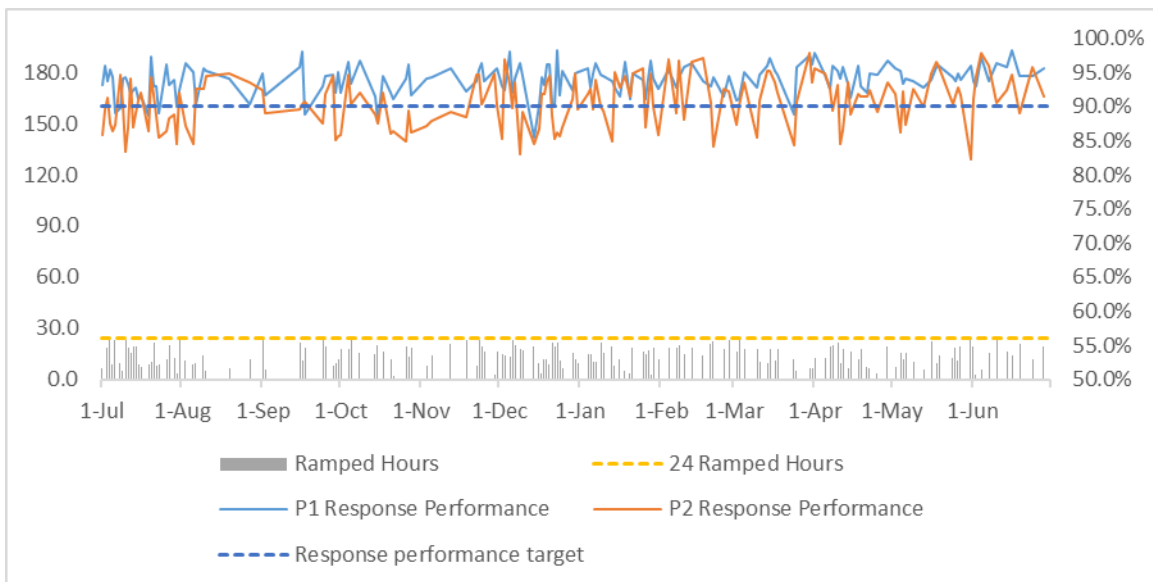
Whatever measure is used, data shows that ramping has increased in recent years (Figure 7). It is highly visible and the subject of public and parliamentary concern.



Source: OAG from SJA data supplied to the DoH

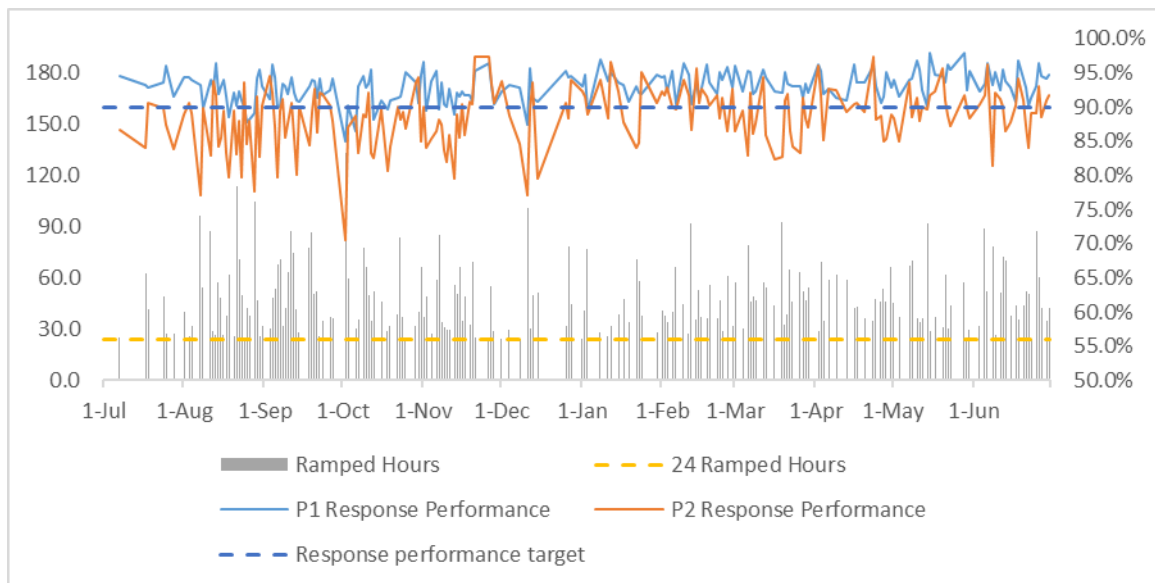
**Figure 7: Ambulance ramping (time to clear) for all ambulances at metropolitan hospitals by hours: January 2013 to March 2019** Note: broken red line is the trend line

While response time in Priority 1 (emergency) cases was largely unaffected by ramping in 2017-18, SJA data shows response time targets for Priority 2 cases were met less often when total daily ramping time for all ambulances exceeded 24 hours (across all metropolitan hospitals on a particular day). Figure 8 shows the effect on response times when daily total ramping time was less than 24 hours. Figure 9 shows the effect on response times when total ramping times exceeded 24 hours. Overall, Priority 2 response performance was 90.5% for days when total ramping time was less than 24 hours and 88.4% when they exceeded 24 hours.



Source: OAG from SJA data

**Figure 8: Daily priority 1 and 2 response times when total daily metropolitan ambulance ramping hours were under 24 hours: 2017-18**



Source: OAG from SJA data

**Figure 9: Daily priority 1 and 2 response times when total daily metropolitan ambulance ramping hours were over 24 hours: 2017-18**

Figure 8 shows days where total ramping time was below 24 hours. Figure 9 shows days where total ramping time exceeded 24 hours. Ramped hours (left axis) is the total ramping time of all ambulances on a particular day. Response performance (right axis) is the percentage of times response times met their targets. Priority 1 response performance is generally above the 90% target in both scenarios, while Priority 2 drops below target when ramping exceeds 24 hours.

### There is little evidence of ramping’s impact on patients’ health outcomes or system costs

Despite the increase in ramping of lower priority patients and the potential for discomfort this may cause, there is little available evidence that these patients suffer long term health impacts as a result. We also found little evidence that ramping imposes material costs on the health system.

While lower priority patients spend more time on ambulance stretchers during times of significant ramping, it may not be affecting their health outcomes. This may be because patients remain on ambulance stretchers and are cared for by ambulance crew during this time. This means they are more closely monitored than patients who present themselves to the ED and take their place unattended in the waiting room.

While it seems intuitively obvious that delays in treatment increase the likelihood of adverse outcomes, much depends on the nature of the condition that brought the patient to hospital. Conditions that require hospital treatment may not pose any immediate threat to the patient’s general health, and urgent pain management is often delivered effectively by ambulance crews. If a patient’s condition deteriorates while being attended by ambulance crew, the priority level can be increased and the patient taken into the ED without further delay.

We also found little evidence that ramping imposes material costs on the health system. While some hospitals have incurred costs in managing the queue of patients waiting with ambulance crew, these costs appear minor in the context of the system as a whole. Some hospitals have hired ambulance officers to help manage patient flow from ambulance deliveries. Other hospitals have hired nurses for this purpose. However, these costs should be seen in the context of the total cost of patient care, wherever it is needed. It is not clear

that transferring these costs between the ambulance service and the hospitals would significantly reduce costs overall.

### **The DoH and SJA do not have an agreed plan or strategy to reduce ramping**

The DoH and SJA meet at senior levels to address complex issues but have not found a way to reduce ramping. This may be because ramping affects hospitals and the ambulance service differently in patient, performance, and cost terms, making an effective joint approach hard to achieve.

Rather than focus on ramping as an isolated issue, it may be better to address it as a problem of managing patient flow into and through the hospital system. Hospitals we spoke to told us that delays in transport for mental health patients often led to them occupying ED beds for long periods, contributing to congestion in EDs and ramping. The DoH has established 2 mental health observation areas in EDs to manage mental health patients and reduce congestion, and advise that further measures are planned.

SJA has tried to reduce ramping by diverting patients away from hospitals when their need for treatment can be met by other means. SJA has established urgent care centres as an alternative for low acuity patients who might otherwise present themselves to an ED. These measures have not made a significant difference to ramping levels.

One reason urgent care centres have not significantly impacted ramping may be that these centres do not treat the large and growing number of ambulance patients who are over 65 years old. It is also possible that most ambulance patients require hospital treatment. Other proposed solutions to ramping include a central command centre with an overview of both ambulances and EDs, along with secondary clinical triage options. There is evidence from overseas that this could help but it would require substantial investment and a joint commitment by the DoH, Health Service Providers and SJA.

The causes of ramping are unclear but it seems to be a symptom, like a traffic jam, of a broader problem of managing patient flow into and through the hospital system. On this view, ramping occurs because of bottlenecks in the system and cannot be reduced by focusing on ambulances alone. Staff in the DoH, WACHS and SJA suggested that a centralised command centre with an overview of both ambulances and EDs could be a way forward.

Understanding the trigger point at which ramping will further affect ambulance response times and patient outcomes is important to help inform future capacity investment decisions, such as whether or when more ambulances and crews are required. This has not yet been done by the DoH and SJA.

One important contributing factor appears to be that mental health patients occupy ED beds for long periods while waiting for more appropriate accommodation. This creates congestion in EDs and contributes to low acuity ambulance patients being queued. Addressing this issue has the potential to improve patient flow and ease congestion in EDs, which in turn could ease ramping.

A factor limiting hospitals' ability to move mental health patients out of EDs is a provision of the Mental Health Regulations 2015 that has been interpreted to limit mental health patient transport to contractors, thereby excluding hospital employees. This means that hospital staff cannot transport mental health patients and must rely on SJA which is contracted to run only 1 dedicated mental health transport crew.

A consequence is that mental health transport is not always available when needed. Providing for better mental health transport options in the SJA contract could improve this situation. Other factors, such as the availability of police or other qualified people to travel with high risk patients, could also be contributing to the problem.

During our audit, the DoH began a 3-month trial of expanded mental health transport. On 1 April 2019, SJA and another provider were engaged to provide 3 mental health crewed ambulances for 18 hours per day from 6 am to midnight. The DoH told us there were positive early results of the trial so it has extended the trial to June 2020 in the lead up to the new ambulance service contract.

The DoH addresses complex issues with SJA at CEO level through the WA Ambulance Standing Committee. This committee meets quarterly or as necessary to consider SJA reports and issues needing attention (e.g. ramping) as well as planning (e.g. the Winter Strategies). Contract management meetings are held more frequently. To date neither the Standing Committee nor the contract management process have found a way to permanently reduce ramping.

## Appendix 1: Progress against recommendations from *Delivering Western Australia's Ambulance Services, Report 5 – June 2013*

Report recommendation	Current progress
To improve effectiveness and accountability when contracting for ambulance services <b>WA Health</b> should:	
<ul style="list-style-type: none"> <li>develop and agree with SJA a new funding model for emergency ambulance services focusing on standards, performance and allocation of risk</li> </ul>	Not implemented – in progress
<ul style="list-style-type: none"> <li>collate and centrally monitor financial data including the cost to government of IHPT</li> </ul>	Not implemented
<ul style="list-style-type: none"> <li>include in contracts minimum standards for emergency and secondary ambulance services and effective mechanisms to monitor these</li> </ul>	Implemented, but more needed
<ul style="list-style-type: none"> <li>require service providers to report more comprehensive performance data using additional cost and clinical indicators</li> </ul>	Implemented, but more needed
<ul style="list-style-type: none"> <li>re-engage with SJA at a senior level to address strategic and complex issues including long term solutions to ramping</li> </ul>	Implemented, but efforts need to continue
<ul style="list-style-type: none"> <li>develop criteria with SJA for the allocation of paramedics across the state</li> </ul>	Implemented but yet to be formally adopted
<ul style="list-style-type: none"> <li>consider publishing information on SJA's complaints processes to assist WA Health staff.</li> </ul>	Implemented
To improve delivery of ambulance services <b>SJA</b> should:	
<ul style="list-style-type: none"> <li>carry out targeted clinical audits in volunteer country sub-centres until longer term solutions are in place</li> </ul>	Implemented
<ul style="list-style-type: none"> <li>develop quantitative performance targets for community paramedics and report these to WA Health</li> </ul>	Implemented
<ul style="list-style-type: none"> <li>explore opportunities for extending the community paramedic model to other areas of identified need</li> </ul>	Implemented
<ul style="list-style-type: none"> <li>build on its regionalisation model and improve engagement with local services in the Kimberley and Pilbara regions</li> </ul>	Implemented, but more needed
<ul style="list-style-type: none"> <li>ensure the positive gains in clinical governance achieved since the Inquiry become embedded throughout the whole organisation.</li> </ul>	Implemented

Source: OAG

## Appendix 2: Response time targets vary between levels of priority and between city and country.

Metropolitan	Target
<b>Dispatch Priority 1 (Emergency)</b>	
Calls responded to within 15 minutes (%)	90
90 <sup>th</sup> percentile response times (min)	15
Average response time (min)	10
<b>Dispatch Priority 2 (Urgent)</b>	
Calls responded to within 25 minutes (%)	90
90 <sup>th</sup> percentile response times (min)	25
Average response time (min)	15
<b>Dispatch Priority 3 (Non-urgent but time-critical)</b>	
Calls responded to within 60 minutes (%)	90
90 <sup>th</sup> percentile response times (min)	60
Average response time (min)	40
<b>Dispatch Priority 4 (Booked)</b>	
On time arrival (<+10 minutes) (%)	90
<b>Country sub-centres with career paramedics – range depends on location</b>	
<b>Dispatch Priority 1 (Emergency)</b>	
Calls responded to within 15 minutes (%)	52 - 90
90 <sup>th</sup> percentile response times (min)	15 - 25
Average response time (min)	10 – 15.5
<b>Dispatch Priority 2 (Urgent)</b>	
Calls responded to within 25 minutes (%)	85 - 90
90 <sup>th</sup> percentile response times (min)	25 - 50
Average response time (min)	15 - 21
<b>Dispatch Priority 3 (Non-urgent but time-critical)</b>	
Calls responded to within 60 minutes (%)	90
90 <sup>th</sup> percentile response times (min)	60
Average response time (min)	40
<b>Dispatch Priority 4 (Booked)</b>	
On time arrival (<+10 minutes) (%)	80

Source: WA Health

## Appendix 3: Definitions of SJA response time priority levels

**Dispatch Priority** means the initial priority assigned by the SJA State Operations Centre, using a structured call taking process, to the allocation of a Patient Transport Vehicle and Crew to an incident.

**Dispatch Priority 1** means the initial priority assigned by the SJA State Operations Centre, using a structured call taking process, to the allocation of a Patient Transport Vehicle and Crew to an **emergency** incident that is time-critical.

**Dispatch Priority 2** means the initial priority assigned by the SJA State Operations Centre, using a structured call taking process, to the allocation of a Patient Transport Vehicle and Crew to an **urgent** incident that is time-critical.

**Dispatch Priority 3** means the initial priority assigned by the SJA State Operations Centre, using a structured call taking process, to the allocation of a Patient Transport Vehicle and Crew to a **non-emergency** incident that is time-critical.

**Dispatch Priority 4** means priority assigned when a SJA Patient Transport Vehicle and Crew are booked to arrive at a predetermined time.

'Emergency' and 'urgent' are not defined but are assigned to cases based on a series of questions put to callers by operators at the SJA State Operations Centre, the answers to which determine classification according to a set decision-making process.







## Auditor General's Reports

<b>Report number</b>	<b>2019-20 reports</b>	<b>Date tabled</b>
2	Opinion on Ministerial Notification	26 July 2019
1	Opinions on Ministerial Notifications	19 July 2019

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