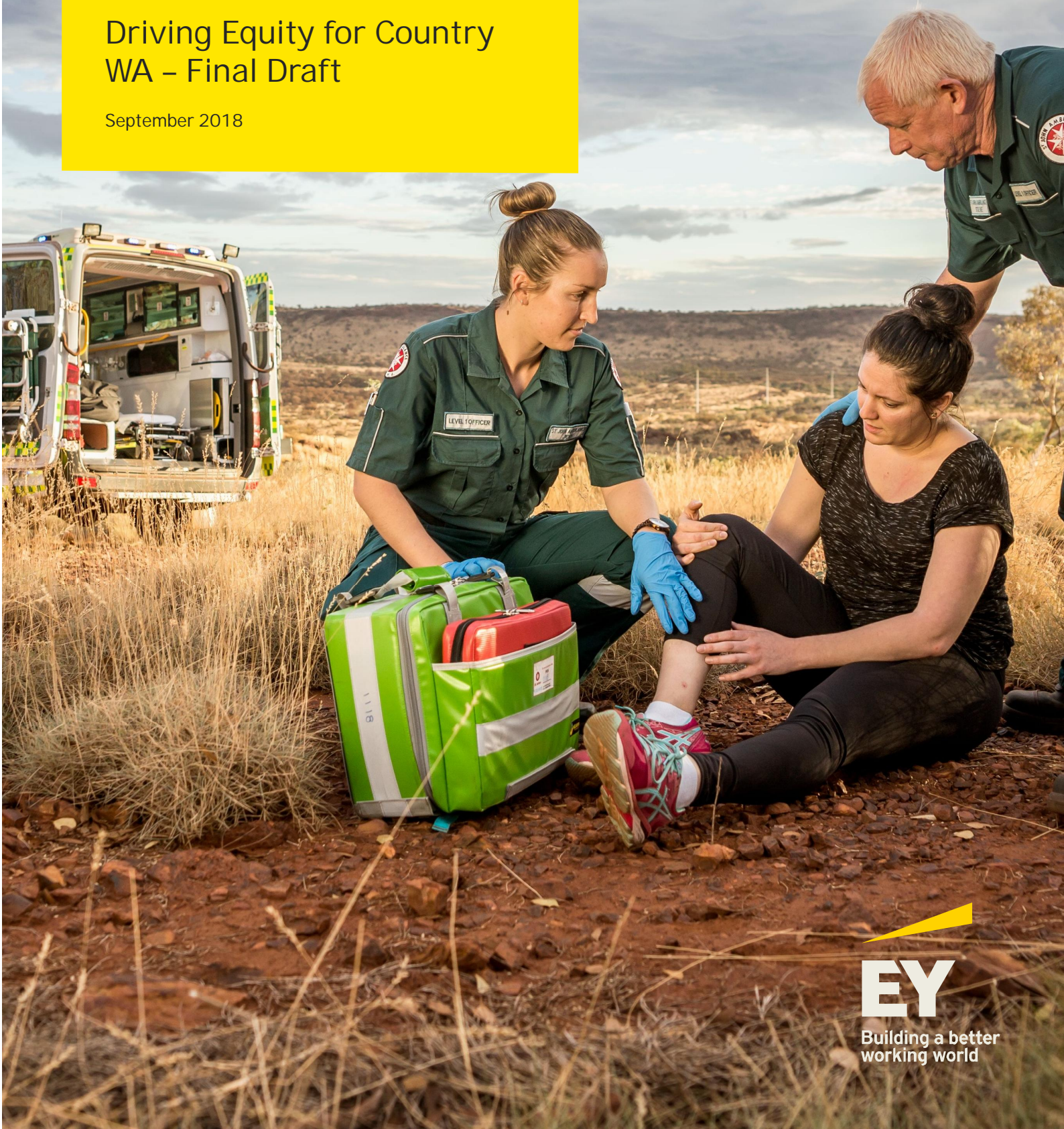


The Country Ambulance Strategy

Driving Equity for Country
WA – Final Draft

September 2018



The country ambulance strategy was conducted over an 11 month period, commencing February 2017. This document was endorsed by the WA Country Health Service Board on 23 February 2018.

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Message from the Chair

A country ambulance service is an essential component of the health system in Western Australia. In 2016, the WA Country Health Service (WACHS) Board endorsed the development of a strategy to enable WA's country ambulance service to meet the needs of regional communities into the future. WACHS is accountable for the provision of quality, accessible health services to more than half a million people across large regional centres to those in small remote communities. The WACHS catchment spans 2.5 million square kilometres, the largest geographical area of any Australian health service provider.

St John Ambulance Western Australia (SJA) provides the Primary Response capability from 160 locations operating in country WA. In addition, SJA provides the majority of transportation of patients between WACHS healthcare facilities, to and from retrievals conducted by the Royal Flying Doctor Service (RFDS) and to metropolitan hospitals when required.

Our volunteers and country paramedics do an amazing job with the resources and support available to them across the vast geography of the state. Volunteers provide more than 2.8 million hours annually operating country ambulance services, representing a significant contribution to healthcare in WA. It is due to this dedication and commitment that Western Australians living in or visiting the country have access to an ambulance service close to home.

Delivering road ambulance services in country WA is a complex undertaking that involves interaction between various health care and transport providers, particularly for Inter Hospital Patient Transport (IHPT) service delivery. In delivering this strategy, the tremendous dedication and efforts of the SJA's paid and volunteer ambulance officers in providing care in extremely challenging locations and clinically difficult situations was made clear by all stakeholders. This strategy is intended to set the foundation to further support and build the service in the future.

It is time to make the appropriate investment into country ambulance services to support our volunteers so they can continue to provide this vital service. The volunteer model is a strong one, it brings communities together. The WACHS Country Ambulance Strategy (the Strategy) aims to strengthen and support the volunteer model through strategic initiatives that realign the ambulance service country people receive. The Strategy outlines the necessary foundations for volunteers and paramedic staff in country WA to continue to provide one of the best ambulance services in the world.



Professor Neale Fong
Board Chair
WA Country Health Service

1. Executive summary

WA has the greatest reliance on country volunteer ambulance officers of any Australian State and is the only State where the service is not State-operated. The situation in WA is further made unique by the vast geography and widely dispersed population outside of the Perth metropolitan area.

In the Perth metropolitan area, the ambulance service is delivered by paid, qualified paramedics who adhere to strict key performance indicators, ensuring provision of a guaranteed, appropriately funded and resourced service.

This is not the case for most of country WA. People living or visiting the country rely on the dedication and commitment of community volunteer ambulance officers who run the emergency ambulance service and transport patients between health facilities.

Volunteers provide more than 2.8 million hours annually operating country ambulance services, representing a significant contribution to the quality of healthcare in WA. These volunteer services largely raise their own funds, purchasing equipment essential to providing an ambulance service through ambulance fees, grants and community fundraising events. Without these dedicated individuals, people living or visiting the country would not have access to an ambulance service close to home.

There is substantial inequity between the provision of metropolitan and country ambulance services in regards to financial, contractual and performance measures. Unlike metropolitan Perth, and a small number of country sub centres there are no contractual requirements for an ambulance service to respond to calls, meet minimum standards of response availability or maintain constant coverage of emergency transportation for what amounts to 99% of the state's geography. The system functions on trust and the good will of hundreds of volunteers across the State, operating a best endeavours service. This stands in stark contrast to aeromedical patient transport contractual arrangement for WA.

While country people do not expect a service equal to their metropolitan counterparts, they have an expectation their country ambulance service is sufficiently resourced and supported to deliver a sustainable service.

WACHS conducted significant state-wide consultation and research on best practice, and examined past reviews into WA's ambulance service, which revealed the following:

- ▶ WA has no policy or legislation outlining what the community can expect from an ambulance service.
- ▶ The current contract allows for two levels of service, one level for the metropolitan area and major country towns which includes performance targets, and one level for the rest of the state where there is no contractual guarantee a service will be provided.
- ▶ In the metropolitan area and major towns, the ambulance vehicle and the resources required to deliver the essential ambulance service are provided to the centre. In the country, volunteers are expected to fundraise within their communities or volunteer their time in patient transfers to purchase these resources to provide the service.
- ▶ The actual cost and funding to provide the service in the country was not transparent or articulated.

The volunteer model is a strong one, it brings communities together. However the lack of investment supporting the volunteers to provide the service places the future sustainability of the service at risk. This increasing pressure to provide the service based purely on good will needs to be addressed.

It is important to recognise the delivery of a country ambulance service is complex. There are multiple types of ambulance transport and many different organisations and people who interact to safely prepare, transport and receive patients in WA. Ambulance services are not defined in legislation or policy in WA, however for the purposes of this strategy the country ambulance service is defined as the combination of:

- ▶ Primary Response to an emergency, and
- ▶ Inter Hospital Patient Transfers (IHPT) for patients travelling between country health facilities or in to and out of metropolitan Perth.

A more detailed overview of the WA country ambulance service is found in section 2.2 and a one page infographic has been developed - see Appendix 1. Importantly, there have been significant improvements and innovation in delivery of contemporary care in remote areas, such as the introduction of the Emergency Telehealth Service across WACHS (see Section 2.3). Moving forward the WA health system will need to continue to consider innovative technologies and service models for healthcare delivery. However, there will always remain a need to physically transport many patients between country health facilities and into metropolitan sites. Securing a sustainable, reliable and safe country ambulance service will therefore remain a key component of delivering health care in country WA.

The WACHS Board endorsed the development of this strategy to enable WA's country ambulance service to meet the needs of regional communities into the future.

The strategy development process:

To develop this strategy, consideration was given to previous reviews into ambulance service provision in WA to understand the historical recommendations and identify key issues facing the country ambulance service. A scan of other Australian States and international jurisdictions was undertaken to understand how different jurisdictions manage the service and to provide examples of service excellence, particularly for country areas. Targeted analysis and review of key documents and activity data was used to confirm and clarify stakeholder statements, and to provide further information and context for the strategy.

A significant component of the strategy development process was widespread engagement with representatives from WACHS, the Kimberley Ambulance Service (KAS), SJA, RFDS, the community, the Department of Health and other relevant parties across all seven country regions and the Perth metropolitan area. This included six weeks of regional engagement with stakeholders in country WA to gather key insights around the complexities, challenges and successes associated with country ambulance services in WA.

The findings were reviewed as a whole to identify themes. In summary, the analysis revealed that inequity exists between metropolitan services and those in the country, as well as between country regions. The WA ambulance service operates with the lowest funding per capita out of all the states and also spends the least per capita. SJA country ambulance services spend less per capita on service delivery than metropolitan ambulance services (driven primarily by the extensive volunteer workforce) and carry almost twice the bad debt.

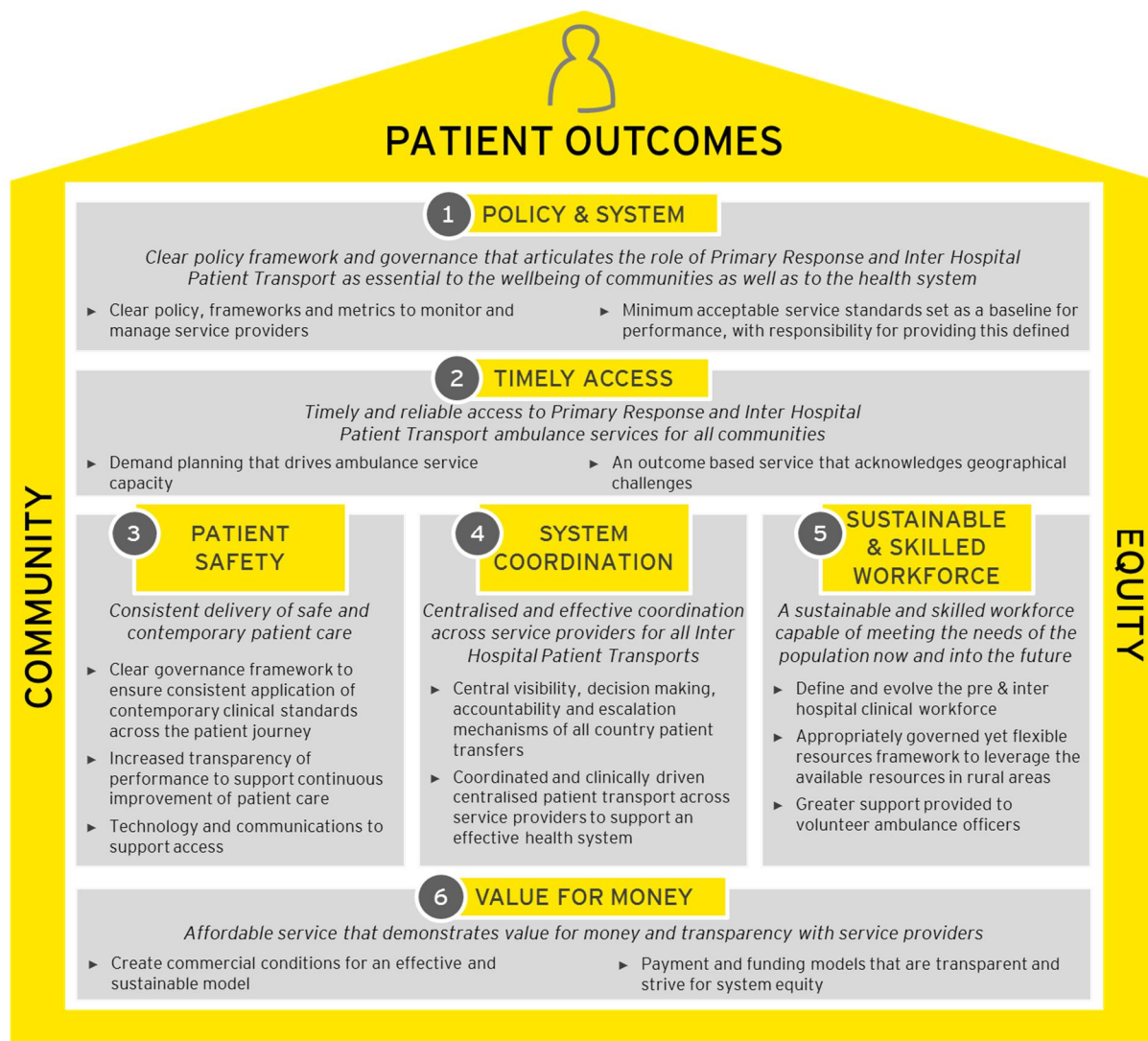
The service model is under immense pressure from rising demand - particularly from increasing IHPT. The new patterns of demand are not served optimally by the historical model that is in place and the complexity of the system with its multiple players has made collaborative improvement a challenge. There are critical internal issues to address (i.e. greater contract transparency around funding allocation), however equity of service for country patients is unlikely to be achieved without targeted additional investment in the country ambulance service.

The findings (detailed fully in section 4) were categorised under common areas and the question was then asked; if these are the issues, what does service excellence look like for each area? This included a blue sky visioning workshop to develop a future vision of ambulance services in WA; six key strategic themes emerged as the pillars of the strategy (see Fig 1 below). Four strategic options for the delivery of the strategy were developed and considered in terms of the transformation required, how well they achieved the change required and their complexity of implementation. In light of consultation to date and information available Option C – Strategic Development was identified as providing the best balance of achievable improvements to address the identified inequities in service and should be developed further.

To then develop the detailed strategy, goal statements were created for each of the six key strategic themes to outline the desired end-state the Strategic Development would achieve. The current state was compared and contrasted with these goals in the form of a gap analysis which in turn developed 19 recommendations. A validation process was then undertaken with key stakeholders to sense check the findings, strategic themes, goal definitions and recommendations. The full methodology for the strategy development process can be found within section 3.

The forward looking strategy and associated recommendations set the foundations for a sustainable ambulance service and what the future may look like for country WA. The overall aim of the strategy is to improve the health outcomes for country patients. The detailed goals, gap analysis, recommendations and evidence of the strategy are outlined in Section 4 of this document.

Figure 1: The six strategic themes of the WA Country Ambulance Strategy



The overarching strategic requirement is for the development of effective policy and governance (1) that can ensure communities' access to a timely and reliable country ambulance service (2). Three areas support the services' ability to meet community needs: patient safety (3), coordination of the service across the health system (4), and the support of a sustainable & skilled workforce (5). The strategy is underpinned by a value for money requirement and will be delivered in a transparent and efficient manner (6). The values of *community* and *equity* encompass the strategy as they are essential to the provision of the country ambulance service in WA.

In the future when the strategy has been activated:

- ▶ An overarching policy will define the responsibility for ensuring access to an equitable and continuous ambulance service to the Western Australian community.
- ▶ Country communities will be aware of the ambulance services available in their area and the performance standards they will meet.
- ▶ Local WACHS facilities will be aware of the capability and capacity of ambulance services in their location while Inter Hospital Patient Transport will be coordinated from a central point.
- ▶ WACHS will have visibility of the ambulance provider's performance and funding allocations, whilst working with them to plan future service locations to address changing demographics.
- ▶ WACHS and ambulance provider's teams will regularly train together, be clear of each other's roles and be universally respected for their respective skill sets, as they work together in a co-designed and integrated patient pathway for patients in country WA.

Recommendations:

The 19 recommendations are set out against each strategic theme below. The organisation listed in brackets is responsible for the action and completion of the recommendation.

Policy & System:

1. Establish clear state-wide policy on ambulance services as a minimum and consider enacting legislation in line with other states and territories. (Department of Health)
2. Define the level of ambulance service (both IHPT and Primary Response) provided to country communities in line with the state-wide policy (WA Country Health Service) and include this within the Clinical Services Framework. (Department of Health)
3. Plan state-wide service delivery using demand modelling then work with providers to design appropriate service delivery models in all locations (existing and new) and include measurable performance indicators in contracts. (WA Country Health Service led)
4. Form an engagement forum comprising WACHS, country volunteers, community representatives and paramedics to discuss ongoing service design and service improvement. (WA Country Health Service)
5. Transfer responsibility for the contract management of country ambulance services to WACHS. (Department of Health)
6. Implement the remaining recommendations from the Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) as a matter of priority. (Department of Health)
7. Complete implementation of the WA Health Patient Transport Strategy 2015-2018 to fulfil the goal of ensuring that the WA community has access to an effective patient transport system. (Department of Health)

Timely Access:

8. Introduce contemporary contracts for ambulance services that define IHPT and Primary Response as two distinct services which have their own scope of services and key performance targets as a minimum. (WA Country Health Service led)

Patient Safety:

9. Mandate consistent clinical governance principles in all patient transport contracts and report jointly on progress and collaborative initiatives to improve patient outcomes and clinical performance. (WA Country Health Service led)
10. Ensure every ambulance - regardless of location - can communicate reliably with all necessary parties at all times. (St John Ambulance¹)

System Coordination:

11. Implement a clinical prioritisation system to inform safe, effective and transparent co-ordination of inter hospital patient transfers across WACHS. (WA Country Health Service)
12. Implement formal escalation mechanisms to ensure safe transfer of inter hospital patients in line with clinically indicated timeframes. (WA Country Health Service)
13. Commission WACHS to lead the development and coordination of state-wide inter-hospital patient flow. (Department of Health)

Sustainable & Skilled Workforce:

14. Provide sufficient administrative and corporate support direct to country ambulance Sub Centres in order to free up volunteers to focus on service delivery. (St John Ambulance)
15. Provide the volunteer ambulance workforce with the opportunity to obtain qualifications through an articulated structured training pathway which aligns with the Australian Qualification Framework and supports career progression. (WA Country Health Service led)
16. Research, trial and implement alternate workforce and training models (including the use of shared staffing and virtual support) and prioritise this at locations which have difficulty maintaining a sustainable workforce. (St John Ambulance)
17. Expand the Community Paramedic model in FY18/19 as a priority in order to relieve pressures in those locations currently having the most difficulty in recruiting, supporting and retaining volunteers. (St John Ambulance)

Value for Money:

18. Mandate transparent reporting on allocation of funds and costs of ambulance service delivery in ambulance contracts, detailing allocations between service locations and between IHPT and Primary Response services. (WA Country Health Service led)

¹ Noting that St John Ambulance WA Inc. are the contracted service provider. Any future providers would also be required to provide reliable communications.

19. Ensure contract periods align with contemporary best practice and are long enough to enable providers to invest for effective service delivery. (WA Country Health Service led)

Next Steps:

Ambulance services are essential to all communities and are a critical service in the delivery of health care. As such, the establishment of a clear policy on ambulance services to define and assign responsibilities for providing ambulance services is the starting point for enabling access to continuous services for country communities (Recommendation 1). In order to reflect and establish what the community can reasonably expect in country WA, the defined level of ambulance service should be articulated within the Clinical Services Framework (Recommendation 2).

To ensure that a measureable, equitable and continuous ambulance service is provided using the most appropriate provider model for ambulance services, a common set of standards and performance measures should be introduced (Recommendation 3). To appropriately manage the introduced standards and performance measures, these elements will need to be included in all future contracts for ambulance services (Recommendation 8).

Following in principle endorsement of the strategy by the WACHS Board, action will need to be taken on the recommendations required to improve country ambulance services in WA. Actioning these key recommendations requires the immediate attention of WACHS, the Department of Health and SJA.



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2. Introduction

2.1 The Case for change

An ambulance service that is continuously available to provide timely care is an expectation held by Western Australians, regardless of whether they live in country or metropolitan areas. Consumer feedback gathered for the purposes of the Country Ambulance Strategy supports this expectation and is summarised in the following comment:

“I believe an ambulance service is essential for country and regional areas. There are limited tertiary medical facilities as it is and so it is imperative an efficient, well trained and equipped team is available to transfer sick and injured patients as soon as possible.”

The consumer feedback received is consistent with the 2009 Independent Inquiry (the ‘Joyce Report’) which stated that:

“Every person in Western Australia has an expectation that when they call an ambulance in an emergency it will come quickly and get the person to a hospital as soon as possible.”

Despite this, the current ambulance model allows for and perpetuates inequity between metropolitan and country WA. WA is the only Australian State that does not have policy or legislation for ambulance services. Policy should outline *who* is accountable for ensuring communities have access to an ambulance service and the *standards* required of ambulance service providers, reflecting the community’s expectations of the ambulance service.

The lack of policy results in a lack of clarity on both accountability and standards of service provision; this needs addressing.

Furthermore, the lack of a policy or legislation for the provision for services in WA is limiting the ability of WACHS to drive change and increase service standards in country WA. Additionally, WA’s exposure to non-regulated ambulance and patient transport increases the risk to the system and to patients.

In the absence of legislation or policy, the contract with the ambulance service provider is the only document providing surety to communities that a continuously available and guaranteed service will be provided.

However, the state-wide contract for ambulance services between the Department of Health (DoH) and St John Ambulance WA (SJA) maintains the inequity between the services provided in metropolitan and country WA. In metropolitan WA the service is provided by paid professionally qualified paramedics and service delivery is subject to contractually required Key Performance Indicators (KPIs). Conversely in country WA, 90% of ambulance locations are serviced by volunteers under a “best endeavours” model. The “best endeavours” model in the contract does not require a Volunteer Sub Centre to respond to a call, contains no obligation for the ambulance service provider to meet a minimum standard of response availability and contains no requirement for constant coverage. For further detail of the contract for ambulance service in WA see section 2.2.

In addition to the inequity in contracts, funding is opaque; the ambulance service provider is not contractually required to provide details of where and how they spend funds to maintain and improve ambulance services. During FY’16 SJA spent \$87 per capita in country WA, compared to \$96 per capita in metropolitan WA. In addition to this SJA spends on average \$757 to complete one ambulance incident in country WA, compared to \$857 in metropolitan WA.

The imbalance is clear; over the past 20 years there have been a series of reviews which have called for change in the operation and governance of the country ambulance service in WA. These reviews have not lead to any great changes in the governance of ambulance services in WA or the underlying operating model used for the country ambulance service. Furthermore,

recommendations made by these reviews remain outstanding and there has been limited further investment into the country ambulance service. For further detail of the previous reviews into ambulance services in WA see section 3.3.

The wave of disruption in healthcare in Australia and globally from technological advances are enabling new ways of delivering care; these provide a timely driver for change in the delivery of ambulance services. Ambulance services in country WA have the opportunity to learn from elsewhere and explore new partnerships with non-traditional health players (i.e. technology start-ups) in the adoption of digital services. For further detail on the innovation and disruption in the delivery of country ambulance services see section 2.3.

The case for change is clear; there is a lack of policy, inequitable contracting, performance measurement and financing, and an absence of change resulting from previous reviews. This, combined with the need for the country ambulance service to be able to adapt to the changing world of technology-driven service delivery requires a country ambulance strategy to provide the future strategic direction of country ambulance service delivery in WA.

2.2 Current state

Definitions

The provision of the country ambulance service is complex in WA; there are multiple different types of ambulance transport and lots of different organisations who provide the services that safely transport a patient from A to B in the country. We have set out the details here by organisation to explain 'who does what'; a diagram and flow chart are included in Appendix 1 which set out a visual that covers this.

For the purposes of this report, the country ambulance service is the service which provides the primary response, transportation of patients between WACHS healthcare facilities, to metropolitan hospitals and to and from retrievals conducted by the Royal Flying Doctor Service (RFDS). Additionally, the term "state-wide" represents the seven WA Country Health Service (WACHS) regions within WA in addition to metropolitan health and ambulance service areas.

The emergency and planned patient transport network includes both road based and aero ambulance services, however the strategy development process has focussed primarily on road based ambulances. Recognition of, and reference to aeromedical services occurs within the strategy when it relates to the interactions with the road based services. Note that fixed wing aeromedical services are provided by RFDS which is directly contracted and managed by WACHS. A diagram showing the system's key service providers and commissioners is presented in Figure 2 below.

Road based ambulance services, for the purposes of this report, include both Primary Response and Inter Hospital Patient Transport (IHPT) ambulance services. Primary Response refers to when a person requires an emergency response, assessment, first aid or treatment at the response location or while being retrieved and transported to a hospital.

IHPT is a form of transport using a road based ambulance, which includes both emergency and non-emergency transportations between a WACHS healthcare facility to either another healthcare facility including metropolitan hospital or to aeromedical transport providers. Although in most instances IHPT patients will have been stabilised, this type of transport can also involve high priority and potentially life threatening situations. IHPT is crucial to an effective hospital system and delays in this service can result in major impacts on patient outcomes, and place undue stress on the facilities and staff. It is important to note that for volunteer Sub Centres, the IHPT service provides the majority of the funding stream for the Sub Centre which then enables them to provide the Primary Response service.

In country WA, these two different services have historically been approached in the same way however their provision and associated challenges are unique. Whilst this future strategy considers

service, requiring volunteer ambulance officers to provide more hours to transport patients to the appropriate location where they can receive the level of care they require. This is occurring against a backdrop of decreasing volunteerism nationally; ageing populations in country communities; and fewer local employment opportunities for volunteers.

St John Ambulance Western Australia (SJA)

SJA, is the primary provider for WA's road ambulance services (Primary Response and IHPT) for metropolitan and country areas. The SJA service comprises road based ambulance services, tasking of the emergency rescue helicopters owned by the Department of Fire and Emergency Services (DFES) for Primary Response incidents, patient transport services and management of the State Operations Centre (SOC).

SJA seeks to maximise its response capacity by utilising volunteer community based ambulance officers to provide ambulance services across country WA. This community focussed approach is historical, with ambulance provision established by local communities when they identify local need. These services were subsequently developed under the direction and governance of SJA. This approach has seen strong community ownership of the local ambulance service, where no services were previously available.

Volunteer ambulance officers provide over 3.6 million volunteer hours of service a year for WA country communities. It should be recognised that if not for the dedication and commitment of the 3,000 or more current volunteers and those who have previously volunteered for the service during the many years of SJA's operation in WA, this service would not be available to the local population.

SJA operates 160 ambulance response locations across country WA. These include Sub Centres and Sub Branches (smaller facilities under the governance of a Sub Centre), which are operated solely by SJA volunteer ambulance officers. Sub Centres represent 144 of the 160 ambulance response locations in current operation by SJA. The growth and placement of Sub Centres has been organic based on local action taken by communities to develop one.



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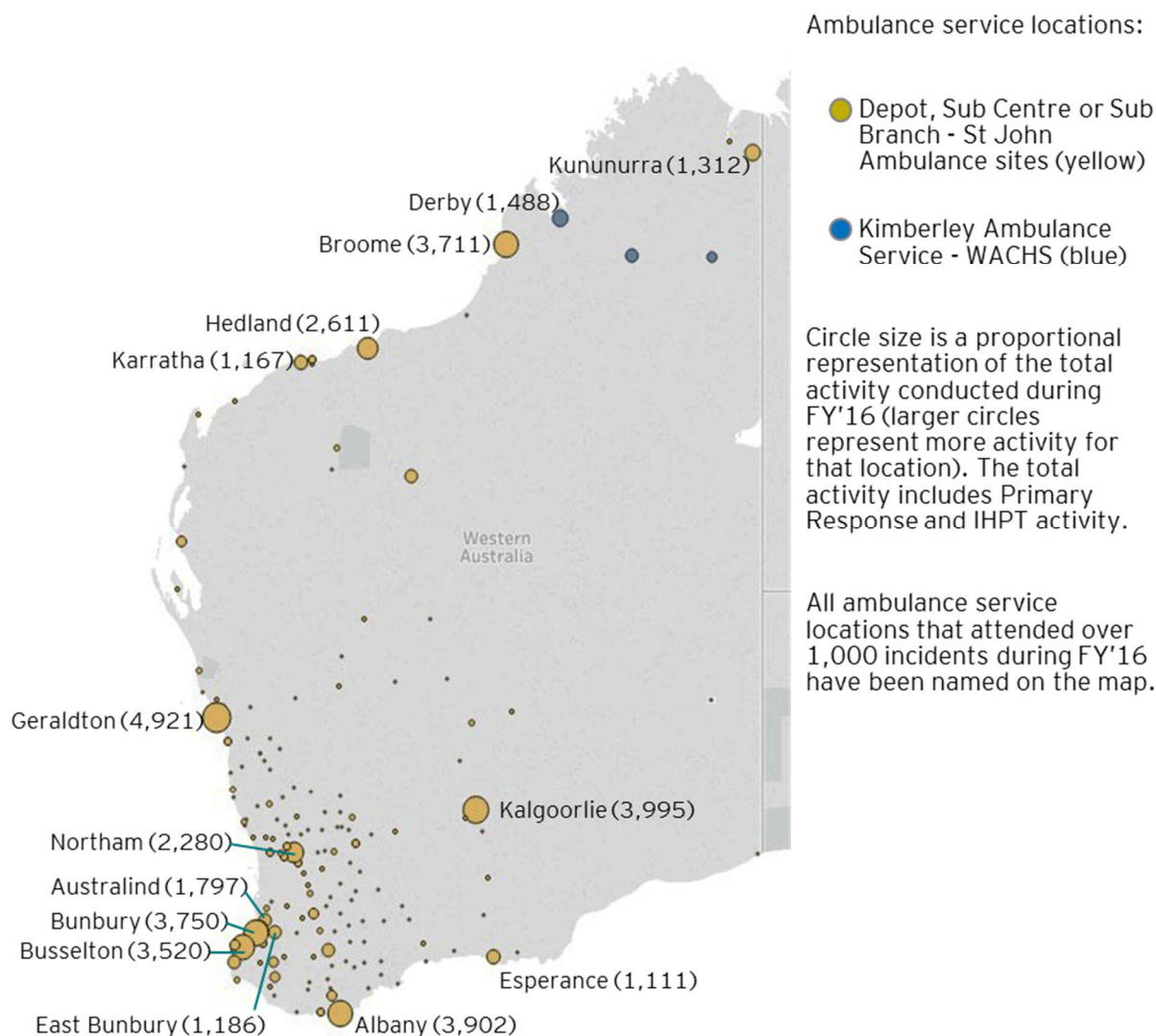
Sub Centres are managed by committees locally, with delegated authority from the SJA Board that allows decisions to be made within the governance principles of SJA. Day to day contact and organisational support is facilitated by regionally based managers and coordinators who report to the SJA Country Ambulance Management Team at Head Office. The 144 Sub Centres are supported by 27 paid Community Paramedics (CPs) who are responsible for recruiting, training and retaining volunteers.

There are 16 Paramedic Depots in high activity areas where paid Paramedics services are provided. At 15 of these locations paid Paramedics work alongside volunteer ambulance officers who increase the capacity of the local services. To complement services provided by paid and volunteer ambulance operations SJA has introduced a paid transport service in eight high activity areas.

SJA operates more response locations per capita than any other Australian State other than Tasmania. SJA reports that the use of this model ensures small communities are not reliant on ambulance services to be provided by larger communities who may be some distance away.

Figure 3 demonstrates the activity level attended to by SJA and WACHS ambulance response sites. Much of the activity is centred in the south western portion of WA.

Figure 3: SJA and WACHS ambulance presence in WA (size denotes activity scale)



The contract between WACHS and SJA

In all metropolitan areas of Perth, ambulance services are governed by KPIs mandated in the contract for the service; these KPIs include target response times. Conversely in country WA, only areas within 10km of the town centre of the locations which have a paid paramedic workforce are operated under contractually required response time targets. This means that in 90% of country locations there is no minimum response time standard which the community can reasonably expect.

Moreover, the contract places no requirement for a volunteer Sub Centre to respond to a request for either an IHPT or Primary Response request. This represents a considerable risk to patients if long delays occur if multiple volunteers decline to respond. SJA maintains high levels of service availability in country WA; however there is no contractual requirement for constant coverage. In popular holiday times, the volunteers available to provide the ambulance service for a community can drop to critical levels. The current contract also does not specify any obligation for SJA to inform other organisations when and where services are unavailable. Therefore the community cannot be assured when they call for an ambulance the closest Sub Centre location will respond to that call.

In metropolitan WA all ambulance depots are operated by paid professional paramedics and are strategically located to attain the response time targets outlined in the contract. Conversely, in country WA the location of volunteer Sub Centres has grown organically over time and are located in areas where the community has advocated for the service. Contractually, SJA must use its “best endeavours” to maintain optimal numbers of volunteers in all country Sub Centres and provide a service in a stipulated list of 114 volunteer locations and in 12 salaried locations country WA.

There is further inequity in patient care available between metropolitan and country WA due to differences in workforce. Patients in metropolitan areas will be attended to by a qualified Paramedic or the most suitably skilled person for their particular need when they call for an ambulance or an Inter Hospital Patient Transport (IHPT). In country regions, patients can be attended to by a Paramedic or a volunteer, depending on where the patient is located not dependent solely on need. While the contract requires volunteers to be trained to a certain level, this level is not equivalent to a Paramedic. The community cannot be assured the most appropriately skilled person for the level of care required will be tasked to attend their needs. Moreover, due to scope of practice limitations on volunteers, some expectations- such as delivery of certain pain relief options- are not able to be met if the country patients are under the care of a volunteer.

Other patient transport providers

The RFDS provides aeromedical and primary health care across WA and is an integral component of the patient retrieval and transport system. They currently have 15 operational aircraft across six facilities in Jandakot, Kalgoorlie, Meekatharra, Port Hedland, Derby and Broome. The majority of RFDS responses relate to IHPT, which is when they most commonly interface with an ambulance.

IHPT transport is requested by clinicians if their patients require transport in excess of 100-200 kilometres (depending on region) and/ or stretcher transport and medical care during flight. When a patient requires an RFDS transfer an ambulance is required to move the patient from the hospital to the closest airstrip. The RFDS will coordinate and book the ambulance service to collect the patient from the retrieval hospital and transport them to the airstrip. Once the RFDS lands at their destination, either country or metropolitan, RFDS coordinates and books an ambulance to meet the aircraft at the arrival point and transfer the patient to their destination. The majority of patients are collected at the airstrip, however for critically ill and complex patients, the RFDS retrieval team may elect to travel in to the hospital to “package” the patient for transport in better surroundings than at the airstrip.

The Department of Fire & Emergency Services (DFES) operates WA's Emergency Rescue Helicopter Service (ERHS), a fleet of two helicopters which operate out of Perth and Bunbury. The helicopters have an operational radius of approximately 240km (to scene and back) without needing to refuel.

The ERHS conducts Primary Care Retrievals, Secondary Care Aeromedical Inter-Hospital Patient Transfer (IHPT), Search & Rescue and other approved tasks. The helicopters operate as a network, providing redundancy cover for each other and are crewed and equipped for primary medical care, including specialist critical care Paramedical services that can be rapidly deployed to incidents or inaccessible patients.

Primary Care Retrievals are tasked and coordinated through the SJA State Operations Centre (SOC). Conversely for IHPT the coordination of the ERHS is integrated with the RFDS fixed wing service. In these circumstances the RFDS provides a medical officer to assess and coordinate the ERHS, and to accompany critically ill patients in conjunction with the SJA critical care Paramedic. This service is a joint operation between SJA, RFDS and DFES.

Finally, throughout country WA there are a number of Aboriginal Community Controlled Corporations and non-government organisations, such as Silver Chain, which deliver primary care, chronic condition and care coordination programs to remote Aboriginal communities within WA. In some circumstances these communities are not serviced by a SJA Sub Centre resulting in the Aboriginal Community Controlled Organisations delivering transport services such as transporting patients to the airstrip. The clinic vehicles and very remote health services operated by WACHS and Aboriginal Community Controlled Corporations contribute to the functioning and provision of the health services in very remote locations in WA. Of note, there are a number of other providers contracted by the Department of Health to provide non urgent patient transport services in the Perth metropolitan area.

In summary, there are a large number of ambulance transport providers across country and metropolitan WA who are required to work together to provide Primary Response and IHPT services to patients across a remote and dispersed geography.

2.3 Innovation and disruption in the delivery of country ambulance services

The already complex system that provides WA's patients with Primary Response and IPHT is set against a backdrop of increasing pressure on country ambulance services, as demand and patient expectation rises. Healthcare is experiencing a wave of disruption from the twin disruptors of increasing consumerism and rapid technological change; demands on the workforce and infrastructure are increasing and country healthcare services globally are seeking alternate methods to provide timely, safe and high quality care to patients.

Any future ambulance strategy must necessarily consider advancements in technology, digital healthcare delivery and innovative service models that can improve capacity and capability of ambulance services. Desktop research was conducted to identify examples and themes of disruptive innovation effecting the delivery of healthcare, including ambulance services, globally.

In urgent and emergency care new technologies are being designed around the consumer, enabling care to be given at the scene by non-clinical bystanders being guided by tele-present clinicians. Technological disruption and innovation will impact WA and in particular the pre hospital health care environment given it's primarily consumer led nature, as opposed to the acute sector where interaction with health services is predominantly clinician led.

The impact of these trends is already being embraced by WACHS; with the endorsement of the new Country Health Digital Strategy, WACHS has positioned itself well to embrace and explore new disruptive technologies. One recent example is the successful development and implementation of the Emergency Telehealth Service (ETS), which provides access to specialist emergency medicine doctors available via high definition videoconferencing to support regional clinicians with acute emergency patients. In WA the government commitment to ongoing innovation in healthcare is clear with the announcement of the new Future Health Research and Innovation Fund which has both research and commercialisation elements.

Likewise SJA has been pro-active in its adoption of emerging technology and community focused solutions such as the development of the state-wide computer aided dispatch system and electronic patient care record. They have for example invested in the deployment of automated external defibrillators (AEDs) in country WA to improve outcomes for patients who suffer a cardiac arrest. Their Community First Responder System uses an app to alert nearby First Aiders to someone in need of help while an ambulance crew is on their way. Looking forward, SJA are trialling a “push to talk” system for country areas to improve rural and remote communications.

Both SJA’s and WACHS’ commitment to innovative systems and technologies demonstrates not only their capability in the digital space but their joint commitment to innovation as a means of driving service improvement. It will be imperative that WACHS and SJA continue to partner together when developing and/or implementing innovative technology.

Examples of innovation in practice

In Sweden drones are being used to reduce the time to defibrillation; a dispatcher activates a drone carrying an automated external defibrillator (AED) to the address of the 911 (emergency) caller. Once it arrives a bystander can detach it and use the AED; initial findings demonstrate this model can reduce response time in rural areas where traditional ambulance response times are longer due to distance.

Tackling similar issues of remote and rural geographies is Zipline in East Africa; remote controlled drones carry supplies (blood, medicines, and consumables) to clinics on demand. Not only has this enabled healthcare to be delivered to more people, it has centralised supply, increased quality control and reduced waste stock. The benefits of such a model for rural WA are clear, of note is that an Australian drone maker is partnering with NASA as part of the Remote Area Medical program successfully delivering medicine to remote clinics.

The next step for drones could be in moving from being delivery vehicles to a means of delivering tele medical interventions i.e. playing an active part in patient care. The US Army’s Medical Research and Material Command unit has been exploring possibilities of using unmanned aerial drones to facilitate a quick and relatively safe medical evacuation from the frontline.

Elsewhere ‘disaster drones’ are being developed that can act as a “bridge” between the physician in a healthcare facility and a patient on the scene of an accident/disaster. The drone is sent to the scene and through technologies such as Goggle Glass, physicians can interact directly with the patient and bystanders to deliver urgent and emergency care in disaster situations. Far from simply dropping packages of supplies this would see drones giving those people on the scene medical intervention capability at a time critical point for the patient.

Crucially, this is not innovation that is being developed in isolation of frontline clinical services, nor is it a futuristic pipe dream for public healthcare. In the UK the National Ambulance Resilience Unit (NARU) is set to provide their Hazardous Area Response Teams (HARTs) with a reconnaissance drone which has a video camera on board to provide an eye in the sky at accident scenes. A trained drone operator at HART will work alongside paramedics, giving them an overview of patients’ condition and location. NARU is working with other emergency services and government departments to develop a combined national strategy for drones.

Partnering in innovation for WA’s country ambulance services

There is a common thread through each of the examples in that they require new partnerships across and within sectors. Opportunities emerge where technology, industry and research combine; WACHS and SJA need to recognise the opportunity they have and focus on partnering between themselves in key areas if they are to be in a position to seize new opportunities.

WACHS & the ambulance provider could consider the following innovative ways to deliver the country ambulance service in the future:

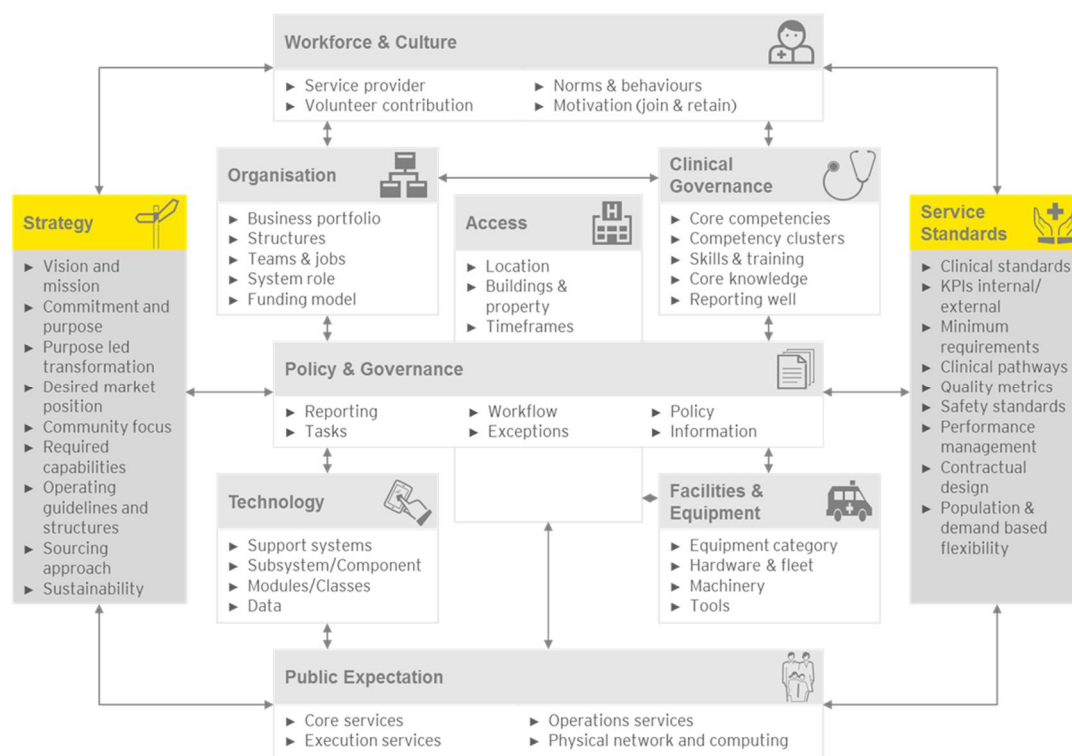
- ▶ Aligned involvement and investment in research & development. Of note is the recent research innovation to address the knowledge gaps in pre-hospital care. The National Health and Medical Research Council has funded the Pre-hospital Emergency Care Australia and New Zealand (PEC-ANZ) Centre of Research Excellence. PEC-ANZ is a collaboration between academic institutions and ambulance services across Australia and New Zealand that will facilitate and coordinate collaborative research projects in the pre-hospital setting with the aim of strengthening the evidence base on which ambulance services can formulate policies and practices, to maximise patient outcomes.
- ▶ Early adoption (potentially as part of trials) of technology, as per the examples above. WACHS & SJA have a unique geography and therefore opportunity to gain maximum benefit from tele-medical health service delivery technology being developed globally.
- ▶ Better connectivity between WACHS & ambulance provider to provide live data to WACHS sites that show information on availability and location of ambulance assets and the status of patients.
- ▶ Integrated clinical coordination and command between WACHS and transport providers via the use of innovations such as telehealth and ETS.
- ▶ Shared training around common outcomes and jointly recognised qualifications. Investigation should be conducted to determine the appropriateness for ambulance staff and volunteers to join WACHS training opportunities via the use of ICT.
- ▶ Development of workforce, especially in remote areas where low case numbers present the opportunity to develop positions capable of conducting the duties of a nurse and paramedic.

3. Strategy development methodology

3.1 The strategy development framework

The strategy development framework was used to set out all areas the strategy needed to address. The strategy was developed through a variety of approaches exploring these areas. These comprised; a jurisdictional scan, consideration of previous reviews, analysis of existing data and documents, financial analysis and extensive stakeholder interviews and sessions. The findings are set out in this section and compiled in to six strategic themes which, following blue sky visioning, delivered four strategic options (see sections 3.7 to 3.9). Option C - Strategic Development was identified as the most appropriate way forward and the full strategy in Section 4 is the detailed recommendations to achieve this future state.

Figure 4: The strategy development framework



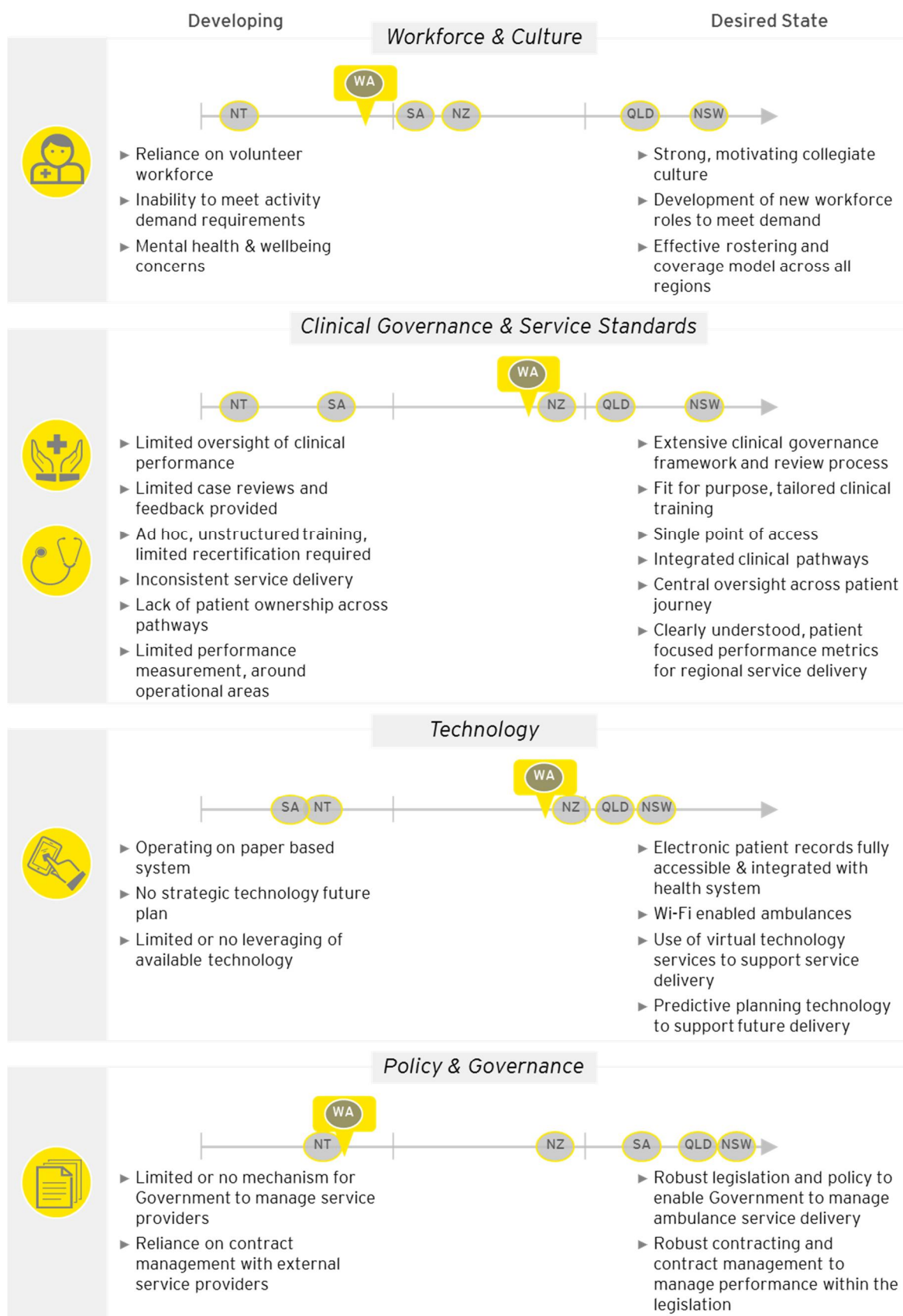
3.2 Jurisdictional scan

Investigation of ambulance service delivery nationally and internationally was conducted to understand how different jurisdictions manage their ambulance service(s), what key challenges were faced and where examples of service excellence existed (particularly for country areas).

From Australia, ambulance services in New South Wales, South Australia, Queensland and the Northern Territory were considered. Particular focus was placed around workforce, service standards, clinical governance, technology and policy and governance. Comparative analysis on the cost of service delivery and workforce structures relative to WA was also conducted.

Globally, the jurisdictional scan considered New Zealand and the Canadian Provinces of Nova Scotia, British Columbia, Alberta and Ontario. The Council of Ambulance Authorities, which provides leadership for the provision of ambulance services in Australia, New Zealand and Papua New Guinea, was engaged to provide a view on the comparisons between Australian states- this is illustrated below in figure 5. This comparison has been confirmed by subject matter resources engaged during the strategy development process. Please refer to the individual summaries which are provided in Appendix 2 for the key findings for each of the jurisdictions.

Figure 5: Comparison of country ambulance service delivery in Australia and New Zealand



3.3 Consideration of previous reviews

In the last decade, there have been seven major reviews into ambulance services in WA. The reviews have had different focuses (service quality to workforce wellbeing) and have delivered a range of recommendations. While many of these reviews acknowledge the *historical* complexities of delivering the country ambulance service in WA, to date there has not been an explicit focus on the *future* strategic direction of country ambulance service delivery in WA.

The below figure is a timeline of reviews into ambulance service provision which were considered as part of the strategy development process. Consideration was also given to the WA Health Patient Transport Strategy 2015-2018 due to its relevance for the provision of transport for country patients.

Figure 6: Timeline of historical reviews into ambulance service delivery



The reviews into ambulance services in WA stretch back to the 1997 Bruce Donaldson review, *The Provision of Ambulance Services in Western Australia – A Model for the 21st Century*. This review found that volunteers are critical to maintaining high quality ambulance services outside the metropolitan area and that there is a clear need to provide financial assistance to volunteer operations which have insufficient access to other sources of income. Recommendations made by this review included the development of robust performance monitoring systems within the purchaser-provider relationship and the introduction of regulatory structures through legislative amendments to both protect the just actions of ambulance officers and ensure the community is protected from the potentially adverse results of competing services operating in a regulatory vacuum.

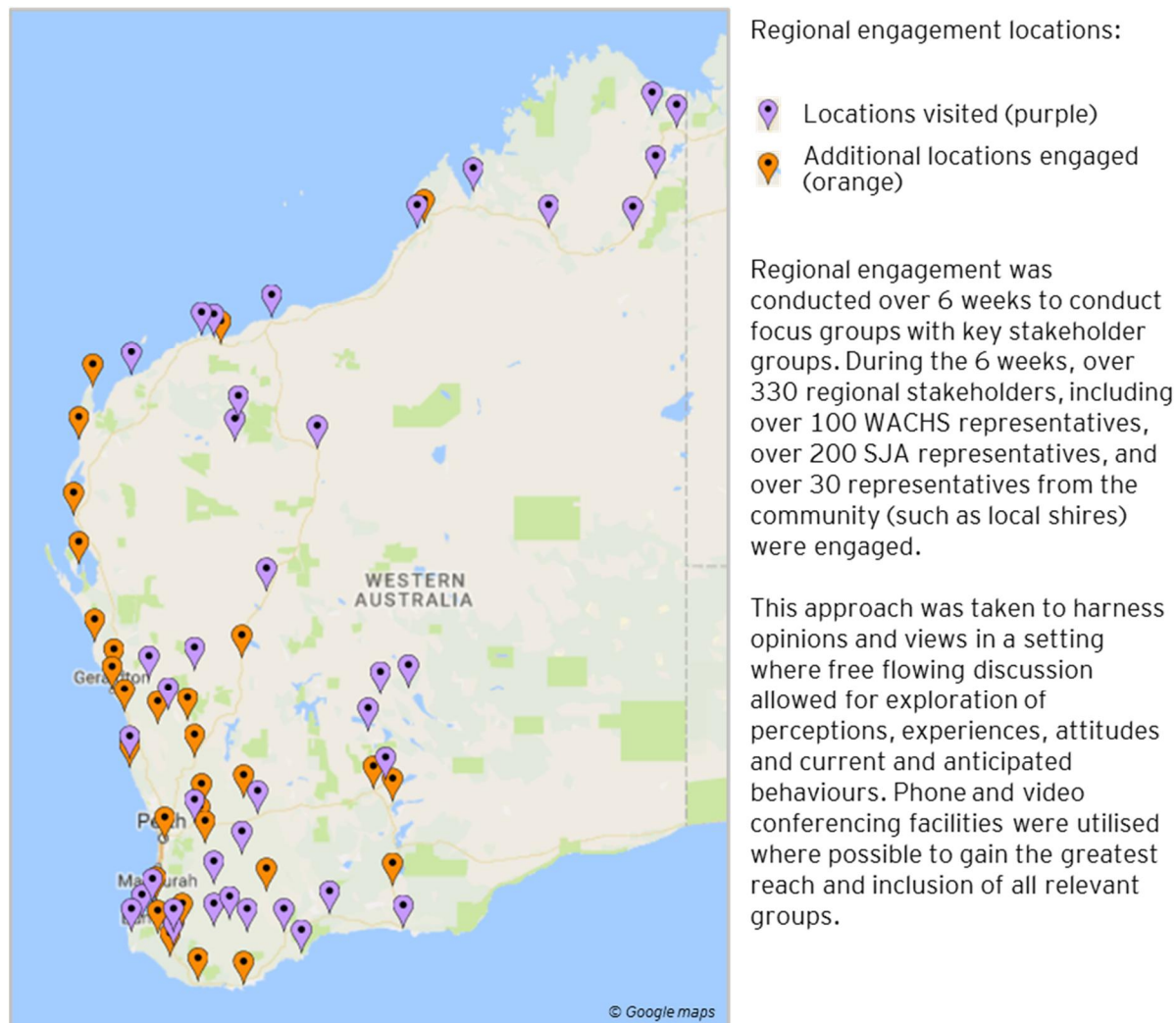
The 2013 Western Australian Auditor General's Report - Delivering Western Australia's Ambulance Services- outlined a number of recommendations to improve the effectiveness and accountability of ambulance services including: the development of a new funding model for ambulance services focusing on standards, performance and allocation of risk; central monitoring of financial data including the cost to government; inclusion of contractual minimum standards for ambulance services and effective mechanisms to monitor these; and requiring service providers to report comprehensive performance data using additional cost and clinical indicators.

The most recent report is by the Independent Oversight Panel, *Review of St John Ambulance: Health and Wellbeing and Workplace Culture* (2016) and highlights the risks and sustainability issues of the country ambulance workforce. This report identified that the "current model for ambulance services in the country poses increased risk to individuals due to stressors unique to the country model. The Panel therefore believes that perpetuation of the current model for the provision of country ambulances presents risks to the community and the State" (Finding 17). The recommendation was made that "St John work with the State Government through the WA Country Health Service to determine a long term solution to the provision of country ambulance services to rural and remote areas of Western Australia" (Recommendation 15).

3.4 Regional and stakeholder engagement

A significant and valuable component of the project was the widespread engagement with representatives from WACHS, the KAS, SJA, RFDS, the community, the Department of Health and others across all seven country regions and the Perth metropolitan area. Over 100 meetings with over 350 stakeholders across the State were conducted to gather key insights around the complexities, challenges and successes associated with country ambulance services in WA.

Figure 7: Regional stakeholder engagement – stakeholder locations



The insight and detail gathered from these meetings was invaluable and is detailed in Section 4. The high level key themes arising from the regional engagement included:

- ▶ The strong value placed on the country ambulance service by country communities.
- ▶ The strong value placed on the volunteer ambulance officers by country communities and the need to provide these volunteers with ongoing support.
- ▶ The universal support for the Community Paramedic model.

3.5 Key document and Activity Data analysis

Targeted analysis and review of key documents and activity data was used to confirm and clarify stakeholder statements and to provide further information and context for the strategy development. The analysis of activity data covered ambulance activity, workforce and service coverage. The findings of this analysis were also used to evidence the recommendations listed in section 4. The below is an example of the data analysis used to demonstrate the service coverage provided by SJA in WA.

Figure 8: SJA service coverage in WA (80km radius around SJA locations)

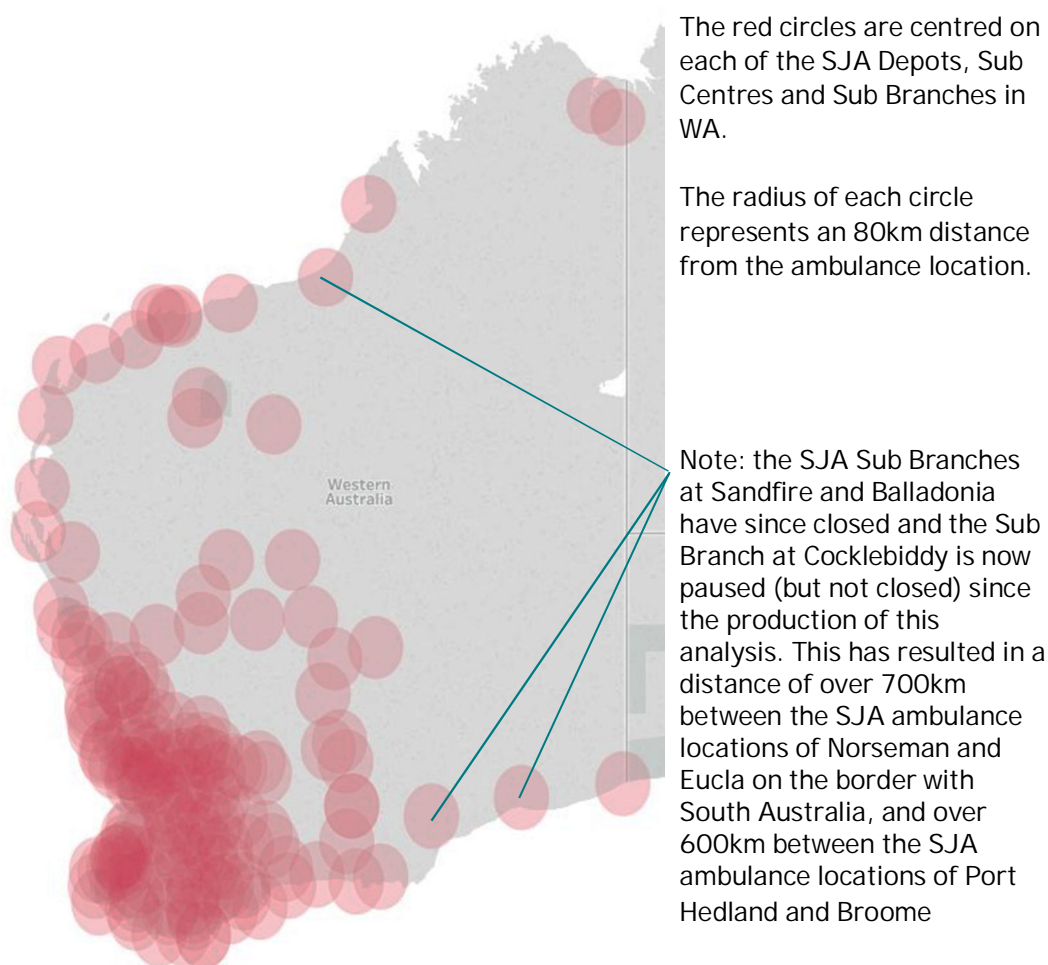


Figure 8 demonstrates that whilst some areas in WA have relative proximity to one or more SJA locations there are areas that are not within 80km² of any SJA Depot, Sub Centre or Sub Branch. The map shows there is significant overlap of SJA locations within the south western portion of WA (the South West, Wheatbelt and Great Southern regions of WACHS). Outside of this area there are significant stretches of country WA that are not within 80km of any SJA location.

² 80km was chosen as a representative distance within which a timely ambulance response was possible, noting that in many instances road distances within this may be greater than 80km.

3.6 Financial analysis

Analysis of financial data was undertaken to examine the financial, expenditure and funding models of the country ambulance service. It should be noted that analysis relating to financial models was limited due to the lack of available data currently captured in the country ambulance system. This is not intended as a criticism of service providers or contract managers but rather to caveat the analysis undertaken and to highlight that increased data capture is an area for improvement.

There is no single agreed view of the costs attributable to country ambulance service as there is no contractual requirement for SJA to report expenditure for the operation of country ambulance services to WACHS or the Department of Health. Additionally, the contract is silent on the allocation of General Service Payment between metropolitan and country services. The perceived lack of financial equity between the country and metropolitan ambulance services was an area of concern highlighted by many stakeholders. The financial analysis undertaken supported this perception; Figure 9 below provides an overview of this financial inequity using the data that was made available.

Figure 9: Financial overview of SJA services in WA

| Area (WA) | FY'16 Activity (Incidents) | FY'16 Operating Expenditure | FY'16 Bad Debts | FY'16 Estimated Population | Expenditure per activity | Expenditure per capita | Bad Debt per capita |
|--------------|----------------------------|-----------------------------|-----------------|----------------------------|--------------------------|------------------------|---------------------|
| Metropolitan | 227,063 | \$194,414,419 | \$13,339,213 | 2,022,044 | \$856.21 | \$96.15 | \$6.60 |
| Country | 62,022 | \$46,934,943 | \$7,520,018 | 536,907 | \$756.75 | \$87.42 | \$14.01 |
| Total | 289,085 | \$241,349,362 | \$20,859,231 | 2,558,951 | \$834.87 | \$94.32 | \$8.15 |

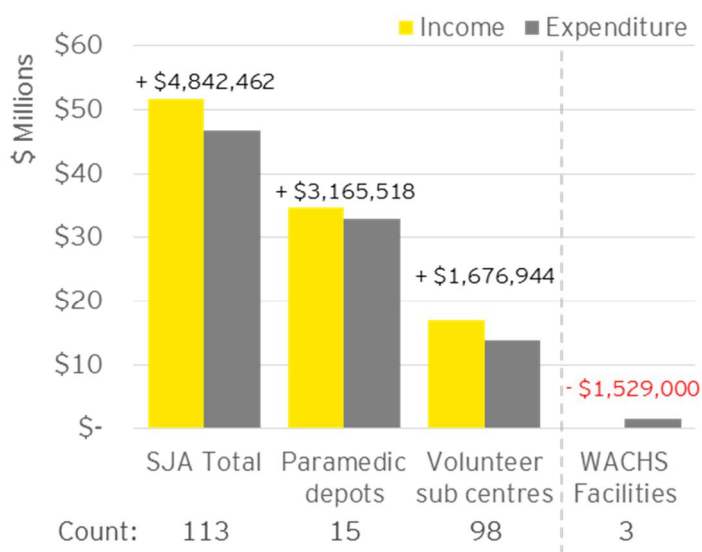
Source:

- FY'16 Operating Expenditure and Activity data taken from the SJA FY'16 Annual Report
- FY'16 Bad Debts taken from Finance data supplied by SJA for FY'16
- FY'16 Estimated Population taken from the Australian Bureau of Statistics, Estimated Resident Population as at 30 June 2016

Information contained within SJA's FY'16 Annual Report indicates that SJA spends roughly \$100 more in metropolitan WA than in country WA per completed incident (Primary Response or IHPT). Furthermore, SJA's spend per capita is \$9 lower in country WA compared with metropolitan WA. This runs counter to the pattern in healthcare more broadly where rural and remote delivery costs are higher; a fact recognised by the rural loading applied by the Independent Hospital Pricing Authority (IHPA). Bad Debts are also more pronounced in country WA, with per capita debt more than double that of the metropolitan area during FY'16, representing 26% of the income received for Primary Response cases (fees for IHPT are invoiced to WACHS facilities).

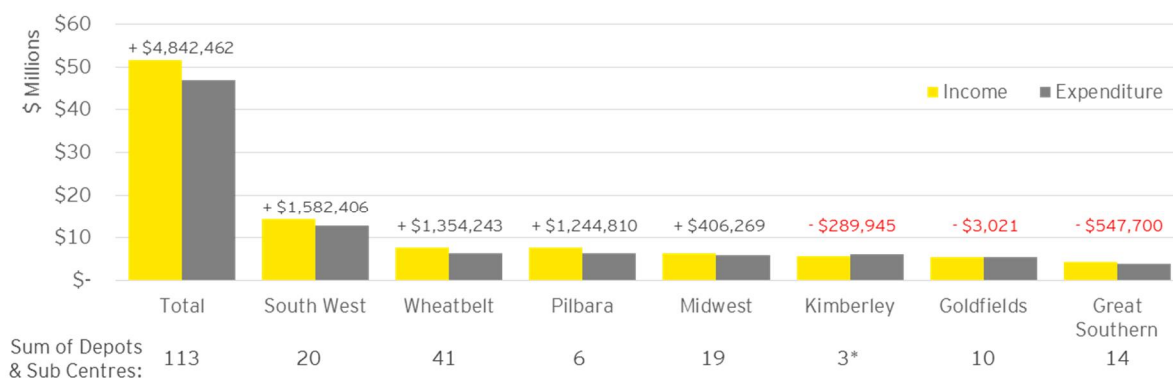
In FY'16, SJA reported a surplus of \$22.2M after tax across both metropolitan and country services (During FY'15 SJA posted a surplus of \$21.5M after tax). There is no requirement in the contract for an investment plan to reinvest any surplus back into the services and infrastructure for ambulances in WA. The lack of direction provided in the contract limits the analysis that can be performed by the contract holder regarding whether funding is allocated efficiently and effectively. Figures 10 and 11 provide an overview of the income & expenditure of the country ambulance service by model and region.

Figure 10: Country income & expenditure by model



In country WA, SJA Depots and Sub Centres posted a surplus of \$4.8M during FY'16, with Paramedic Depots contributing over \$3.1M of this surplus.

Figure 11: Country income & expenditure of SJA Depots and Sub Centres by region



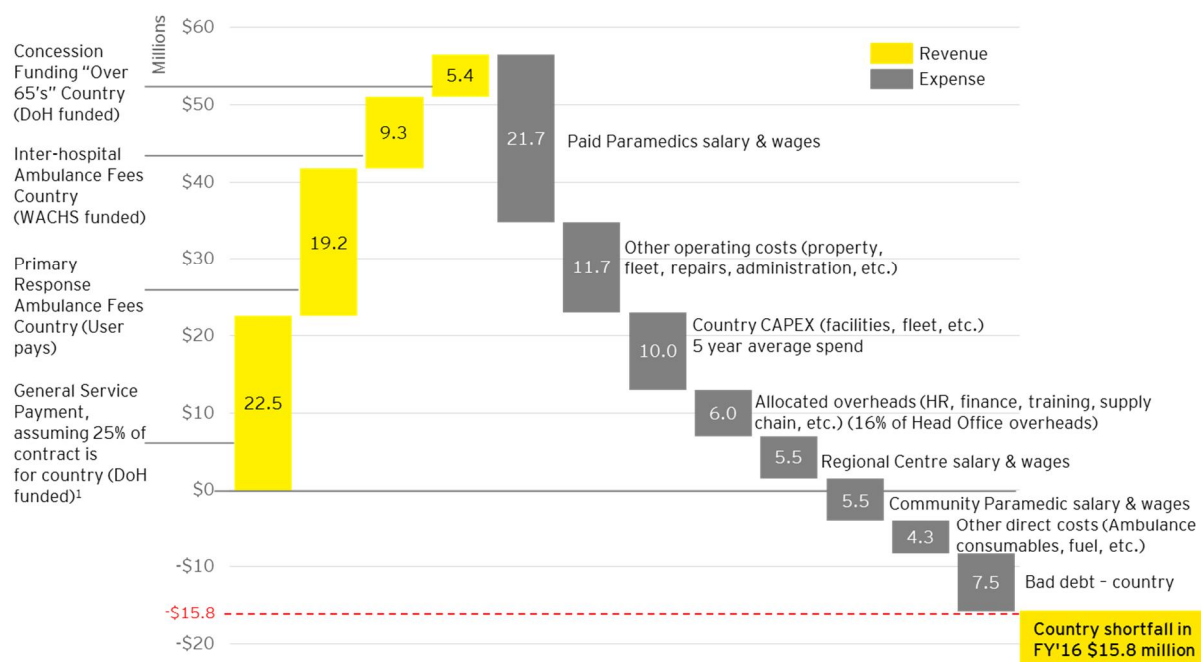
*Note: this does not include WACHS run facilities above, SJA only

Collectively the SJA Depots and Sub Centres are financially strong, however the distribution of funds across the Sub Centres may not be equitable. Of the seven WACHS regions, the Depots and Sub Centres, four of the regions posted a surplus during FY'16, with the South West, Wheatbelt and Pilbara regions all posting a surplus in excess of \$1.0M. The SJA Depots and Sub Centres in Great Southern, Goldfields and Kimberley regions all posted a deficit.

During the regional engagement, stakeholders explained that in some regions funds/programs were in place to distribute income amongst the Sub Centres. However, stakeholder feedback advised that the availability of these regional funds is not well understood and they are not mandatory in every region. The Great Southern, Midwest and Wheatbelt are all listed as having a Regional Support Fund (a resource sharing fund between Sub Centres in the region) in the FY'16 SJA Annual Report.

Information provided by SJA stated that SJA's metropolitan ambulance services cross-subsidises the country ambulance services to the order of approximately \$10 million per annum. The specific data provided by SJA demonstrates a shortfall of \$15.8m for country ambulance services in FY'16. Figure 12 presented below is SJA's representation of the cross-subsidisation required to fund country ambulances services during FY'16. Please note that the data used to generate this figure is distinct to the data used to prepare figures 10 and 11.

Figure 12: SJA's view of the cross-subsidisation required for country ambulance services



¹ The DoH contract amount is weighted 75% for Metropolitan and 25% Country in line with the split of Paramedic salaries and the amount of Priority 1, 2 and 3 cases (which are both approximately a 75%/25% split). This is an arbitrary split as the contract does not state that funding is to be allocated between Country and Metropolitan.

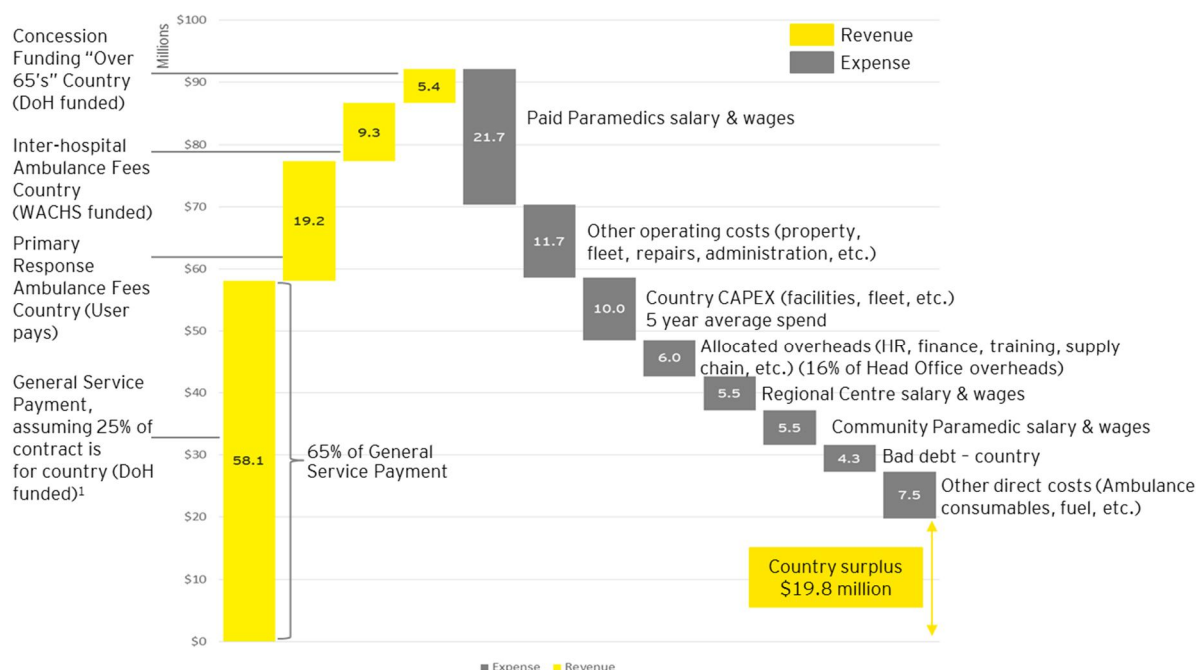
SJA's 25% attribution of the General Service Payment to country services uses Paramedic salaries as a comparison measure as demonstrated in figure 12. The cross-subsidisation could be represented differently based on the measure that is used for the attribution of the General Service Payment. Alternate measures to determine the proportion of the General Service Payment allocated to country may be considered which demonstrate different views of the cross subsidisation of country ambulance services by the metropolitan service. Holding all other inputs constant, alternate measures and subsequent apportionment are detailed in Figure 13 below.

Figure 13: Alternate measures of the General Service Payment allocation

| Alternate Measure | Alternative % Payment to country | Resulting funding to country (FY'16) | Resulting country deficit / surplus (FY'16) |
|---|----------------------------------|--------------------------------------|---|
| Current split used by SJA | 25% | \$22.5M | -\$15.8M |
| Paramedic Depots located in country (16) vs metro (30) | 35% | \$31.3M | -\$7.1M |
| % split required for Country to break even | 43% | \$38.4M | \$0 |
| % of ambulances located in Country (349) vs metro (184) | 65% | \$58.1M | +\$19.8M |
| Depots and Sub Centres located in country (115) vs metro (30) | 79% | \$70.6M | +\$32.2M |

Figure 14 presented below is an alternate view of SJA country income and expense in FY'16 using a 65% apportionment of the General Service Payment to country (% of ambulances located in country vs metropolitan areas as a measure).

Figure 14: Representation of a 65% apportionment of the General Service Payment to country

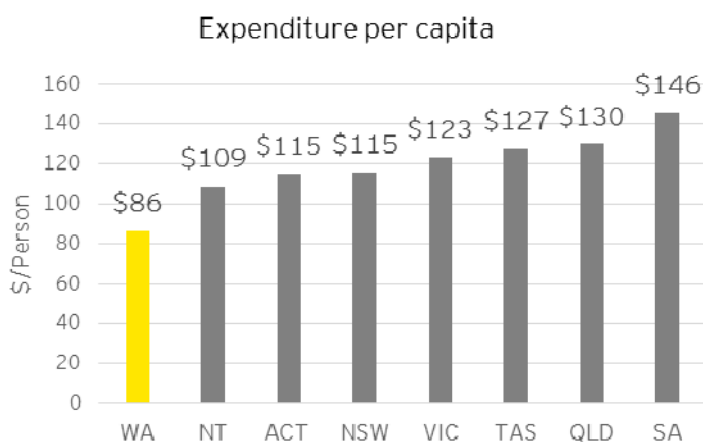


Over recent years, Governments have shifted away from block funding in health, moving towards activity based funding where possible. Block funding is largely used to support areas where service provision is required but activity levels do not allow sufficient funding by activity alone. Applying this approach to the General Service Payment in the SJA-WACHS contract, a greater proportion of this payment could be allocated to country ambulance services. In FY'16, metropolitan activity accounted for 75% of total activity and utilisation of ambulances was much higher in the metropolitan area (1,381 cases/ambulance) than in the country (177 cases/ambulance). As a result, it is likely the metropolitan service has a greater ability to fund based on activity levels, while country regions would require block funding to support capability given their lower activity levels.

Overall, the financial analysis conducted as a part of the strategy development process confirmed that the spending on ambulance services is not equitable between country and metropolitan Western Australia and Western Australia has a significantly lower spend and income on ambulance services.

WA ambulance service operates with the lowest income per capita out of all the states and also spends the least per capita.

Figure 15: Expenditure per capita on ambulance services by state



Summary financial analysis points:

- ▶ The WA ambulance services receives the *lowest funding amount from government* per capita out of all the states
- ▶ The funding received per capita from *charges to patients* by the WA ambulance service is the *second highest* of all the States
- ▶ The WA ambulance service *spends the least* per capita of all the states/ territories
- ▶ *SJA spends \$9 less per person in country WA* than it does per person in metropolitan WA.
- ▶ *SJA spends on average \$100 less to complete one ambulance incident (Primary Response or IHPT) in country WA*, compared to one ambulance incident in metropolitan WA.
- ▶ During the 2016 financial year *bad debt for the country ambulance services was twice that of the metropolitan ambulance service* based on both total ambulance activity and population.

3.7 Summary of findings

In summary, the quantitative and qualitative strategy development work revealed that inequity exists between metropolitan services and those in the country, as well as between the regions within the country.

The service model- having organically grown from the pro-active and collective good work by SJA volunteers- is under immense pressure from rising demands, particularly from increasing IHPT- and is suffering from significant fragmentation between the multiple system players. The new patterns of demand are not optimally served by the historical model that is in place and equity of service for country patients is unlikely to be achieved without targeted additional investment in the country ambulance service.

The findings (detailed in section 4) were categorised under common areas.

The six areas are summarised below:

- ▶ **Policy and system:** There is no policy or legislation for country ambulance service delivery which causes a lack of clarity over roles, accountabilities and standards.
- ▶ **Timely Access:** The growth in demand (particularly for IHPT) and lack of defined service standards/ KPIs in the contract means reasonable expectations around timely access (i.e. that take in to account the greater distance in country) are not guaranteed.
- ▶ **Patient Safety:** The lack of contract clarity, integrated systems and governance frameworks means there are barriers to consistently delivering safe and contemporary clinical care.
- ▶ **System Coordination:** The number of different organisations and systems involved in the transportation of country patients are not working optimally together around the patient.
- ▶ **Sustainable and skilled workforce:** There is increasing pressure on the country ambulance workforce from increasing demand. Current systems and training do not enable the workforce to deliver seamless care around the patient.
- ▶ **Value for money:** Whilst there is no one agreed cost of country ambulance services in WA it is clear that there is an inequity in the funding between country and metropolitan and between WA and other states. The resultant inequity of service in country WA is unlikely to be addressed without targeted additional investment.

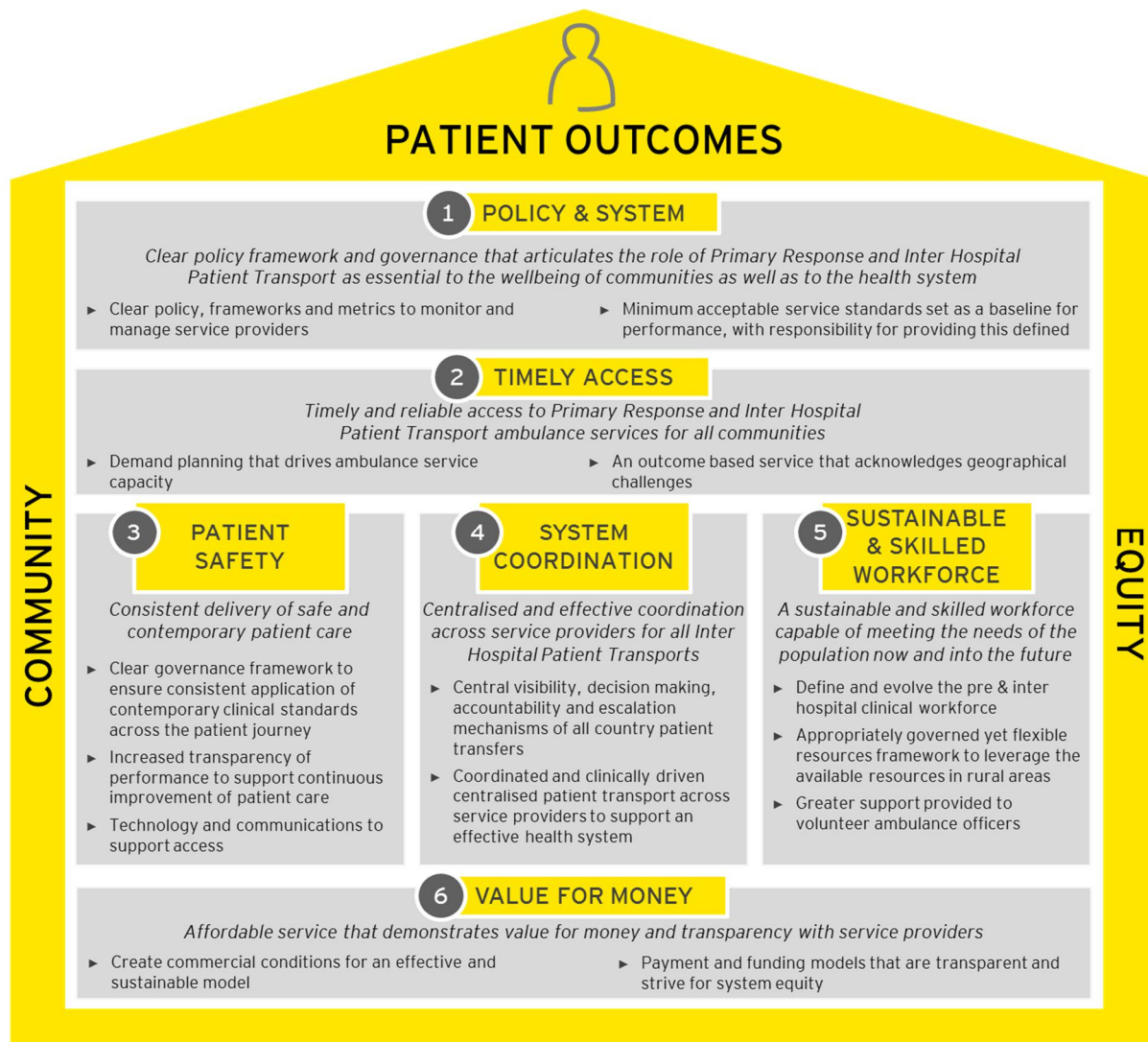
Detailed findings and evidence for these themes can be found in Section 4.

3.8 Strategic themes and future state goals

The findings of the project work were then viewed in reverse: if these are the six main problem areas that the findings can be grouped under, then what does service excellence look like for each of them? This exercise was undertaken and the six strategic themes along with future strategic goals were formed.

The following strategic themes will guide the required step change in ambulance service delivery in country WA.

Figure 16: The six key strategic themes of the WA Country Ambulance Strategy



3.9 Blue sky visioning and Strategy validation

A blue sky visioning workshop was undertaken to develop a future vision of ambulance services in WA around the six strategic themes. During the workshop stakeholders from WACHS, SJA, metropolitan health services, Regional Development and the country communities were tasked to develop a future vision of ambulance services in WA.

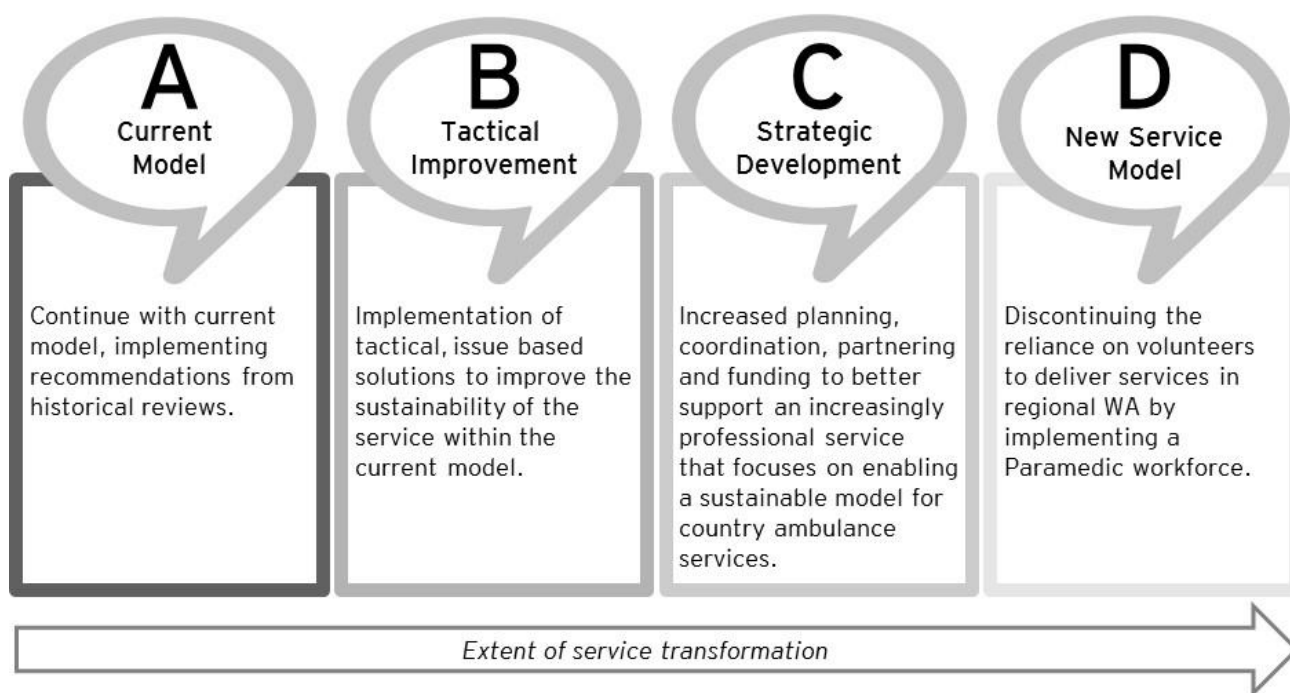
Subsequently the findings, strategic themes and goals were reviewed and validated by corporate and medical representatives of WACHS, representatives of the Kimberley Ambulance Service, Community Paramedics and volunteers from SJA and representatives of the Department of Health.

3.10 Strategic options assessment

Four strategic options were then identified as possible approaches for how the future state of ambulance services in WA could achieve the strategic goals. These options were:

- ▶ Option A - Current Model - Maintaining the current country ambulance service delivery model with no significant change.
- ▶ Option B - Targeted Improvement - Requiring additional investment for the implementation of tactical, issue based solutions to improve the sustainability of the service within the current model.
- ▶ Option C - Strategic Development - Increased planning, coordination, partnering and funding to better support an increasingly professional service that focuses on enabling a sustainable model for country ambulance services.
- ▶ Option D - New Service Model - Discontinuing the reliance on volunteers to deliver services in regional WA by implementing a Paramedic workforce.

Figure 17: The four strategic options



Options A and B represent derivations of the current service delivery model, with continued improvement to address operational issues. Options C and D require more significant step changes to address key strategic concerns. The four strategic options were assessed on the level of transformation required, cost, impact on the community, complexity of implementation and how well they achieved the six strategic themes.

Option A would maintain the current contract and model for delivering ambulance services with the same staffing models and clinical practices, while delivering similar clinical outcomes and value for money as seen in recent years. This option does not take into consideration changes to population demographics or staffing/volunteer numbers which would place pressure on achieving the same clinical outcomes in the future.

Option B would continue to operate the current service delivery model whilst implementing tactical improvements that were shared by stakeholders during the regional engagement. These improvements would be add-ons to the current operational structures or projects which would

remain largely unchanged. Again, this option does not take into consideration changes to population demographics or staffing/volunteer numbers and their ability to cope with rising demand.

Option C would build upon the successes of the current model while introducing further initiatives to enable WA's country ambulance service to meet the needs of regional communities into the future. This option improves planning, coordination, partnering and funding arrangements that drive a sustainable model into the future. It is underpinned by the application of service renewal facilitated by new technologies. Option C focusses on determining future needs of WA's population in rural and metropolitan areas and the ambulance service's role in meeting these needs in a sustainable and equitable manner.

Option D proposes a model where the current workforce model would be replaced with a fully paid and professional workforce across the entirety of WA. This model has the potential to operate as an in-house government model incorporating all road and aeromedical ambulance services into the same organisation. However, the instigation of a fully paid workforce and the requirement to purchase or lease facilities across WA would involve a significant increase in funding that is likely to be unaffordable for the system and the WA tax payer. The recruitment of a paid workforce and a rationalisation of locations, would require significant time and effort to implement, with service degradation of the current service in the short term potentially leading to poorer clinical outcomes. Finally, the removal of volunteers and an established service provider from providing some aspect of ambulance services would likely cause significant negative community reaction. This negative reaction could lead to significant loss of direct and indirect community investment in the country ambulance service.

In light of the consultation process, WACHS considers that Option C – Strategic Development offers the best balance of achievable improvements to address the identified inequities in service provision. Strategic Development will build upon the successes of the current model while introducing further initiatives to enable WA's country ambulance service to meet the needs of regional communities into the future. It is underpinned by the application of service renewal facilitated by new technologies. Option C has a particular focus determining future needs of WA's population in rural and metropolitan areas and the ambulance service's role in meeting these needs in a sustainable and equitable manner.

To achieve the Strategic Development required for ambulance service delivery in country WA a series of recommendations were developed under each of the six key strategic themes. The recommendations developed for Option C and the evidence to support each recommendation is presented in Section 4.

3.11 A vision for the future

This strategy is future looking, with the goal of setting the foundations for a sustainable service for country communities. In working through the strategy and associated recommendations we have considered what the future will look like from different stakeholders' perspectives.

From a Community perspective:

- ▶ The goals and expectations of the ambulance service will be clear to the community and delivered under a clear policy.
- ▶ The ambulance service will be maintained as a cornerstone of the community, where volunteers and paid staff are recognised for the contribution they make to the health of people in the country.
- ▶ Country communities are ensured that when an ambulance service is requested, a response will be provided, as they have access to an equitable, continuous and defined ambulance service.
- ▶ Service performance and clinical outcomes will be made available to the public.

- ▶ The cost to the user for accessing ambulance services is clear and transparent.

From the Patient's perspective:

- ▶ Patients and communities will be aware of what ambulance services are available in their area, and the performance standards they are required to meet. The most appropriate service models are in place for all locations in country WA.
- ▶ When people call an ambulance, they feel assured that the care they will be provided is in line with clear and published standards throughout the duration of their care.
- ▶ Care across the country WA is patient centric and delivered by a workforce that meets recognised standards of training and governance.
- ▶ Transfers to other WACHS facilities or Metropolitan sites will occur in a clinically appropriate timeframe, by the most clinically appropriate method.

From a WACHS perspective:

- ▶ The service will be delivered under a clear policy, setting the goals and expectations. These will be clear to WACHS.
- ▶ WACHS staff will be aware of the capability and capacity of the service provided in their location.
- ▶ WACHS staff will have real time communications with ambulance service providers. In emergency situations they will be informed of arrivals and be briefed on patient condition and arrival time.
- ▶ Staff from WACHS and ambulance service providers will have trained together regularly and be clear of their roles, responsibilities and capabilities – the emergency situation will be seamless.
- ▶ A formal mechanism operates for the access of alternate providers to address urgent patient transport needs when providers are unable to meet the clinical priority timelines.
- ▶ IHPT's will be coordinated from a central point finding a suitable bed in the right location for the patient, relieving local WACHS teams of the need to simultaneously manage the patient while also coordinating transfers. Clinicians can focus their attention on the immediate patient needs.
- ▶ Clinical governance will consider the ambulance interaction as a key component of the overall patient pathway. Patient outcomes, incidents and innovation initiatives will be reviewed and assessed together with ambulance service providers.
- ▶ The prehospital care will be an integral part of the patient pathway, co-designed with ambulance service providers to the highest standards of contemporary evidence based care.
- ▶ Equipment, consumables, medical records and procedures will be compatible, and where possible consistent, between ambulance service providers and WACHS.
- ▶ WACHS will have visibility of the clinical outcomes performance of ambulance service providers and the means to confirm that investments and funding allocations are transparent. The investment and funding model will drive equity.
- ▶ The modernised contract for ambulance services is managed by WACHS including performance measures and clinical outcomes. The contract is complementary to metropolitan contractual arrangements.

From an Ambulance Provider perspective:

- ▶ The service will be delivered by ambulance provider under a clear policy, setting the goals and expectations.
- ▶ Volunteer and paid staff time will be universally respected for their skill set and considered a key component of the patient pathway. Teams can be reassured that all IHPT calls are clinically appropriate and have taken into consideration local skills, workforce pressures and the local environment.
- ▶ Longer term contracting will support strategic investments and long range planning to build capability and capacity.
- ▶ WACHS and the provider will work together to plan for future service locations, allowing longer term investment to support the changing demographics.
- ▶ Location of future services will be coordinated with WACHS to allow for the best possible placement in relation to the needs of the community.
- ▶ Ambulance volunteers and paid staff have access to reliable and continuous communications technology.
- ▶ Volunteers are supported by formal structures and systems to meet their operational, clinical governance and contractual requirements.
- ▶ There will be new opportunities to bolster the workforce through:
 - ▶ Training and qualification for volunteers that is nationally recognised.
 - ▶ Innovative training pathways, recognition of prior learning and transferability of qualifications.
 - ▶ Innovative models for sharing of staff with WACHS.
 - ▶ Increased investment into key locations and successful initiatives such as the Community Paramedic model.
 - ▶ Receiving and participating in joint training with WACHS and other emergency services while recognising the already major contribution volunteers make.

From a System Manager perspective:

- ▶ The System Manager manages compliance with the enacted state-wide Ambulance Services policy.
- ▶ The State's approach to safety and quality is embedded in the integrated clinical governance model and promotes transparency of outcomes across all Health Service Providers and patient transport service providers.
- ▶ The true cost to the State Government of providing ambulance services is transparent to the System Manager to enable sustainable and equitable provision of the essential public service.

4. Country ambulance strategy

The strategy is structured around the six strategic themes. For each theme the strategy covers:

- ▶ The strategic goal
- ▶ Key gaps where the current service falls short of the goal
- ▶ Recommendations for addressing these gaps
- ▶ A summary of the key evidence gathered through the jurisdictional scans, stakeholder feedback, and data/ document analysis.

The country ambulance strategy sets out how the system can work together to bridge the gap between current and future state, support future service improvement and drive a greater commitment to long term sustainability in country ambulance service delivery.



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4.1 Policy & system

Clear policy framework and governance that articulates the role of Primary Response and Inter Hospital Patient Transport as essential to the wellbeing of communities as well as to the health system.

The goal

- ▶ *The responsibility for ensuring access to equitable and continuous ambulance services to the Western Australian community is defined within an overarching policy.*
- ▶ *The role of ambulance service providers road based ambulance services as being key to the health care system in WA is articulated and a governance framework (the Clinical Services Framework) defines all ambulance services available in each location.*
- ▶ *The most appropriate provider of ambulance service is delivering a high quality continuous and measurable service.*
- ▶ *The management of contracts related to ambulance services is in alignment with the new WA Health System governance arrangements and responsibilities.*

Gap analysis

- ▶ There is currently no legislation or system-wide policy governing ambulance service delivery in WA, resulting in inconsistent standards applied to the different ambulance providers servicing WA; this includes WACHS operated services such as the Kimberly Ambulance Service.
- ▶ A state-wide Ambulance Services policy has not been created under the Policy framework nor referenced back to Health Services Act 2016.
- ▶ The current state-wide ambulance contract no longer reflects the changes to the WA health system governance arrangements with the System Manager responsible for facilitating equity through policy and the health service provider's managing the contract, performance and funding agreements
- ▶ The responsibility for ensuring that country locations have access to a continuous, equitable emergency ambulance service to country WA is therefore not articulated. There is no state-wide Policy on ambulance services and the current contract allows a best endeavours approach to service provision for 90% of country locations.
- ▶ There is no formal recognition and acknowledgment that an ambulance service is integral to a highly functioning health service. The requirement and accountability to provide an ambulance service is currently not considered in health services planning either as the pre-hospital provider of emergency care or the transport provider between facilities for definitive care.
- ▶ The different providers of ambulance services within country WA are not consistent in their service provision capabilities and not subject to consistent performance indicators, training and workforce requirements or structures for clinical and corporate governance.
- ▶ There is no consistent method in determining the most appropriate provider of ambulance services for country locations. In some locations WACHS and some Aboriginal Community Controlled Corporations are delivering the services by default with no consistency or recognition of them as the provider of both primary response and IHPT ambulance services.

Recommendations

Develop policy, and potentially legislation, to define and assign responsibilities of the ambulance services in WA as the starting point for enabling access to continuous services for country communities. The contracts with single or multiple providers of Primary Response and IHPT ambulance services will clearly define the services and outcomes expected for country WA.

1. Establish clear state-wide policy on ambulance services as a minimum and consider enacting legislation in line with other states and territories. (Department of Health)
2. Define the level of ambulance service (both IHPT and Primary Response) provided to country communities in line with the state-wide policy (WA Country Health Service) and include this within the Clinical Services Framework (Department of Health).
3. Plan state-wide service delivery using demand modelling then work with providers to design appropriate service delivery models in all locations (existing and new) and include measurable performance indicators in contracts. (WA Country Health Service led)
4. Form an engagement forum comprising WACHS, country volunteers, community representatives and paramedics to discuss ongoing service design and service improvement. (WA Country Health Service)
5. Transfer responsibility for the contract management of country ambulance services to WACHS. (Department of Health)
6. Implement the remaining recommendations from the Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) as a matter of priority. (Department of Health)
7. Complete implementation of the WA Health Patient Transport Strategy 2015-2018 to fulfil the goal of ensuring that the WA community has access to an effective patient transport system. (Department of Health)

Evidence

The following summary evidence supports the strategic theme of Policy & System:

Jurisdictional scan & historical reviews

- ▶ WA has no legislation or policy regarding ambulance services, and the Clinical Services Framework is silent on the role of ambulances. Within all other Australian States ambulance services are regulated by legislation and are guaranteed to the public via the packages of legislation, policy, contracts and service level agreements. (1)
- ▶ Without an overarching framework there is no guarantee of an ambulance service across the State and nothing to safeguard high quality ambulance service provision. A policy governing the operation of ambulance services in WA is required to:
 - ▶ Outline who is responsible and accountable for ensuring communities have access to an ambulance service
 - ▶ Outline the standards required of ambulance service providers
 - ▶ Define IHPT as integral component of the WA Health system due to the geographically dispersed nature of the population. (1)
- ▶ In the recently published *Review of Safety and Quality in the WA Health system (2017)* there are a number of key recommendations made which resonant with the Policy and System recommendations as they highlight the importance of:
 - ▶ Developing system-wide policies to facilitate joint working across clinical networks. (1)
 - ▶ Engaging with consumers to determine their expectations. (2)
 - ▶ Having consistent standards across providers and providing transparency of those not achieving the standards to the public. (2)

- ▶ Providing transparent clinical performance data to the public and the need for benchmarked outcomes at a service and organisational level. (3)
- ▶ The Department of Health's WA Health Patient Transport Strategy 2015-2018 was conducted with the goal of ensuring that the WA community has access to an effective patient transport system. The strategy identified a three year action plan to enhance WA Health's patient transport services and is structured across six identified action areas. The six key action areas identified in this strategy are consistent with the recommendations made by the Country Ambulance Strategy. Of particular relevance to the strategic theme of Policy and System are the key action areas of:
 - ▶ Standards - Ensure all services are provided in accordance with appropriate standards. (1)
 - ▶ Governance - Enhance our strategic management of the services and ensure all consumers receive the most appropriate service. (3 & 5)
 - ▶ Provision and Procurement - Ensure the ongoing provision of appropriate services to the Western Australian community. (3)
- ▶ WA is the only Australian State where a component of the ambulances services within the State are provided under a best endeavours model. The current contract outlines that SJA must use best endeavours to:
 - ▶ Provide a Country Sub Centre at all locations stipulated on the Country Sub Centre List, and
 - ▶ Maintain optimum number of volunteers in all country Sub Centres.

The best endeavours model does not guarantee an ambulance service in all country locations, nor does it guarantee a response time target for all country locations within WA. (3)

- ▶ WA has the highest reliance on volunteers to deliver ambulance services of any Australian state. During FY'15 68% of ambulance were volunteers in WA according to the Report on Government Services (2016). Tasmania and South Australia were the next most reliant on volunteers for ambulance services with 61% and 53% of ambulance personnel being volunteers respectively. Queensland (3%) and New South Wales (4%) had the lowest reliance on volunteers as personnel for the ambulance service. (4)
- ▶ The WA Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) listed 12 recommendations under the two broad categories of improving effectiveness and accountability when contracting for ambulance services (to be actioned by WA Health) and improving delivery of ambulance services (to be actioned by SJA). These recommendations were accepted by the Department of Health and work has commenced to implement these, however it is not obvious that these recommendations have been all been fully implemented. (6)
- ▶ The Department of Health's WA Health Patient Transport Strategy 2015-2018 listed actions under each of the six action areas. These actions were accepted by the Department of Health and work has commenced to implement these, however it is not obvious that these actions have all been fully implemented. (7)

Stakeholder feedback

- ▶ The lack of legislation and policy has left the community and WACHS staff unsure of what they can expect and who is responsible for the country ambulance service. (1)

- ▶ It was reported that previous attempts to introduce legislation regarding ambulances in WA since 2009 were not supported by Treasury, as it was suggested the Services Agreement (contract) between the State and SJA be considered a policy statement in the absence of legislation or Government policy. It was recommended that contract standards be developed and implemented as a proxy for legislative requirements, with Key Performance Indicators (KPI) set within the contract to determine whether standards were being met. Concerns remain that the contract is not a sufficiently robust to act as a proxy for legislation in the State. (1)
- ▶ In all other States and Territories in Australia except the Northern Territory, ambulance services are provided by the Government and regulated by legislation. It is an offence to provide a private ambulance service without the permission of the relevant Director-General or Minister. Due to the absence of legislation and policy governing the operation of ambulances in WA the State Government has a limited ability to control the operations of 'rogue' Primary Response ambulance services operating outside of a contractual agreement. (1)
- ▶ The feedback from country consumers highlighted that:
 - ▶ Country consumers believe that the State Government holds the responsibility of providing an ambulance service to all communities in WA.
 - ▶ Country consumers expect that following a 000 call an ambulance (or some form of emergency response such as RFDS) would respond to that emergency anywhere in the state. The consumers did note the time of arrival may, in some cases, be protracted due to the vastness of WA and distances required however a guaranteed response was expected.
 - ▶ Country communities expect to know what ambulance service is available in their local area and also when an ambulance service is not available to them.
 - ▶ There is a considerable commitment by volunteer ambulance officers to the service; they undergo extensive training to keep their skills and knowledge up to date and make themselves available, particularly to be on call, at night. (1)
- ▶ Feedback gathered from country consumers highlighted that people living in WA have the expectation that, when called for, an ambulance will arrive, even if it takes some time. The country consumers believed that those living in country communities deserve the same service as those living in metropolitan areas. Those living in any community can have accidents and health issues, therefore having local paramedics and getting to hospital in the shortest possible time was seen as a major determination of survival rates by country consumers (2).
- ▶ This view was supported in an informal survey of District Health Advisory members across country WA
 - ▶ 100% of community members believe ambulance services are essential for their community.
 - ▶ 100% of community members expect that when they call for an ambulance where ever they live in the State one will arrive.
 - ▶ 100% of community members expect to know when an ambulance service is not available in their community. (2)
- ▶ Clinic vehicles and very remote health services operated by WACHS and Aboriginal Community Controlled Corporations contribute to the functioning and provision of the health services in very remote locations in WA and are sometimes used to provide ambulance services particularly where there are gaps in ambulance service coverage. Some stakeholders highlighted the need to have an agreement to protect and support those organisations to ensure this ad-hoc arrangement does not compromise the local communities. Further work is needed to ensure a common set of standards are applied to these vehicles and services to ensure equity and appropriate patient experience and safety for all communities in WA. (3)

- ▶ The Kimberley Ambulance Service (KAS) is currently regulated and governed by WACHS internally. As such the standards applied to this service, meet local need but are different to the remainder of the State. For example, while KAS staff receive ‘ambulance essentials’ training delivered by SJA, they are largely expected to rely on their pre-existing clinical skill and abilities developed through WACHS-provided training. Some of the clinicians were of the view that their clinical skills were adequate but further ambulance skills training was required to operate effectively as ambulance crew. (3)
- ▶ Currently some community members in the Kimberley call directly to hospital when they required an emergency ambulance, bypassing the normal 000 call. It was seen to be easier to talk with a local staff member as there was an assumed local knowledge of location and personal information. KAS stakeholders felt these calls could be diverted to the SOC operated by SJA but the operations centre would require better local knowledge and understanding of non-traditional address-based location identifiers such as the “green house” on such and such community”. This feedback received by stakeholders of the KAS illustrates the importance for all ambulance services in WA, regardless of the provider, to meet a common set of performance standards. (3)
- ▶ Representatives from country communities expressed the importance of educating the public of the essential nature of the country ambulance service for the delivery of emergency care and healthcare within country WA. Furthermore, some of these representatives felt it was important to promote volunteering for this essential service. (4)
- ▶ The current state-wide contract for ambulance services in WA is owned and managed by the Department of Health. Some WACHS stakeholders believe that decentralising contract management to allow for the country component of the contract to be managed by WACHS could improve the effectiveness of the service. (5)
- ▶ The WACHS stakeholders reported that the changes to the RFDS contract, which is managed by WACHS and therefore, closer to the point of service delivery, had significantly improved the contract management process and subsequently, the service delivery. It was noted that similar changes may be effective for the country ambulance service to increase visibility of performance, understanding of regional complexities, and improve service coordination. (5)

Data analysis

- ▶ The ambulance service is an important component of a high functioning and integrated health service. WACHS operates a regional network model, whereby Regional Health Campuses connect services across the region and support staff located at the smaller sites to optimise service delivery. Integration and ability to transport patients is imperative. As such, the IHPT service provides the critical role of transporting patients to the WACHS location where they can access the services required to meet their clinical needs. To operate the Regional Network Model in a safe and efficient manner WACHS needs to understand the level of ambulance services in each location. The inclusion of ambulance services in the Clinical Services Framework will guide WACHS in the planning and delivery of safe, high quality public health care in country WA. (2)

- ▶ The WA Health Clinical Services Framework published by the Department of Health is the State government's principal clinical service planning document for WA's public health system. The Clinical Services Framework is designed to describe medium to long-term horizons and the strategic parameters that can be used by individual health service providers to inform and guide their planning for services, workforce, infrastructure, technology, and budgeting in line with strategic intent of WA Health. The Clinical Services Framework considers the impact of actual and anticipated changes in the health environment including: population growth and ageing and increasing demand for services; the move to full Activity Based Funding/ Management (ABF/ABM); demand management initiatives; and increasing options for community-based care to provide safe services closer to where people live. As listed in the Clinical Services Framework, WACHS regional services operate via a 'hub and spoke' model where the role delineation and linkages within the respective regional health service network is identified for each facility. The ambulance service provided by SJA conducts the IHPTs of patients between WACHS facilities. The Clinical Services Framework recognises the very significant contribution of providers such as RFDS and SJA in the delivery of extensive primary health care and a 24-hour emergency service to those who live, work and travel throughout WA however, these services are not detailed in the framework. (2)

4.2 Timely access

Timely and reliable access to Primary Response and Inter Hospital Patient Transport ambulance services for all communities.

The goal

- ▶ *When an ambulance service is requested in regional Western Australia, a response will be provided, within the agreed timeframe from an optimally located asset.*
- ▶ *Future contractual arrangements address the location of assets, communication and technology standards, service standards and integration of the service.*
- ▶ *The ambulance service has communications technology that provides reliable and continuous communications for all ambulance vehicles and can enable technological advancements.*

Gap analysis

- ▶ The current model of service delivery for IHPT in regional WA is frequently not meeting the expectations of a timely response for communities or WACHS clinicians.
- ▶ The current contract is limited in the detail of the services being purchased and of the outcomes required for the majority of the country locations. With 85% of locations without performance indicators, there is no mechanism for measuring the reliability, timeliness and safety of the service.
- ▶ Sub Centres outside the 10km radius of the Career Sub Centre town centre have no response time target. Activity is not always being responded to by the closest Volunteer Sub Centre.
- ▶ Due to the current contracting arrangement, Volunteer Sub Centres and Branches have the ability to decline requests for service provision which impacts the continuity and availability of ambulance services in country communities.
- ▶ The current location of ambulance service centres in country WA is based on historical and community drivers rather than analysis of demand, population demographics or where other health care and ambulance services are located.

Recommendations

In developing this strategy the dedication of paid and volunteer staff to providing a consistent ambulance service to the country population in WA was evident. The following recommendation addresses the fact that the volunteers and the service in the country need the support of contracts and improvements to communications and technology in delivering a sustainable and continuous service.

8. Introduce contemporary contracts for ambulance services that define IHPT and Primary Response as two distinct services which have their own scope of services and key performance targets as a minimum. (WA Country Health Service led)

Evidence

The following summary evidence supports the strategic theme of Timely Access:

Jurisdictional scan & historical reviews

- ▶ The Independent SJA Inquiry (the 'Joyce Report') (2009) stated that "Every person in Western Australia has an expectation that when they call an ambulance in an emergency it will come quickly and get the person to a hospital as soon as possible." Despite the commitment and dedication of the volunteer and country ambulance personnel there are still areas where this is not the reality. (8)

- ▶ The WA Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) commented
 - ▶ The contract between SJA and the Department of Health lacks mechanisms to monitor the quality of services provided, standards of patient care, reliability, responsiveness, staff training, staff conduct, equipment and value for money. (8)
- ▶ The recently published *Review of Safety and Quality in the WA Health system* (2017) includes a recommendation that "The modernisation of contracts include contemporary performance management and assurance requirements." (8)
- ▶ To ensure that WA country communities have timely access to ambulance services, contemporary performance measures should be added to the contract for ambulance services and managed appropriately.
 - ▶ The Queensland Ambulance Service (QAS) is run as a state-wide service. Response times are measured in all country areas as part of Service Delivery KPIs as well as metrics for turnaround times, travel times, average at scene time and transport times.
 - ▶ In New South Wales (NSW) activation ('tasking') time targets - rather than time to arrive targets - are used due to the recognised difficulty of accessing some regional locations. (8)
- ▶ To support the delivery of consistent timely access to ambulance services, WA would require demand and capacity modelling to take place to ensure that the service location enables good coverage that can deliver timely. Furthermore, the timely access to ambulance services of the country population should be tracked, measured and effectively managed through the inclusion of appropriate performance measures in any contracts for the provision of country ambulance services. (8)

Stakeholder feedback

- ▶ The absence of clear contract stipulations means some community members and WACHS staff hold the opinion that there was nothing to hold SJA to account in terms of what they could reasonably expect. A contract statement of best endeavours for service delivery and standards does not provide any certainty of service provision. (8)
- ▶ Stakeholders in all regions felt it was important to strive for a minimum standard of timeliness for ambulance services. Achieving this will require optimising the location of ambulance services to ensure a timely response can be achieved based on demand. (8)
- ▶ The majority of Volunteer Ambulance officers agreed a minimum response time should be included within the contract, however consideration needed to be given to the uniqueness of a volunteer arrangement and in particular the time taken to get to the Sub Centre and 'leave base' to attend a job. (8)
- ▶ The current contract for ambulances services does not require SJA to ensure the country ambulance service is continuously available. As such, SJA utilises 'spectrum calls' to Sub Centres rather than an automated tasking process to task volunteers for both Primary response and IHPT. Tasking therefore relies on volunteer availability and discretion at the time of a call. During FY'15 10% of all ambulance calls were diverted to a Sub Centre that was not the closest location to the incident (note that this metric was not reported for FY'16). Stakeholders reported that in the case of IHPT, volunteer teams could choose to decline the requests, resulting in delays to the tasking and dispatching. (8)

- ▶ The current contract for ambulances services does not require SJA to provide updates to WACHS facilities about delays in sourcing a crew to perform IHPTs. WACHS clinicians reported that a lack of a reliably available service and communication of the estimated time of arrival for ambulance services is hampering timely patient transfers and negatively impacting patient outcomes. (8)
- ▶ Many stakeholders do not feel the current contractual KPI's are effective at managing performance. (8)

Data analysis

- ▶ Timely care is not guaranteed by contractual response targets at volunteer Sub Centres, which represent 144 of SJA's country locations (90%) in the state. As a result country consumers do not have a minimum response time which they can expect when accessing ambulance services. (8)
- ▶ The RFDS contract sets out mutually agreed intents and performance indicators. Both the population and WA Health providers have a defined expectation of the service and can be ensured of a continuously available service. Some of the performance indicators of relevance are
 - ▶ RFDS will provide a continuous and guaranteed service throughout the entire State of WA and be available 24 hours per day, 365 days per year.
 - ▶ Target Patient Response Times for each of the different Flight Priorities and health services across the State, are applied and measured.
 - ▶ Notification and evidence of service unavailability, which is measured and reported as a KPI within the contract.
 - ▶ A requirement to co-operate with WACHS in delivering patient transport services in a conscientious, expeditious and professional fashion to ensure the efficient and continuous management and treatment of patients. (8)
- ▶ Analysis of the state-wide contract for ambulance services was conducted against contemporary contract management elements. The contract does not include the necessary performance measures and clinical governance principles to ensure a country ambulance service that is safe and efficient. The following shortfalls were identified in relation to the country ambulance service component of the contract:
 - ▶ SJA delivered a 99.96% capacity availability to the people of country WA during FY'17, however there is no contractual requirement for all ambulance Sub Centres to be covered each day or on a 24 hour basis or for communities of health services to be notified of outages. Performance measures to track and report the availability of the service against a defined target should be investigated for inclusion within the contract.
 - ▶ The contract outlines response time targets for cases attended to by Career Sub Centres within 10km radius of the Career Sub Centre town centre, however there are no targets stipulated for locations beyond 10km or for volunteer Sub Centres. During FY'16 these cases represented 41% of the total ambulance activity in the country WA. For these cases it is not possible to identify whether the response provided was timely, as they were delivered under the best endeavours model. (8)
- ▶ During FY'16, 64% of all IHPT activity in country WA (using priority 4 activity as a proxy), either had no targets set (43%), or did not meet contractual target response times required (21%). For Primary Response 47% of all country activity in FY'16 (using priority 1-3 activity as a proxy) either had no targets set (40%), or did not meet contractual target response time required (7%). (8)

- ▶ In contemporary practice some providers of ambulance services are moving towards the measurement of patient experience through customer satisfaction surveys. In the data received by the project, there is no visibility of the satisfaction of customers in country WA. In the future it would be reasonable to expect that customer satisfaction could be measured for both country and metropolitan customers separately and split by Primary Response and IHPT. (8)
- ▶ Where metrics exist, the Unscheduled Emergency (priority 1) response time targets stipulated in the contract with SJA country range from 15 to 25 minutes. In FY'16, only 64% of Unscheduled Emergency (priority 1) country activity was responded to in under 15 minutes. (8)

4.3 Patient safety

Consistent delivery of safe and contemporary patient care.

The goal

- ▶ *Patients requiring emergency and inter-hospital transport can be confident that the quality of their care will be delivered in line with clear and published standards throughout the duration of their care.*
- ▶ *An integrated clinical governance model is in place to enable and promote transparency, clarity of communication and collaboration across all service providers. The clinical governance model will be one that:*
 - ▶ *Adopts and embeds the State's approach to safety and quality using shared principles*
 - ▶ *Monitors clinical performance reporting including publically available elements*
 - ▶ *Establishes integrated clinical pathways*
 - ▶ *Monitors, reports and addresses patient experience*
 - ▶ *Supports quality improvement initiatives*
 - ▶ *Credentials the workforce and*
 - ▶ *Investigates clinical incidents and monitors the implementation of the recommendations*

Gap analysis

- ▶ *Standards covering all aspects of clinical service delivery are lacking. There is no shared performance reporting of clinical care provided by the ambulance service and no transparency of care quality across service providers.*
- ▶ *There is currently no specific mechanism for WACHS and SJA to discuss and monitor clinical performance or work collaboratively towards continuous quality improvement activities.*
- ▶ *There are no integrated clinical pathways or policies currently in place between country ambulance and WACHS facilities.*
- ▶ *There is no publicly available safety and quality performance data for country ambulance services.*
- ▶ *There is currently no reporting of patient level clinical outcomes.*
- ▶ *The responsibility and accountability of patient care when transporting patients is not clear, with conflicting policy and practices.*
- ▶ *Access to reliable and continuous communications in many locations in the State is not available and is restricting the ability of ambulance crews and others to communicate with one another. This hampers providers' abilities to*
- ▶ *Receive high level clinical advice, escalate patient concerns or communicate with Emergency service personnel at scene.*

Recommendations

Central to these recommendations is the formation of a shared clinical governance framework between WACHS and the country ambulance service provider which would be responsible for the safety of patients in country WA when accessing Primary Response or IHPT services.

9. Mandate consistent clinical governance principles in all patient transport contracts and report jointly on progress and collaborative initiatives to improve patient outcomes and clinical performance. (WA Country Health Service led)
10. Ensure every ambulance - regardless of location - can communicate reliably with all necessary parties at all times. (St John Ambulance³)

Evidence

The following summary evidence supports the strategic theme of Patient Safety:

Jurisdictional scan & historical reviews

- ▶ The WA Auditor General's Report Delivering Western Australia's Ambulance Services (2013) included recommendations that align with the strategic theme of Patient Safety:
 - ▶ Longer term solutions are needed to improve and maintain the clinical governance of ambulance services in country areas.
 - ▶ Introduction of monitoring mechanisms, such as patient outcomes, into the contract to improve effectiveness and accountability for ambulance services. (9)
- ▶ The recently published Review of Safety and Quality in the WA Health system (2017) recommended WA health system to
 - ▶ Establish clear clinical governance structures to allow for integrated risk management across all health care and patient transport providers.
 - ▶ Promotion of collaboration between service providers to support high quality and coordinated activity as well as equitable service delivery across WA. (9)
- ▶ There is a national trend towards integrated clinical governance frameworks and planning processes between ambulance services and the wider health service. In some Australian States, such as New South Wales and Queensland where the ambulance service sits within the health system, there is natural clinical integration, oversight and joint decision making. In WA this natural integration has not occurred and remains separate between the public health system and SJA. (9)
- ▶ In many other states and countries integrated and clear clinical pathways for frequent major conditions (i.e. stroke and chest pain) are being implemented. In WA some work has begun to develop integrated clinical pathways however further work is required to implement and fully embed integrated clinical pathways along the entire patient pathway. (9)
- ▶ In the Canadian province of Nova Scotia, there are multiple integrated committees and weekly meetings between SJA and the contract holder around clinical requirements. These committees focus on the reporting of clinical performance across the entire province. This level of collaboration does not yet exist between the Department of Health, WACHS and SJA in WA. (9)

³ Noting that St John Ambulance WA Inc. are the contracted service provider. Any future providers would also be required to provide reliable communications.

- ▶ Globally there is a movement towards marrying operational KPIs such as response times, with clinical outcome focussed measures. Clinical standards reported by the Queensland Ambulance Service (QAS) as a part of the "Care for Patients" measures include clinical outcomes for the management of Asthma, Diabetes, Traumatic Pain and Cardiac Pain as well as Patient Safety outcomes using the QAS clinical audit and review tool. The performance of the QAS against each of the performance measures is publically reported each quarter and benchmarked against the National performance of other ambulance service providers. (9)
- ▶ There is a global movement towards innovation to provide timely care for Primary Response requests. Examples include:
 - ▶ "Hear and Treat" where the caller's medical needs are met without dispatching an ambulance by providing advice, self-care or a referral to other urgent care service.
 - ▶ "See and Treat" where the patient is assessed treated and, discharged or a referred to other services without needing transport. These methods are underpinned by reliable and continuous communication capability. (10)

Stakeholder feedback

- ▶ Stakeholders felt clinical standards are developed within organisational silos and are neither published nor consistently shared. This is resulting in clinical policies and procedures that are not consistent across organisations. (9)
- ▶ Sub Centres felt there was a lack of clarity regarding accountability for patient care at each stage of transfer. Individuals referred to their organisations policies, which were contradictory with one another. This highlighted a lack of collaboration in clinical policy development. (9)
- ▶ Staff from SJA and WACHS noted that in general the only mechanism for feedback on clinical performance or patient outcomes for either party was informal. There were limited to no opportunities for staff to jointly perform incident reviews, training or morbidity/mortality style inquiries for the purpose of learning and development. (9)
- ▶ Cross service clinical reviews, sharing of clinical incident data, debriefs and training are not mandated or consistently delivered across the State, but are considered valuable by stakeholders from WACHS and SJA where they do occur. (9)
- ▶ WACHS nurses and doctors are used as second crew members in the ambulance when SJA is unable to get sufficient volunteers. The WACHS staff are also used as clinical escorts when the clinical status of the patient requires additional clinical support. The role and responsibilities of the WACHS staff in these two differing roles is not clear or articulated. (9)
- ▶ It is reported that paramedics are assisting in Emergency Departments with critical cases, and maintaining skills by organising practical time in WACHS facilities. There is no integrated governance or indemnity to guide these practices. (9)
- ▶ Nursing and medical students are currently indemnified to practice in WACHS facilities by way of a Memorandum of Understanding between their education providers and WACHS. Stakeholders did not see any impediment to having a similar governance arrangement for SJA's workforce. It was noted however that the appropriate governance and planning would be required, and WACHS would not be responsible for delivering, managing or monitoring training of SJA's workforce. (9)

- ▶ The electronic Patient Care Record (ePCR) is used to record patient care whilst in transit in an ambulance. The information is then printed and given to the clinical staff to support the patient handover. Feedback from stakeholders identified inconsistency in the ability to transfer the information between providers. Data was not always received from SJA to WACHS in a timely manner or at all. This is currently a barrier to communication and collaboration across service providers. (9)
- ▶ Stakeholders expressed the importance of and desire for coordination and sharing of training and learning opportunities across all service providers (e.g. WACHS, SJA, RFDS, and DFES). (9)
- ▶ Stakeholders commented that reliable communications needs to be an immediate priority. It was regularly reported that once on the road, crews frequently could not communicate with SOC or other emergency services to receive clinical support. Ambulances rely on a mobile network which is often not available 'out of town', or on satellite coverage which could also be unreliable depending on weather and geography. In some cases, crews were accessing private communication assets to keep in contact with the SOC or other emergency services (i.e. via mine sites). The lack of reliable communications limits the ability of volunteers to escalate any deterioration of patient conditions or access expert opinions and results in WACHS clinicians escorting patients to reduce inherent non risk. (10)

Data analysis

- ▶ SJA currently reports compliance with their Clinical Practice Guidelines. During FY'16, 94.1% of cases audited were clinically compliant across both the metropolitan and country services. However these guidelines are only relevant to the care the patient received whilst in transit and do not intersect with WACHS guidelines. (9)
- ▶ There is no visibility of SJA's clinical incidents. The ambulance provider currently reports all Severity Assessment Codes (SAC) 1 incidents to Patient Safety Surveillance Unit (PSSU) and is not required to report or make available the details to WACHS or the System Manager. The lack of transparency of clinical incidents is a risk to WACHS given they are delegating patient care to the ambulance provider when requesting a patient transfer. (9)
- ▶ In 2016, WACHS reported that 29 (6%) of SAC1/SAC2 clinical incidents were attributed to transport issues (road and aeromedical). In any environment, clinical incidents can occur across the patient pathway and should therefore be collaboratively addressed across service providers. (9)
- ▶ The current contract between the Department of Health and SJA does not include any clinical KPIs and therefore there is no data or transparency available to the WACHS on patient outcomes. (9)
- ▶ SJA has its own Clinical Governance Framework which outlines 7 fundamental clinical indicators which are used to identify areas of clinical excellence, verify the effectiveness of clinical practice, assist in the early identification of potential clinical risks and define benchmark clinical outcomes. However, these indicators are not reported on externally. (9)
- ▶ The contract with the RFDS requires records, such as Patient Care and Service Staff records, be made available for audit and inspection by the relevant governing bodies, including WACHS. These contractual requirements foster a collaborative approach to clinical performance reporting which is driven by contractual requirements. (9)

4.4 Service coordination

Centralised and effective coordination across service providers for all Inter Hospital Patient Transport.

The goal

- ▶ *A single, clinical coordination process for planned and unplanned patient transport enabling the visibility, decision making, and accountability for country patient flows and incorporates all patient transport providers and other transportation assets. Patient flow across country WA is seamless and uses effective handovers, is patient centric in the timeliness of transport, and is supported by consistency in equipment and technology where possible.*

Gap analysis

- ▶ Frequently there is a lack of coordination, inconsistency and inefficient use of resources when multiple transport provider options are available. For example when a time critical event happens in a location where more than one transport provider can be tasked.
- ▶ There is no clear accountability or oversight of decision making on the best transport option for the patient (road ambulance, fixed wing or rescue helicopter).
- ▶ There are multiple points of access for requesting air and/or road retrieval. The coordination and logistics are taken on by local clinicians who have to navigate the complexities of service providers reducing time spent on direct patient care.
- ▶ There is a perceived inconsistency and lack of visibility on the clinical decision making process for Inter-hospital patient transport services.
- ▶ There is a lack of high level, reliable clinical advice available to country clinicians to determine transport urgency based on patient need.
- ▶ There is no mechanism for WACHS clinicians to escalate clinical concerns on the timeliness or mode of transport to meet the patient needs.
- ▶ There is inefficient use of expensive and finite transport and retrieval services due to the lack of coordination and oversight of all assets.
- ▶ There is no central view of health service availability; bed availability across the health system including the metropolitan hospitals; staffing levels and capacity at WACHS facilities; and the availability of patient transport services and ambulance crews across service providers, including aeromedical.
- ▶ Changes to service provision at WACHS locations (i.e. doctor availability or medical imaging outages) are not formally discussed with the ambulance providers and alternative plans put in place to allow for timely transport of patients to the right location.

Recommendations

The focus of the recommendations for service coordination is on progressing to a system-wide coordinated IHPT service in country WA. It is recognised that patient transport in country WA is very complex with many partners. Therefore, for the benefit of patients, greater coordination is required not only with the road based ambulance service but with all transport providers including aeromedical.

11. Implement a clinical prioritisation system to inform safe, effective and transparent co-ordination of inter hospital patient transfers across WACHS. (WA Country Health Service)
12. Implement formal escalation mechanisms to ensure safe transfer of inter hospital patients in line with clinically indicated timeframes. (WA Country Health Service)
13. Commission WACHS to lead the development and coordination of state-wide inter-hospital patient flow. (Department of Health)

Evidence

The following summary evidence supports the strategic theme of Service Coordination:

Jurisdictional scan & historical reviews

- ▶ The WA Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) found there to be no centralised means to control and monitor IHPT. Decisions to transport patients and the destinations for IHPTs are currently made by a clinician at the WACHS sending facility, who does not have visibility of the availability of IHPTs service providers or the services available at the receiving WACHS or metropolitan facility. (11)
- ▶ Centralised clinical coordination of patient transport is common practice both nationally and internationally:
 - ▶ Retrieval Services Queensland (RSQ) provides clinical coordination for patient transfers through the Queensland Emergency Medical System Coordination Centre. RSQ coordinates the tasking, via a single tasking point for all of Queensland's inter-hospital transport and aeromedical retrieval patients. This ensures consistent delivery of state-wide clinical services by having visibility across the health system and providing information and support to clinicians when making decisions for patient care. The use of RSQ is mandated when utilising providers with state-wide contracts held by the Department of Health. The RSQ operates under the principles of:
 - ▶ Safety and consistency – Retrieval services are coordinated and delivered with a focus on consistent, quality patient care through standardised state-wide procedures.
 - ▶ Equity – Coordinated retrieval services are provided in a way to promote equitable patient access to emergency specialist care.
 - ▶ Cohesive – A whole of government approach to service coordination, integration and governance for the delivery of aeromedical retrieval and patient transport services across multiple providers. (13)
 - ▶ New Zealand has a national pathways manager with oversight of all patient transfers across the country. An equivalent position is not present in rural WA for addressing and resolving urgent patient transport needs. (11)
 - ▶ The ambulance service provider in Nova Scotia has a formal strategy to integrate clinically and physically (co-locate) with the health system to enable transparency and reduce siloed decision making for all patient transports occurring in the province. (13)
- ▶ The WACHS report *Country Ambulance Service* (2011), identified the need for an integrated model of clinical coordination when transferring patients, to improve the safety and timeliness of patient transfers and support the regionalisation model. The reform intended to enhance the clinical coordination processes, prevent delays and improve care and outcomes for country patients by introducing processes for communication, disposition and tasking of transport services by all patient transport service providers. However, there is still no formal Clinical Coordination Service in WA. The provision of acute care for those living in country WA would be

substantially improved through an integrated model of clinical coordination when transferring patients from one location to another. (13)

- ▶ The Independent St John Ambulance Inquiry - *Report to the Minister for Health* (the 'Joyce Report') (2009) made the following findings in relation to the need of an Integrated State-wide Emergency Care System:
 - ▶ The adequacy and effectiveness of the emergency rescue helicopter's tasking for primary and secondary retrievals was questioned, including the split responsibility for tasking. Since the conclusion of this report, the responsibility for activation, patient management, and patient destination remains the responsibility of SJA for primary retrievals, while for secondary retrievals the responsibility for tasking rests with the RFDS.
 - ▶ The review recognised the critical importance of the RFDS as a patient transport service in country regions of WA and that typically, ambulances will be involved at both the origin and destination of an RFDS flight. The report suggested that for better integration between emergency transport services, a single communication centre staffed by both SJA and RFDS could be established to improve patient transport systems in WA.
 - ▶ The Inquiry identified the disjointed and incongruous interface between IHPT and emergency ambulance services which are both provided by SJA and tasked from the communication centre. (13)

Stakeholder feedback

- ▶ The use of WACHS Nurses as escorts for IHPT is inconsistent and inefficient. In some locations the decision to use a nurse escort was considered essential for all patients while for others it was ad hoc and clinician dependent. Data and feedback received from stakeholders revealed that currently nurse escorts are required for in excess of 40% of all patient transfers. Stakeholders believed the requirement to use WACHS staff to perform escorts during IHPT could be formalised, applied consistency with greater visibility and clinical prioritisation of IHPTs. (11)
- ▶ Some stakeholders suggested that a lack of a robust priority allocation, which is uniformly understood across the health system, may be resulting in inefficient use of patient transport. (11)
- ▶ WACHS has introduced the 'WACHS Link' process to improve patient flow service coordination and standards. Currently WACHS Link includes planned patient repatriation from metropolitan to country hospitals, and unplanned transport from country regions into region/metropolitan linked hospitals. The conditions of stroke, mental health and obstetrics are excluded as patients are sent to specialty based centres. Whilst improvement has been acknowledged, stakeholders felt there was opportunity to extend provisions to cover most clinical options and transport directions. Centralised coordination of IHPT in the future would be able to build on concepts like WACHS Link. (11)
- ▶ WACHS staff expressed a desire to have the flexibility to use alternative service providers where available and appropriate, particularly for IHPT when existing requests cannot be met by the SJA. (12)
- ▶ The provision of IHPT services involves complex service coordination due to the levels of interaction required between multiple service provider organisations. Current levels of coordination between service providers are below what is expected by stakeholders. Stakeholders held the opinion that this could be improved through integrated co-ordination and oversight of all patient transport requests. (13)
- ▶ WACHS clinicians are required to contact multiple organisations (SJA, RFDS, metropolitan hospitals) to organise transportation and beds for patients. In some cases the Emergency

Telehealth Service (ETS) supports with coordination for Emergency Department patients, however this is out of courtesy and not a requirement of the role. There is currently no entity or function with complete oversight of the availability of the services provided by the multiple organisations involved in patient transport within WA. (13)

- ▶ The ERHS helicopters were seen as a fantastic resource in the South West region, however many of the stakeholders held the opinion that the tasking of the helicopter was not clear. Many stakeholders were generally unclear on the escalation process for tasking and dispatching the helicopter and whether RFDS or SJA were in charge of this process. Many stakeholders were also of the opinion that those tasking the helicopters (DFES), fixed wing (RFDS) and road transport (SJA SOC) all need to be sitting together to provide overall clinical coordination. (13)
- ▶ Volunteers and Paramedics reported an increase in low priority IHPT during the early hours of the morning and prior to the weekend – as WACHS sites closed beds. There were also reports of individual patients being transferred multiple times between WACHS facilities due to service outages or staff unavailability until the final destination was reached. (13)
- ▶ Many stakeholders from SJA and WACHS felt that integrated service planning at the regional level could reduce frustrations experienced by staff following seemingly unexpected changes to service provision by the other party. WACHS staff were not aware if ambulance services were not available. Similarly, SJA was not aware if service outages at WACHS facilities would require a change in the destination for a Primary Response patient. Currently neither WACHS nor SJA has oversight of the service provision outages and changes effecting both organisations. (13)

Data analysis

- ▶ During FY'16 Scheduled - Booked (priority 4), a proxy for non-urgent IHPT activity accounted for 40% of the ambulance activity conducted by volunteer ambulance crews. It is expected the demand for IHPT will continue to grow. Coordination and clinical prioritisation of these requests would improve the safety and effectiveness of these. (12)
- ▶ Under the current policy and contract WACHS is required to purchase all road based IHPT services from SJA except for occasions where the provider declines to provide the service. For the benefit of country patients reaching an appropriate level of care in a timely manner, WACHS need to implement mechanisms to address circumstances where SJA declines or has insufficient capacity to provide a service in a clinically appropriate time. (12)
- ▶ The contract with SJA does not stipulate any requirement for service coordination or obligation to inform the community or local health providers when ambulance services are not available. (13)

4.5 Sustainable & skilled workforce

A sustainable and skilled workforce capable of meeting the needs of the population now and into the future.

The goal

- ▶ *All roles related to ambulance service delivery are well defined and clearly understood. The roles allow for a clear career pathway option for paid and volunteer staff.*
- ▶ *The numbers of country ambulance workers, both paid and volunteer, are at optimal levels and are sufficient to meet the demand for Primary Response and IHPT services now and into the future.*
- ▶ *Country ambulance workers are consistently provided opportunities for nationally recognised training in line with their role.*
- ▶ *A clinically active and sustainable Community Paramedic model is used to support and sustain volunteers.*
- ▶ *There is flexibility in entry pathways and recognition of prior learning to foster recruitment in to the ambulance service to enable more efficient use of limited skillsets available in regional locations.*
- ▶ *Collaborative workforce and training arrangements between health service and ambulance providers are in place and support the ongoing professional development and skills maintenance of clinicians in the regions.*

Gap analysis

- ▶ The capacity of the country ambulance service workforce is variable across the State. The number of volunteers as at 30 April 2017 was 3,867 including volunteers whose memberships are paused and probationary. This figure is 6.8% below the 'optimal' target level set by SJA. Each Sub Centre sets their own optimal levels for volunteer numbers.
- ▶ No quantitative data was available to identify activity by volunteer, however anecdotal evidence from volunteer representatives advised that at any time 20-70% of the volunteer members were considered non-active by other volunteers.
- ▶ The qualification and skills required for the ambulance workforce is within the current contract however these qualifications do not align with any registered training organisation or nationally recognised course making it difficult to structure a career pathway.
- ▶ The CP role has significantly increased support to the volunteer service. However the CP role is facing challenges such as community expectations of around the clock availability, and the risk of clinical skill devaluation.
- ▶ There are a number of locations where the CP's area of responsibility is so large that it appears to be impacting on their effectiveness of supporting and sustaining the volunteers.
- ▶ There is a clear gap in governance relating to the use of workforces across service provider boundaries. The informal use of WACHS staff to support and supplement volunteer ambulance crews for IHPT represents a hidden cost to service provision that is unique to the country service.
- ▶ Collectively, Sub Centres are financially robust; however the distribution of funds across the Sub Centres is not equitable. SJA has practices in place for the pooling and sharing of some regional funds between Sub Centres, however stakeholder feedback advised that the process regarding access to these regional funds is not well understood in every region and contribution to these funds is not mandatory.

- ▶ For the purchase of equipment essential to providing an ambulance service, such as ambulances or consumables, Sub Centres are required to accumulate funds through the completion of IHPT or fundraise through grants, events or other means.
- ▶ The Independent Oversight Panel review in August 2016 identified issues relating to organisational culture and health and well-being of employees and volunteers. It called for co-operation between all parties to address these sensitive issues and recommended changes to policy, procedures and practice.

Recommendations

The number of people willing and available to perform the role of a paid or volunteer ambulance officer remains limited. A multifaceted approach is required to broaden the pool of available resources that can be drawn upon when needed, while building and sustaining the current workforce roles.

14. Provide sufficient administrative and corporate support direct to country ambulance Sub Centres in order to free up volunteers to focus on service delivery. (St John Ambulance)
15. Provide the volunteer ambulance workforce with the opportunity to obtain qualifications through an articulated structured training pathway which aligns with the Australian Qualification Framework and supports career progression. (WA Country Health Service led)
16. Research, trial and implement alternate workforce and training models (including the use of shared staffing and virtual support) and prioritise this at locations which have difficulty maintaining a sustainable workforce. (St John Ambulance)
17. Expand the Community Paramedic model in FY18/19 as a priority in order to relieve pressures in those locations currently having the most difficulty in recruiting, supporting and retaining volunteers. (St John Ambulance)

Evidence

The following summary evidence supports the strategic theme of Sustainable & Skilled Workforce:

Jurisdictional scan & historical reviews

- ▶ There is a general trend of declining volunteer numbers nationally. Therefore there is a growing need to support the volunteers and the volunteer model for ambulance Sub Centres in country WA. (14)
- ▶ In New Zealand operational volunteers have a defined career pathway to becoming ambulance officers and are trained to the same standard as the professional workforce. (15)
- ▶ Paramedics are not currently a registered profession in any State or Territory; however the title 'Paramedic' is protected under legislation in New South Wales, South Australia and Tasmania. In 2016, the Australian Health Workforce Ministerial Council confirmed Paramedics would be regulated in all States of Australia as part of the National Scheme. It is expected WA will enact the arrangement in 2018. Therefore relevant stakeholders in WA will need to work together on the implementation and changes the new legislation will bring. (15)
- ▶ In NSW, the 'Paramedic Connect' strategy supports the integration of Paramedics into small regional communities to provide a more comprehensive range of care options. Alternate workforce models like this could be considered for use in remote and hard to staff locations in country WA. (16)

- ▶ In Queensland a 'Rural Generalist Program' is provided where graduates complete a dual degree in nursing and paramedicine, then work in small rural health service locations to provide both of these services. This model whereby a single healthcare worker can provide a greater variety of services is seen as a 'force multiplier' model for the provision of health and emergency services to the community. (16)
- ▶ The report *Ambulance Services in Country Western Australia 2015-16 Royalties for Regions Project* (2017) conducted by WACHS to determine the continuation of ambulance services to country residents of WA by Royalties for Regions funding activities through WACHS and SJA found that:
 - ▶ The volunteer system is integral to country ambulance service provision and has been strengthened through improved training and support from CPs and increased support from SJA for both staff and volunteers. Response times of volunteer Sub Centres have improved since the introduction of this program.
 - ▶ Value for Money was achieved as the CP model facilitates SJA to recruit and train volunteers.
 - ▶ CPs build resilience within the community and provide support, while responding to serious/complex cases where possible. They also have a role within their local area's emergency management capability liaising with local industry and other emergency responders.
 - ▶ The skills and confidence of volunteer ambulance officers is the primary output from engagement by CPs and therefore an intended increase in the quality of care provided to the community.
 - ▶ CPs form a valuable link between remote volunteers and the clinical and business governance from SJA headquarters. This design ensures clinical quality to the populations SJA services and real support for members of the community who volunteer their time for this purpose. (17)

Stakeholder feedback

- ▶ There is recognition by stakeholders that the volunteer model is the foundation of country ambulance service delivery in WA. Many Sub Centres and local Governments had concerns about the long term sustainability of a reliance on volunteers for front line services, citing aging and transient populations, as well as a general decline in volunteerism. Accordingly, support needs to be provided to volunteer Sub Centres to allow for their continued operation in line with future clinical and contractual requirements. (14)
- ▶ Stakeholders explained that in some regions funds and/or programs were in place to redistribute income amongst the Sub Centres to provide a greater level of funding equity. However, stakeholder feedback advised that the availability of these regional funds is not well understood and they are not mandatory in every region. The Great Southern, Midwest and Wheatbelt are all listed as having a Regional Support Fund in the FY'16 Annual Report. Volunteer Sub Centres should be supported by systems that make all Sub Centres financially secure and not reliant on these funds to operate, allowing the volunteers to focus on conducting operational duties. (14)
- ▶ Many volunteer ambulance officers expressed frustration at the time that was required by each Sub Centre to complete tasks such as the ordering, stocktaking and administration of the Sub Centre. The volunteers felt that greater support could be provided to allow them to focus on responding to Primary Response and IHPT cases. (14)
- ▶ Volunteers and Paramedics expressed a need and strong desire for national recognition of volunteer training and improved career pathways. Providing this to volunteers would help to

support the volunteer model and may help to boost and sustain volunteer numbers in the future. (14 & 15)

- ▶ Alternative entry pathways and greater recognition of prior learning for those with pre-existing clinical qualifications could be considered as a means to increase volunteer numbers and leverage scarce country resources. The lack of ability to operate to their full scope of their practice was reported to be frustrating for some volunteers with other clinical qualifications. National recognition of volunteer training would help provide greater recognition of prior learning. (15)
- ▶ Some Paramedics felt that a movement towards national regulation of the profession would strengthen the professionalism and standards of the service, but may present issues with working alongside a non-regulated volunteer workforce. These concerns strengthen the case for having nationally recognised training and qualification. (15)
- ▶ Significant variance in volunteer clinical utilisation (operational hours completed) was reported by stakeholders, with some anecdotal estimates indicating that 20% of active volunteers were delivering 80% of service activity. In a number of locations there is no formal rostering system and SJA is unable to report clinical hours completed by volunteers. (15)
- ▶ Understanding and capturing the true capacity of the volunteer ambulance workforce is difficult due to the lack of data capture on clinical hours worked. In addition the current definition of an active volunteer is one who has completed their annual training. (15)

Data analysis

- ▶ Contrary to stakeholder feedback, SJA reports that active volunteer numbers have increased in all regions except the Kimberley, with overall numbers growing by 7% since April 2015. SJA is unable to confirm whether increases are attributed to clinical front line ambulance officers, or administrative non-clinical support as active volunteer status is achieved through completion of training but not operational hours or availability. This suggests that increases in numbers may be driven by an increase in support volunteers that do not respond to ambulance cases. Methods to sustain and grow the number of active volunteer ambulance offices in country WA should be implemented to support the volunteer model into the future. (14)
- ▶ WACHS contributes to some of the demand placed on the IHPT model, occurring when WACHS services are unavailable (CT outages) or if staff are unavailable. The result is ambulance crews travelling further than normal. It has been suggested that greater oversight ensuring appropriate IHPTs will reduce the demand and should directly impact the sustainability of the workforce. (14)
- ▶ SJA has introduced a paid patient transport model in eight locations. SJA recognises that this network could be expanded, particularly given the view that the current IHPT model is not fully meeting the needs of the country health system. Further evaluation of this model is required to determine its effectiveness. (16)
- ▶ Currently there are 27 CPs across WA. The number of Sub Centres a CP is responsible for managing is inconsistent, ranging from 1 to 12 Sub Centres. (17)
- ▶ The CP role has significantly increased the reliability and quality of the volunteer service. Between June 2014 and June 2016 volunteer Sub Centres receiving oversight from a CP who was not resident in the town had a 10.4% increase in volunteer numbers. An increase in the number of CPs throughout country WA would foreseeably increase the sustainability of the volunteer model. (17) The introduction of further CPs is based on the following rationale:
 - ▶ The introduction of additional CP's would reduce the travel time to service their areas of responsibility by splitting geographically dispersed locations, especially those with higher workload areas.

- ▶ To provide annual leave coverage and relief as a method of fatigue management for CPs.
- ▶ All CPs to have a balanced workload of less than 500 cases attended to by the Sub Centres they oversee.
- ▶ To increase the level of support of provided to volunteers as well as to ensure service provision for the communities. (17)

4.6 Value for money

Affordable service that demonstrates value for money and transparency with service providers.

The goal

- ▶ *There is a long term collaborative and transparent arrangement to providing country ambulance services that supports investment in the health system and a focus on long term planning.*
- ▶ *The true cost to the State Government of providing Primary Response and IHPT services is identified and open book accounting is in place to enable both effective contract management and the sustainable provision of an essential public service for the long term.*

Gap analysis

- ▶ There is no single agreed view of the costs attributable to country ambulance service and there is no contractual requirement for an equitable allocation of the General Service Payment between metropolitan and country services.
- ▶ Country communities are carrying additional financial burden to provide ambulance services, such as having employees conduct Primary Response and IHPT services as ambulance volunteers whilst the employer continues to reimburse them for their time.
- ▶ The current contracting timeframe of three years does not foster long term strategic investment.
- ▶ Some locations providing the country ambulance service are challenged by bad debts, as the users of ambulance services cannot or do not pay for these services. During the 2016 financial year bad debt for the country ambulance services was twice that of the metropolitan ambulance service based on both total ambulance activity and population.
- ▶ The current funding method is based on a historical model whereby the Government purchases “standby cover” of the ambulance paramedic workforce with users then paying for the cost of SJA providing the actual service.
- ▶ In WA SJA operates a “user pays” system, in the metropolitan region this amount can range from \$467 to \$949 depending on the type of service used. For ambulance users in country WA, there is no equivalent publically available information on how much the service will cost.
- ▶ People who are on Healthcare cards, Pharmaceutical or Pensioner benefit cards are required to pay the full amount. It should be noted that permanent residents of WA aged over 65 do not pay for ambulance services as both the Department of Health and SJA each contribute a 50% concession to the fee.

Recommendations

The value for money recommendations relate solely to the road ambulance service and the services the State purchase from the service provider/s.

18. Mandate transparent reporting on allocation of funds and costs of ambulance service delivery in ambulance contracts, detailing allocations between service locations and between IHPT and Primary Response services. (WA Country Health Service led)
19. Ensure contract periods align with contemporary best practice and are long enough to enable providers to invest for effective service delivery. (WA Country Health Service led)

Evidence

The following summary evidence supports the strategic theme of Value for Money:

Jurisdictional scan & historical reviews

- ▶ The *Report on Government Services* (2016) details that WA had the lowest ambulance expenditure per person in FY'15 in Australia. WA's expenditure per person was 79% of the expenditure per person in Northern Territory (second lowest), and 59% of the expenditure per person in South Australia (highest). However, much of this may be driven by the fact that WA has the highest reliance on volunteers of any Australian State. (18)
- ▶ The WA Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) noted that the bulk of the Department of Health's funding of SJA is for the delivery of ambulance services in the metropolitan area, with metropolitan crews funded to be on standby for 52.5% of the time. The rate at this time was drawn from a 1996 Government report and the Inquiry implementation report, and highlighted that it did not reflect either SJA's current practices nor the demands and constraints within the services. The report suggested that greater cost effectiveness may be achieved by better understanding and addressing health system constraints. Funding models have not changed since this recommendation. (18)
- ▶ Contemporary models of funding provide block funding to provide capacity and capability for essential services where it cannot be funded by activity alone and activity based funding for high volume services. This does not appear the case for the procurement of ambulance services as the current state-wide contract does not specify the disbursement of the block funding between metropolitan and country services. (18)
- ▶ The WA Auditor General's Report *Delivering Western Australia's Ambulance Services* (2013) found that the WA State Government lacks the ability to control the operations of ambulance service delivery. The report highlighted the potential risk to patients as well as a clinical governance risk for the Department of Health and suggested contractual arrangements be made with all operators. The inclusion of contractual arrangements and mechanisms to monitor and manage the operations of SJA has not yet occurred. (19)
- ▶ The contract with the service provider in Nova Scotia is long term (>5 years) with the option for earned extensions based on performance. The contract includes both clinical and operational KPIs that support performance based extensions. Similar contracting terms could be explored between stakeholders in WA. (19)

Stakeholder feedback

- ▶ Some Sub Centres felt that the current financial model doesn't promote efficient or fair financial distribution across the State to support patient care. Income is largely the result of a Sub Centre's location relative to other facilities – i.e. income is generated on IHPT to then support a Primary Response service. Stakeholders held the opinion that the funding received by ambulance Sub Centres should not be determined by their location relative to other facilities, rather that it should be dependent on the demand for ambulance services to ensure equitable service levels to all locations in country WA. (18)
- ▶ Uncaptured costs support the country ambulance service, such as volunteer service delivery, WACHS staff providing 'free' crew support in ambulances via Nurse Escorts, and businesses carrying the cost of staff in allowing employees to leave their workplace to volunteer. (18)
- ▶ SJA noted that short term contracting does not provide for a collaborative approach for future planning and joint clinical governance due to the upfront invest requirement to implement these. (19)

Data analysis

- ▶ The current funding model of the country ambulance service is determined by the contract between the Department of Health and SJA which is due to expire on 30 June 2018. The current components of the funding model include:
 - ▶ A Service Payment (General) which is paid by the Department of Health to SJA. For the FY'17 this payment was \$93.2M. This amount is paid directly to the SJA head office with no amount directly allocated to the Sub Centres or Depots. There are no contractual stipulations on where or how these funds must be spent by SJA. Representations made by SJA illustrate that roughly 25% of the Service Payment is used in country WA to fund expenses including: wages and salaries of Paramedics, CPs and Regional Centre staff; allocated head office overheads (such as the SOC, human resources, finance, training and supply chain); and other operating costs (such as property, fleet, repairs, facilities, fuel and consumables).
 - ▶ The income earned by the Sub Centres and Depots is earned from two streams: the fee for Primary Response services (paid by the user) and the fee for IHPT (paid by WACHS). The income for these two streams is paid directly to the Sub Centre or Depot completing the service. This income is used to fund the operations of the Sub Centre or Depot, such as for the purchase and maintenance of buildings and ambulances; the purchase of ambulance consumables; and uniforms for ambulance officers. (18)
- ▶ The current contract and funding model do not provide the transparency required to clearly identify the cost of providing a country ambulance service and limits the analysis that can be performed by the contract holder to determine whether funding is allocated equitably, efficiently and effectively. As such, there is no single agreed view of the costs attributable to country ambulance service. There is no contractual requirement for SJA to report expenditure for the operation of country ambulance services to WACHS or Department of Health. Additionally the contract is silent on the allocation of the General Service Payment between metropolitan and country services. (18)
- ▶ According to the *FY'16 Annual Report* of SJA, the Depots and Sub Centres in country WA posted a surplus of \$4.8M during FY'16, with Paramedic Depots contributing \$3.1M of this surplus. Collectively Sub Centres are financially strong, however the distribution of funds across the Sub Centres may not be equitable. Of the seven WACHS regions, the Depots and Sub Centres in four of these regions (South West, Wheatbelt, Pilbara and Midwest regions) posted a surplus during FY'16. In three of the WACHS regions (Great Southern, Goldfields and Kimberley regions), the Depots and Sub Centres collectively posted deficits during FY'16. (18)
- ▶ Cross subsidisation of the country service by the metropolitan service was estimated at \$15M for FY'16 by SJA. This calculation is based on the assumption that the General Service Payment in the contract with the Department of Health is 75% allocated to Metropolitan services and 25% allocated to Country services. This funding allocation calculation does not align with contemporary funding models and could be calculated differently using a different apportionment of the General Service Payment. Furthermore, as levels of bad debt are higher in the country (26%) than in the metropolitan area (17%), the apportionment of funding should also consider the regions ability to recover costs. (18)
- ▶ SJA's FY'16 Annual Report information indicates that SJA spends \$87 per person in country WA, compared with an expenditure of \$96 per person for metropolitan WA. (18)
- ▶ SJA's FY'16 Annual Report information indicates that SJA spends on average \$757 to complete one ambulance incident (Primary Response or IHPT) in country WA, compared to \$857 to complete one ambulance incident in metropolitan WA. (18)

- ▶ The KAS has only recently received specified funding to deliver the ambulance service in its three locations. The current funded amount of \$1.5M is considered to be less than the service would cost if delivered by SJA. (18)
- ▶ The contract with the RFDS requires that data for financial transactions be made available for audit and inspection by the relevant governing bodies, including WACHS. (18)
- ▶ The current contract between the Department of Health and SJA has a term of 3 years and has activity based payments rather than outcomes based payments or incentive payments, and no clinical KPIs. Ongoing work to develop a contemporary contract should have specific regard to country ambulance services as well as metropolitan (19)



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5. Next steps

Ambulance services are essential to all communities and a critical partner to WACHS and the wider health system in providing a high functioning, safe and integrated healthcare system. Despite the extensive historical reviews of ambulance services there has been limited further investment into the country ambulance service in WA. Additionally, recommendations and areas of improvement outlined by these reviews appear to remain outstanding. The strategy development process identified these systemic recurring issues and a clear need for a step change transformation to support and increase the sustainability of road based ambulance services in country WA.

Following in-principle endorsement of the strategy by the WACHS Board and the Minister for Health, an implementation plan is required to be agreed to by key stakeholders. This is to ensure that, unlike other recent reports, this strategy is successfully implemented. Further analysis and actions will be required as part of a detailed business case to support development and understanding of the short and long term programs required to improve country ambulance services in WA. The following paragraphs set out the proposed sequence to action the recommendations.

Recommendation 1, to set clear policy for ambulance services to support future service improvement of the country ambulance service in WA should be viewed as the first priority. Following this, the defined level of ambulance services should be made transparent to the public through inclusion in the Clinical Services Framework so that country communities are aware of what they can reasonably expect of their country ambulance service in WA (Recommendation 2).

The standards and performance indicators used to evaluate the provision of ambulance services will then need to be determined (Recommendation 3). In line with the existing contracting timetable, the contract(s) for ambulance services should clearly set out the services and outcomes that are being purchased and their associated definitions, minimum standards and the performance metrics by which they are held to account (Recommendation 8). The contract(s) will also need to be informed by the desired contractual term (Recommendation 19) and once set up should be managed by the appropriate party (Recommendation 5).

To achieve the necessary changes required to achieve a strategic development of the country ambulance service in WA, the Department of Health, WACHS and transport providers should immediately begin work to develop the mechanism for state-wide integrated co-ordination and oversight of patient transport (recommendation 13) and increase the number of CPs in operation in country WA (recommendation 17).

The remaining recommendations should then be actioned to improve the coordination of the service (recommendations 11 and 12); the quality of care received by patients (recommendations 9 and 10); the skills and sustainability of the country ambulance workforce (recommendations 14-16); and the transparency of the funding model and cost for services (recommendation 18).

Overall, all parties have a responsibility to increase communication and improve partnerships and relationships to continuously improve service provision. As the lead agency WACHS should lead implementation of this strategy and the ongoing continuous improvement to the service. Smooth integration of the service and workforce underpins the provision of healthcare within country WA and should be addressed as a priority. Practical next steps areas are set out below where it is recommended how the major system players can take responsibility as a priority.

| Action | Recommended Owner | Recommended Timeframe | Accepted (Y/N, comments & date) |
|--|-------------------|-----------------------|---------------------------------|
| Accept and endorse the strategy | WACHS | FY18 | |
| Release strategy for public consultation to confirm it meets the needs of community. | WACHS | FY19 Q1 | |
| Lead the development of the business case to build out detailed actions and implementation plan to drive strategic initiatives | WACHS | FY19 Q2/3 | |
| Lead oversight and management of country ambulance services through new governance structures with providers in line with recent reforms. | WACHS | FY19 Q2/3 | |
| | | | |
| Lead the development of policy that governs ambulance service provision in WA | DOH | FY19 Q2/3 | |
| Reflect the country ambulance strategy recommendations in the next contract review and renegotiation of the contract in 2020. | DOH | FY20 Q1/2 | |
| Incorporate ambulance services into the Clinical Services Framework to enable ambulance service delivery be considered when developing localised clinical service plans, and clarify required capabilities of individual services. | DOH | FY19 Q3/4 | |

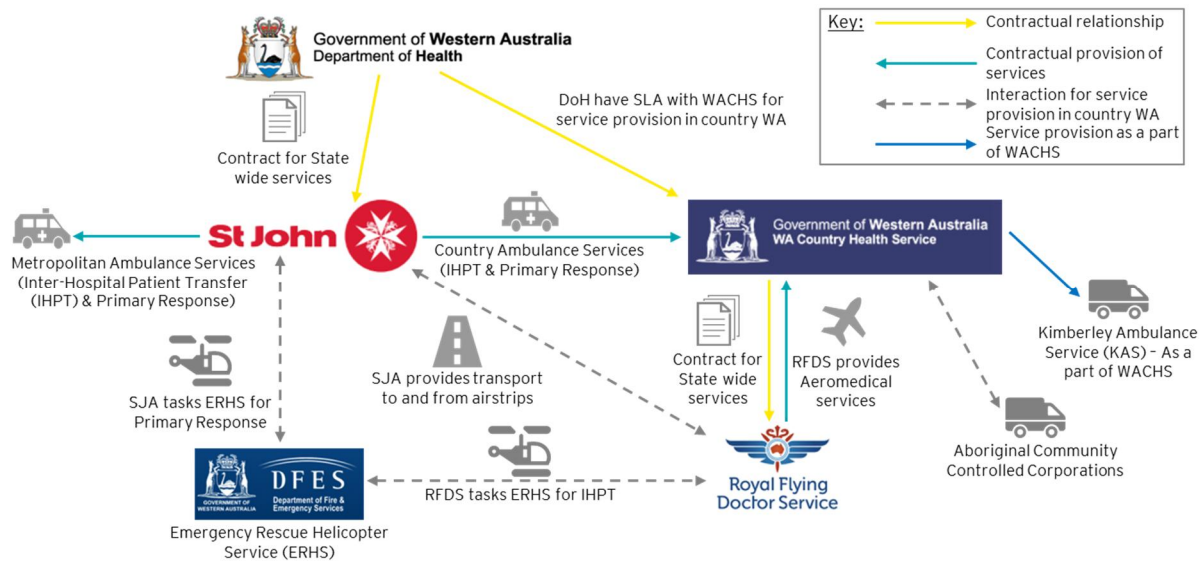
| Action | Recommended Owner | Recommended Timeframe | Accepted (Y/N, comments & date) |
|--|-------------------|-----------------------|---------------------------------|
| Work with the health system to implement recommendations within the country ambulance service. | SJA | FY19 Q2/3 | |



Image © St John Ambulance WA used with permission

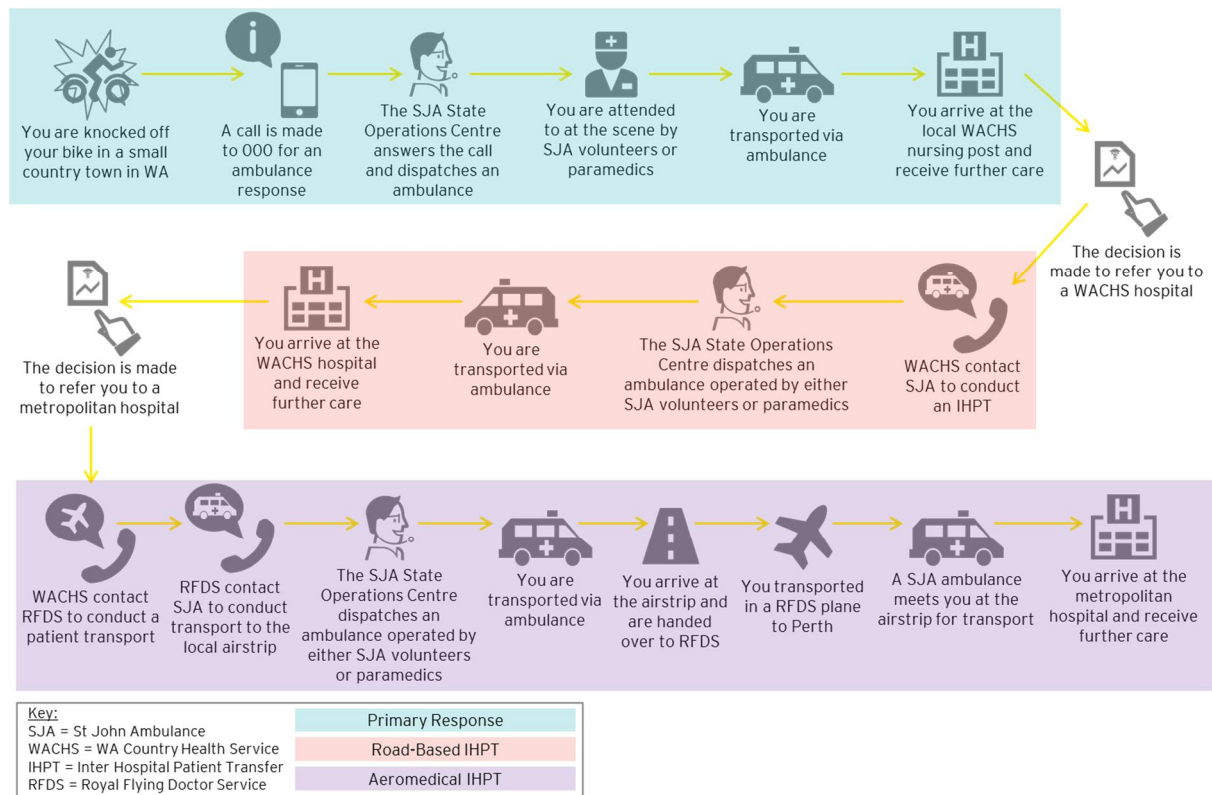
6. Appendix One – The Country Ambulance Service

The Country Ambulance Service – The Organisations:



The Country Ambulance Service – the current process:

The following diagram sets out an example of how the process works, noting that depending on clinical need, location and availability of ambulances, individuals may experience a different path.



7. Appendix Two – Jurisdictional Summaries

Oceania wide

Name: The Council of Ambulance Authorities (CAA)
Model: Formally incorporated to provide leadership for the provision of ambulance services in Australia, New Zealand and Papua New Guinea



Technology

- ▶ Telemedicine is still quite immature across the region. It is crucial to have high reliability at each point of telemedicine (patient facing, advice provision and the connection between the two) and this can present a challenge to some services.



Policy & Governance

- ▶ All ambulance services are remarkably similar (85-90%) in their service delivery policies (equipment, dosage, etc.).
- ▶ Models of care are changing at different paces depending on relationship with contract holders, and individual personalities involved. Programs such as 'Hear and Treat' and 'See and Treat' are being tried everywhere, with the goal of reducing hospital admissions.
- ▶ The organic growth of ambulance services and rapid changes in community demographics mean that some areas do not have appropriately located services.



Workforce & Culture

- ▶ A challenge is presented when employing a volunteer workforce due to the skill level required for successful hospital diversions in the field through 'Hear and Treat' and 'See and Treat' programs.
- ▶ Around the world, volunteering is generally used to supplement a paid workforce and maintain surge capacity. WA and NZ are unique in their use of volunteers to manage capacity on a day to day basis.
- ▶ Fatigue management policies and legislation limit a person's ability to work. This is easy to manage in paid workforce, but difficult with volunteers where there is less visibility over hours already worked (i.e. if a volunteer has done a 12 hour shift in their day job, they can't then do a 12 hour ambulance night shift).
- ▶ Integration of emergency services is supported wherever possible however the role of an emergency medical responder is quite limited (immediate lifesaving skills). While this is useful, it is less than 5% of ambulance work.



Clinical Governance & Service Standards

- ▶ Currently, Paramedic training is largely in emergency (70%) and limited in long term health and comorbidity (30%). There is a recognised need to shift the focus of studies, however this will take time due to university degree lengths.
- ▶ Paramedics across AUD and NZ are considered leading in terms of quality service provision. Services all employ a clinically skilled workforce with a good basis of knowledge.
- ▶ 'Hear and Treat' and 'See and Treat' programs are largely dependant on the risk appetite of the contract holder. The lowest risk option is a transmittal to hospital – however this is not always the best outcome for the patient.
- ▶ Measurement of prehospital care is challenging due to the relatively short time involvement of an ambulance in the holistic patient journey.
- ▶ Operational KPIs such as response times are considered the worst type of KPIs. Clinical KPIs are used where possible (i.e. cardiac arrest and pain management) and others are being developed (i.e. stroke and trauma).

New South Wales

Name: Ambulance Service of NSW (ANSW)
Model: ANSW, a division of the Department of Health, operates under the Health Services Act 1997 (NSW)

Current population: 7.6 M
Size: 800 000km²
Density: 9.5 people/km²



Technology

- ▶ Computer Aided Dispatch systems across a number of emergency service organisations are linked through an InterCAD Electronic Messaging System (ICEMS), allowing incident requests and messages to be shared in real-time without the need to make calls. ICEMS enhances collaboration and teamwork between agencies by sharing accurate/relevant information and vehicle status and significantly adds to staff safety and welfare.
- ▶ ANSWs demand coverage model has the ability to suggest locations where ambulance cover should be introduced; findings are based on both population drivers and current demand patterns.
- ▶ Significant investment has been made into an Ambulance Electronic Patient Record (AERP), benefits include:
 - On the road access to protocols, pharmacologies and clinical procedures;
 - National data sets;
 - Patient case history;
 - Automated flow of information between ambulances and hospitals.
- ▶ As most '000' calls come from mobiles, ANSW is currently investigating emergency video calling capability to contact patients.



Workforce & Culture

- ▶ NSW Ambulance is largely a professional workforce, with very few volunteers involved in service delivery (3%).
- ▶ Volunteer Ambulance Officers (VAOs) provide a first response and transport role in remote areas without a full time ambulance presence.
- ▶ VAOs are required to be available on a regular basis and participate in an on call rostering system.
- ▶ Community First Responder (CFR) programs exist with individuals agreeing to be available on a regular basis and respond in their private vehicle.
- ▶ VAOs wear the approved Ambulance operational uniform while CFRs wear a branded safety vest and PPE.
- ▶ Both VAOs & CFRs are required to pass an induction training program, attend an annual weekend training session.
- ▶ A *Healthy Workplace Programme* has been implemented to improve staff morale and workplace culture by dealing more effectively with bullying and harassment in the workplace.



Clinical Governance & Service Standards

- ▶ Performance targets are largely operational and based on response times. Activation time targets are considered more appropriate than journey time targets in regional areas due to distances.
- ▶ ANSW is well established in three (of twelve) Local Health Districts with committees that oversee the initiation, development, implementation and evaluation of joint clinical and demand management initiatives around cardiac, stroke and mental health patients.
- ▶ Where ANSW has the capacity to respond, the Clinical Emergency Response System (CERS) Assist program allows for Paramedics to provide a pre-determined emergency response in rural and remote health care facilities. CERS Assist means that Paramedics work as part of the health care facility team providing additional assistance until local resources are activated or medical retrieval services are available.
- ▶ The 'Paramedic Connect' strategy comprises a range of initiatives integrating the Paramedic workforce into the broader health workforce in small rural communities to provide a more comprehensive range of care options.

South Australia

Name: SA Ambulance Service (SAAS)

Model: Became part of SA Health in 2008 and operates in accordance with the Health Care Act 2008 (SA)

Current population: 1.7 M

Size: 985 000km²

Density: 1.7 people/km²



Technology

- ▶ SAAS recently developed a business case for an Electronic Patient Record (EPR), this will include a tablet based interface for front line staff and volunteers to support a new operating model. This will be rolled out for implementation in late 2017.
- ▶ The EPR will allow for instant reporting on the patients care records to help develop better clinical governance by having a electronic database to be interrogated for any clinical incidents.
- ▶ Currently investigating Wi-Fi enabled ambulances for country and improved call centre technology to support hear/see and treat services to reduce admissions to acute hospitals.
- ▶ This technology improvement programme is also looking at eLearning platforms for volunteer staff to support the development of core skills.
- ▶ All future strategy being developed by SAAS is enabled by technology improvements.



Workforce & Culture

- ▶ SA Ambulance has both a professional and volunteer workforce, with volunteers making up approximately 50% of total personnel.
- ▶ SAAS run a mixed model with Paramedics and volunteers supporting service delivery in the State. A formal volunteer agreement that ensures an effective and structured rostering system.
- ▶ Volunteers are trained to Cert IV Health Care (Ambulance) - this can take 18 months with ongoing training requirements and a minimum service hours required.
- ▶ SAAS has introduced a Cert II 'Ambulance Assist' to get people on the ground more quickly.
- ▶ Minimum crew arrangements are based on geographic reach, rather than activity history (hub & spoke model).
- ▶ Volunteers are primarily interested in high priority service not IHPT. Where gaps occur, SAAS add trained Paramedics at premium rates to keep hub and spoke model operating.
- ▶ Volunteers are provided out of pocket expenses (not lost income). Increasingly employers are not supporting work outside of their community - only 27% of all volunteer crews are restriction free.
- ▶ Patient transport services in country SA are performed by emergency resources or in some areas dedicated Regional Medical Transport Service (RMTS) crews. Volunteer ambulance officers may elect to provide emergency coverage only to their communities which reduces transfer capacity in country areas.



Clinical Governance & Service Standards

- ▶ Innovative service solutions such as 'hear and treat' or 'see and treat' are not currently implemented consistently.
- ▶ Contractual design is immature and reporting is weak. SAAS does not report outside of urban centers on response times or clinical quality.
- ▶ Clinical standards are the same across country and metropolitan areas, however there are no clinical performance indicators, KPI's or visibility of whether they are being implemented correctly.
- ▶ Funding model policy currently supports presentation to an ED (50% user pays; 50% Government funded) - this does not always result in the best outcome for the patient.
- ▶ Unlike volunteer emergency ambulance officers, transport ambulance officers do not undertake a formal reaccreditation program, despite having the same scope and authority to practice, and extremely limited opportunities to practice at this level.
- ▶ There is a concern that keeping service standards in the country may be a challenge as volunteers decrease and do not take part in inter hospital transfers leading to financial and capacity challenges.
- ▶ Staff on the RMTS hold an ambulance officer qualification and most have a Certificate IV Health Care (Ambulance) or similar.
- ▶ RMTS crews were constructed of a Cert IV ambulance officer and a Paramedic (usually one approaching retirement as a step down from emergency work). The main role of both was to provide transport for non-emergency patients. The presence of a paramedic on the vehicle allows for patient treatment to continue during transfer and for high acuity patients to be supported when required. As there was a Paramedic on the vehicle, the crew could also be used as a 1st response to emergency calls if no other suitable ambulance was nearby.
- ▶ In regional areas this is a very cost effective and efficient way of providing both non-emergency transfers (which made up most of the ambulance demand) and emergency response without having to rely on volunteers or two separate crews, one for patient transport and one for emergency work.
- ▶ Recently, transport crews undergone additional training and been provided with specialist equipment and vehicles to undertake bariatric and mental health patient transfers throughout the State. This has helped to directing some additional non-emergency demand away from emergency crews.
- ▶ There has been anecdotal positive feedback from service users, GP's and hospitals regarding the availability of the RMTS and the bariatric and mental health transport support provided.
- ▶ The Queensland Ambulance Service (QAS) is run as a state-wide service and as such, there is a commitment that a paid ambulance service will respond to a request where appropriate, depending on the geographical distance required to travel.



Queensland

Name: Queensland Ambulance Service (QAS)
Model: QAS is a division of the Department of Community Safety (responsible for ambulance, fire, search & rescue, etc.)

Current population: 4.8M
Size: 1 734 000km²
Density: 2.7 people/km²



Technology

- ▶ All ambulance vehicles are fitted with satellite navigation systems to accurately and quickly reach destinations.
- ▶ QAS recently implemented personal issue iPads for all operational staff. It is the intention to use these in the future to capture images to share with hospital staff and other centralised experts.
- ▶ All stations are to become Wi-Fi hubs, with the computers being replaced by iPad docking stations at ambulance stations.
- ▶ The iPad device is the key operating device for the Electronic Patient Record Form (ePRF); QAS has consulted with Apple during development to ensure compatibility with all other systems currently in use.
- ▶ QAS has a central communications centre and seven virtual communications centres throughout the State to coordinate ambulance services.
- ▶ Queensland Health has contributed significant funds to increase telecommunications connectivity in the State.



Workforce & Culture

- ▶ QAS is largely a professional workforce, with very few volunteers involved in service delivery (4%).
- ▶ Local ambulance committees are made up of groups of people that used to run and recruit for the ambulance service locally. These groups no longer provide services but have been retained in the governance structure and now provide an interface to the community. They are involved with the local ambulance officer and link them with those in the local community who can assist with the provision of ambulance services.
- ▶ For smaller stations, the local community is encouraged to be involved to support a continuity of service. This includes different volunteer positions such as ambulance attendants and drivers. Volunteers are trained to Certificate III or IV.
- ▶ Queensland Health run a 'Rural Generalist Pathway' program, that involves recruiting medically trained people and upskilling them to provide a greater variety of services. I.e. Teaching an ambulance officer to take an X-ray. This supports the provision of services in small communities. Graduates complete a dual degree in nursing and paramedicine, then work in small rural health service locations to provide both of these services. This model whereby a single healthcare worker can provide a greater variety of services is seen as a 'force multiplier' model for the provision of health and emergency services to the community.
- ▶ A rural incentives package provides staggered cash payments to staff who undertake a regional posting in identified priority locations for three years. In particularly remote locations, Paramedics are provided with travel benefits and a house (owned by QAS).
- ▶ QAS focuses on indigenous recruitment in remote communities:
 - Indigenous elders participate in the recruitment panel to ensure that those individuals expressing interest are well regarded by the community;
 - Individuals are initially trained to the level of a senior first aid certificate and then progressively increase their skill level;
 - In some communities every ambulance has a qualified Paramedic working with an indigenous officer (varying levels of qualifications);
 - This program has contributed to enhanced cultural competency and has attracted more non-indigenous staff to work in these communities.



Policy & Governance

- ▶ Head offices for QAS, RFDS, and Fire and Emergency Services are all collocated in Queensland. The complex includes shared facilities in the form of major incident rooms, meetings rooms and training spaces as well as having designated spaces for each respective agency. This single point of coordination and contact is reported to make the coordination of services significantly easier.
- ▶ QAS shares ICT support services with Queensland Fire & Rescue and Queensland Police. QAS also shares telecommunications services with multiple agencies in a partnership type arrangement.
- ▶ It is a Queensland Government policy to look for co-location opportunities where possible. Emergency services are obliged to look at the capital planning of other services in the areas where looking to open a new facility or conduct a refurbishment.
- ▶ Local ambulance service networks are aligned with health district boundaries to ensure a coordinated and functional relationship between QAS and the broader health system.
- ▶ When planning for location of ambulance services, QAS looks at local case load, population growth trends and the health needs of the community. QAS endeavors to use a "hub and spoke" method in rural and regional areas.
- ▶ Retrieval Services Queensland (RSQ) coordinates the tasking of aeromedical retrieval and inter-hospital transport of patients across the whole of Queensland.



Clinical Governance & Service Standards

- ▶ QAS has both efficiency and effectiveness metrics that they report on. There are four quadrants (Care for Patients, Care for Staff, Daily Activity & Service Standards):
 - *Care for Patients* quadrant is focused on clinical performance indicators/outcomes that include traumatic pain management, severe asthma management and patient safety.
 - *Care for Staff* focuses on training, development, wellbeing and operational areas of the QAS workforce. It reports on metrics such as skills maintenance, fatigue claims, sick leave, FTE and workplace health and safety incidents.
 - *Daily Activity* reports operational events that include number of incidents, acuity and growth patterns.
 - *Service Standards* relates to the operational performance of the service. This quadrant reports on indicators such as response times, synchronisation of iPads, off stretcher times and drug breakages.
- ▶ Response times are measured in all country areas as a part of Service Delivery KPIs as well as metrics for turnout times, travel times, average at scene time and transport times.
- ▶ A single patient safety unit with visibility of workload, activity and hospital access throughout the State is staffed by Paramedics. They make contact with Duty Operations Managers and provide advice on activity within their region. The operative provides 'eyes and ears' type oversight of all activity without having command and control type responsibilities.
- ▶ A cardiac arrest database allows QAS to measure 'cardiac arrest to discharge' survival rates using the Utstein template.
- ▶ The introduction of Clinical Performance Indicators and the ePRF are expected to improve clinical audit processes and clinical guidance.



Northern Territory

Name: St. John Ambulance Australia (NT) Inc. (SJANT)
 Model: SJANT is a not-for-profit organisation that operates under contract to the NT Government

Current population: 0.25 M
 Size: 1 346 000km²
 Density: 0.18 people/km²



Technology

- ▶ Ambulance patient data is recorded into SIREN, the SJANT electronic patient care record system.
- ▶ Electronic case cards support data transfer back through the communications centre. Unfortunately access to central data is difficult and analysis is limited as a result.
- ▶ Until recently, NT ambulance equipment was considered below standard. Recent contracts (including an injection of \$149 million over five years for seven new ambulances) have sought to improve this and NT is now at an appropriate level.
- ▶ Telemedicine from vehicles is considered a distant goal due to current funding restrictions. It is recognised by the leadership that this will provide potential to change the clinical model to a see/hear and treat and reduce the number of people conveyed to the ED.



Workforce & Culture

- ▶ SJANT has a large volunteer workforce, with volunteers making up 75% of total personnel.
- ▶ Professional Paramedics are employed in the region and supported by volunteers in areas that don't have 24/7 coverage; volunteers largely provide transport services rather than ambulance officer services.
- ▶ Paid Paramedics and volunteers generally work together.
- ▶ SJANT is its own training authority, authorised to train volunteer transport officers & communications officers to Certificate IV First Aid.
- ▶ All paid Paramedics are university educated; there currently issues finding postings for graduate Paramedics.
- ▶ SJANT has been experiencing challenges related to settling Enterprise Agreements with ambulance service staff for a number of years.
- ▶ Volunteers are not provided with loss of income or expense reimbursement.
- ▶ NT does not currently run a Community Paramedic model.



Clinical Governance & Service Standards

- ▶ Under the contract, SJANT and NT Department of Health have a joint Quality & Clinical Governance Committee, responsible for oversight of the Q&CG processes required for the delivery of Emergency Road Ambulance and Medical Transportation Services across NT.
- ▶ SJANT operates under a Clinical Practice Manual that outlines clinical guidelines, procedures and drug therapy protocols.
- ▶ Key Performance Indicators (KPIs) are largely operational with a key focus on response times (moving towards non emergency response times), particularly for cardiac patients. KPIs are open for review under the contracts second year.
- ▶ SJANT will provide road transport up to 150kms; beyond this transport is managed by external flight services.
- ▶ Patient transport decisions are made by a medical officer on advice from a regional clinic. These officers are not centralised and do not always hold local area knowledge.
- ▶ Extended care Paramedic program (i.e. treat in the field) was trialled in the Darwin and was extremely successful (on average diverting 5 people / 12 hour shift); the trial ended when Federal funding stopped.



Organisation

- ▶ Citizens can pay a subscription for ambulance cover, allowing them free emergency ambulance transport.
- ▶ Holders of an NT Centrelink Pensioner Concession Card or Health Care Card are not required to join the Ambulance Subscription Scheme as these costs are funded by the NT Government (NTG).
- ▶ Any ambulance transport out of a clinic or hospital is funded by the NT Health Department.
- ▶ Due to the high proportion of ambulance patients funded by the NTG, only a small population base are required to pay for the service. SJANT is only able to collect 7% of fees charged to these patients.

New Zealand

Name: St John Ambulance of New Zealand (NZ) Inc. (SJANZ) **Current population:** 4.6 M
Model: SJANZ is a not-for-profit organisation that operates under contract to the NZ Government **Size:** 269 000km²
Density: 17 people/km²



Technology

- ▶ The use of a demand and resource modelling software (Siren) has improved rostering and resource deployment nationally.
- ▶ Electronic Patient Report Forms (ePRF) were recently introduced, and integrate with district health board systems so hospital services can access real-time information from incoming ambulances.
- ▶ There is a project underway to connect ePRF data with NZ Summary Care Record to support integration of patient records across the healthcare system.
- ▶ There is a formalised ICT and Digital strategy in place to 2022; under this, a program of work is in place for further development of technology such as telehealth. SJANZ is actively pursuing digital solutions to reduce activity and increase emergency ambulance availability.



Workforce & Culture

- ▶ A blended model of Paramedics and volunteers is used to deliver ambulance services (similar to WA).
- ▶ All staff follow the same training plan (Certificate IV First Aid) requiring 12 days theory training, and 12 weeks on the job technical training.
- ▶ SJANZ is moving towards Ambulance Officers being a formally Registered Profession (initially Paramedic level and above only).
- ▶ Flexible rostering and more equitable distribution of calls across communications dispatch desks is planned.
- ▶ SJANZ aims to eliminate all single crewed ambulance responses by the end of 2019, due to safety concerns.
- ▶ SJANZ and the New Zealand Fire Service (NZFS) work together as co-responders to optimise responses times to the most time critical medical emergencies (1% of cases).
- ▶ As rural demand reduces and the inability to crew ambulances in these areas increases, SJANZ will look to replace ambulances with first response vehicles, and utilise community first responders (CFRs) or NZFS resources.



Clinical Governance & Service Standards

- ▶ The SJANZ contract focuses largely on performance as it related to response times, rather than clinical standards.
- ▶ Developing standardised clinical pathways for high acuity cases such as stroke, cardiac and trauma are in development.
- ▶ In 2015, SJANZ introduced Clinical Performance Bundles (CPBs) to quantify the quality of care delivered, enable visibility of improvements over time and allow for benchmarking against other ambulance services.
- ▶ CBP reports are derived from data collected in the ePRF systems.
- ▶ A national pathways manager position has oversight of patient transfers across the entire country system. Using this visibility, SJANZ is building towards standardised and auditable patient transfer pathways.
- ▶ Ambulance dispatchers are not always aware which volunteer stations are crewed or not crewed and where ambulance resources are available for dispatch. A reliance on group paging to dispatch a volunteer crew sometimes creates delays.



Workforce & Culture

The SJANZ Volunteer Sustainability Strategy outlines future vision for volunteers under 5 key areas:

| Recruitment & Induction | Training & Progression | Management & Support | Exit or Re-engagement | Reward & Recognition |
|--|--|--|--|--|
| <ul style="list-style-type: none"> ▶ A clear and common understanding of expectations for volunteer roles ▶ An informed, planned collaborative and more consistent approach to volunteer recruitment ▶ The right people in the right roles in the right places at the right times ▶ A more diverse volunteer workforce that better represents the community ▶ A more efficient, measured and consistent induction process that leads to better retention ▶ Improved customer facing online application process ▶ Stronger links with other healthcare/emergency services professions and removal of unnecessary barriers in recruitment | <ul style="list-style-type: none"> ▶ More tailored and flexible training options ▶ Better equipped, more engaged volunteers able to perform their roles effectively ▶ Consistently well supported volunteers with a clear and realistic understanding of their development opportunities and future pathways ▶ Maximising the potential of a young volunteer workforce ▶ Engaged, clinically up to date operational volunteers who can realistically commit to training and meaningfully benefit from the content | <ul style="list-style-type: none"> ▶ Fully resourced managers who are able to support and develop their volunteers ▶ Realistic & useful systems in place to support development and enhance the performance ▶ More structured and consistent approach to volunteer coordination and administration ▶ Better supported volunteers and development opportunities for mentors ▶ Improved relationships between paid staff and volunteers - creating a more consistently professional and productive workplace ▶ Systems in place to measure year on year progress | <ul style="list-style-type: none"> ▶ A realistic overview of the volunteer workforce and any gaps to support planning and cost saving ▶ Pressure on highly engaged volunteers relieved using accurate data analysis to feed into planning ▶ Higher number of skilled volunteers returning to their roles, or being recruited by other departments as already engaged, skilled and trained volunteers ▶ Better informed as an organisation about why volunteers leave increasing capacity to identify areas for development | <ul style="list-style-type: none"> ▶ The whole organisation is enabled to celebrate the value of volunteers in a meaningful way ▶ Better community relations and local support networks ▶ Volunteers and managers fully aware of the St John Honours system and promote and understand the nominations process ▶ An elevated profile of St John volunteer contribution ▶ Better understanding of the volunteer workforce and the organisation thereby makes more informed decisions around volunteering |

Nova Scotia



Name: Emergency Medical Care Inc. (EMC)
 Model: EMC is contracted by Emergency Health Services (EHS), a Health Dept. agency, to deliver ambulance services
 Current population: 0.9M
 Size: 55 000km²
 Density: 1.6 people/km²



Technology

- ▶ EMC has their own dispatch system which integrates with Telehealth and hospital systems.
- ▶ A mapping module at the call centre quickly displays the most efficient response option for the service.
- ▶ The service provides non-emergency online advice by a registered nurse, supporting patients who are unsure whether their condition should be assessed urgently, and often those in regional or remote areas.
- ▶ All assets (ambulance, helicopter and aircraft) have the ability to transmit data to hospital prior to patient arrival to support handover process.
- ▶ EMC is investigating video technology to develop a 'see and treat' model to save journeys especially to remote communities in bad weather.



Workforce & Culture

- ▶ EHS/EMS professionals include:
 - Communications Centre: emergency medical dispatcher;
 - Ground Ambulance: Primary Care Paramedic (1 year training), intermediate care Paramedic, advanced care Paramedic, assistance provided by medical first responders as needed;
 - LifeFlight: critical care Paramedic, critical care registered nurse, registered respiratory therapist
 - Ground and LifeFlight: medical oversight physician.
- ▶ There is a first responder service in operation, ranging from individuals with first aid and CPR knowledge through to certified medical agencies. Often first responders are firefighters, approved by the Medical Director to operate in this role.
- ▶ Paramedics have 24/7 access to an online medical control physician from anywhere in Nova Scotia.



Clinical Governance & Service Standards

- ▶ For IHPT, the physician at the sending site is accountable for patient care and safety during ground ambulance transport until the patient is transferred to the care of the receiving-site care team.
- ▶ The contract with EMC is long term (>5 years) and performance based (operational and clinical KPI's).
- ▶ There is a weekly contract meeting between the provider and contract holder on meeting clinical and operational requirements; Paramedic knowledge and skills are reviewed annually.
- ▶ EMC is responsible for developing and reporting on a comprehensive Clinical Quality Management (CQM) program (see over page for more details).
- ▶ The service has clear clinical protocols for common responses (stroke and heart attack) that Paramedics can access.
- ▶ To reduce unnecessary ambulance deployment, the call center employs a registered nurse to support triage.
- ▶ Nova Scotia has a formal strategy to integrate clinically and physically (co-location) with the health system to enable transparency and reduce siloed decision making.



Clinical Governance

- ▶ Through the execution of the CQM program, EHS and EMS strive to improve care and service by monitoring structures, processes and outcomes.
- ▶ CQM supports identification of exemplary care and addresses any challenges. Using quality improvement processes, data is continually collected and evaluated and resulting in the continuous improvement of processes.
- ▶ The CQM program is dynamic and responsive to changes from various sources such as research evidence or patient feedback.

Key Committees / Groups

Clinical Quality Improvement Committee
 A joint EHS-EMC Clinical Quality Improvement (CQI) Committee meets on a quarterly basis to assess clinical indicators for compliance with established standards and recommends actions to address instances

Information is communicated from EMS to EHS through regular reporting and via the CQI committee

Clinical Quality Forum
 The Clinical Quality Forum provides an opportunity for EMC personnel to share ideas and materials and discuss improvement initiatives.

Core components of the CQM program

Clinical Practice Guidelines

- ▶ A collaborative committee developed 28 robust clinical practice guidelines to provide direction to EHS clinicians.

Clinical Education

- ▶ Needs assessments take into consideration Paramedic feedback, clinical practice guidelines, equipment, performance data and operational requirements to deliver an education program to support clinical practice (both mandatory & non mandatory).

Clinical Indicators & Benchmarks

- ▶ Indicators are drawn from clinical practice guidelines and national and international standards.
- ▶ Benchmarks help to determine whether care meets established standards.

Data Collection

- ▶ Clinical quality information is obtained through completion of clinical audits, CAD and ePCR databases, stakeholder input and patient satisfaction surveys.

Clinical Auditing

- ▶ Audits compare the care provided to patients with clinical standards and identify areas requiring improvement.
- ▶ The audits are completed on a monthly basis by Clinical Development Paramedics.

Case Reviews

- ▶ When ambulance calls lead to a 'service inquiry' there is a review of the clinical care provided by Paramedics.
- ▶ Paramedics can request a case review themselves.

Contractual & Legislative Compliance

- ▶ Legislation is monitored for changes that will impact the provision of emergency health services, and changes to policy and process are made accordingly.

Accreditation

- ▶ An external review of EMC measures the service against established standards and provides feedback during the accreditation process.

British Columbia



Name: British Columbia Ambulance Service (BCAS)
Model: BCAS is managed by British Columbia Emergency Health Services (BCEHS) and falls under the jurisdiction of the Provincial Health Services Authority (PHSA)

Current population: 4.6M
Size: 945 000km²
Density: 5 people/km²



Policy & Governance

- ▶ BCEHS provides provincial ambulance and emergency health services, and is mandated by the Emergency and Health Services Act, which outlines its single role as a provider of pre-hospital care. The act establishes British Columbia Ambulance Service (BCAS) as the operating arm of BCEHS, split up between urban, rural and remote.
- ▶ Although supported by PHSA, BCEHS has the provision to develop and implement its own processes, standards, and treatment guidelines. Corporate support functions and funding are provided by the PHSA to leverage multi agency synergies.
- ▶ Communications and issues management functions regarding ambulance services are maintained within BCAS due to the specificity and sensitivity of the information.
- ▶ BCAS recently introduced call triage system, with a policy of redirecting ambulances to the priority location when necessary. Data analysis following the change demonstrated it was an effective policy step that improved overall patient outcomes.



Workforce & Culture

- ▶ Rural stations are staffed using a stand-by model, where paramedics are paid a reduced rate to stand-by at the station ready to respond. When they respond to a call, they are paid their full hourly wage for three hours. Remote stations are staffed similar to volunteers, where paramedics are called to respond by pager from the community. When on-call, paramedics receive a stipend to be available and their full hourly rate for four hours when responding to a call.
- ▶ BCAS partners with local Governments, fire departments and members of the community to support the delivery of first responders program.
- ▶ The service aims to ensure there is a consistent level of training to a minimum level standard to all service staff.
- ▶ Free training days are used as a method for recruitment in the community.



Clinical Governance & Service Standards

- ▶ The health care quality compliance function within PHSA and supports investigations, with audits having an increased focus on quality.
- ▶ An EHCSC team facilitates patient-centred improvement projects, reviews patient safety events and coordinates systems-level changes to the pre-hospital care system. This team ensures patient safety is at the forefront of organisational decision-making.
- ▶ Paramedics are not legally authorised to make diagnostic decisions. Historically, this led to unnecessary hospital presentations. A new program enables Paramedics 24/7 access to a physician (via telephone) who can make diagnosis. This 'see and treat' function has improved patient outcomes and the welfare of the Paramedics by providing them with decision support.
- ▶ The BCAS rural ambulance service consistently struggles with the balancing of quality of care, timeliness and cost.

Alberta



Name: Alberta Health Services (AHS)
Model: Ground ambulance services are the responsibility of the provincial health authority operating under the *Emergency Health Services Act*

Current population: 4M
Size: 662 000km²
Density: 6 people/km²



Policy & Governance

- ▶ Alberta Health establishes policy, standards, and legislation for the health system in Alberta. Ambulance services are delivered by Alberta Health Services (AHS), which is a fully-integrated health system accountable to Alberta Health.
- ▶ AHS is responsible for the operational governance and delivery of ground and air emergency medical services.
- ▶ AHS has implemented a regional delivery model consisting of five clinical operational areas based on geographic region. These five 'zones' are responsible for ensuring the delivery of Emergency Medical Service (EMS) in the geographic area. The primary responsibility of these zones is related to the delivery of front-line services and specific corporate functions related to system performance, integration and clinical education.
- ▶ AHS has integrated operations under a single authoritative structure (EMS), which is accountable for the service delivery and oversight of land and air ambulance and dispatch services. This integrated approach has allowed for the ability to make decisions over all facets of system-wide service delivery.



Workforce & Culture

- ▶ AHS and more than 40 contracted EMS operators supply ground ambulance services throughout Alberta; over 3,000 EMS practitioners (paid staff) deliver ground ambulance services.
- ▶ There are three levels of EMS practitioners
 - Emergency Medical Responder (EMR)
 - Emergency Medical Technician (EMT)
 - Emergency Medical Technologist Paramedic (EMT-P)
- ▶ EMS practitioners have different levels for training depending on their position. EMRs have a basic level of training while EMTs have more comprehensive training including an eight month certificate program. Paramedics require two years of advanced training and practicum before they are certified to work.
- ▶ Medical First Response (MFR) agencies such as fire departments and community based volunteers contribute a valuable role in the care of patients before they arrive at a hospital.
- ▶ AHS has a responsibility to ensure patient care is delivered safely and to ensure responders are trained, prepared and supported to deliver that care.



Clinical Governance & Service Standards

- ▶ Clinical education is delivered internally by EMS resources due to specialisation of education and training requirements in the field.
- ▶ System performance and management is delivered internally by EMS, including the analysis of data in areas such as emergency response times and coverage locations.
- ▶ Alberta Health and EMS are working together to establish a single, comprehensive source of valid EMS system data that encompasses the EMS dispatch and delivery systems to be used for operational decision making and quality and safety management.
- ▶ There are 204 stations across the province dispatching AHS and contracted ambulances. These stations are strategically dispersed to support rapid response times to all areas and enable evidence-based decision making and maximum utility of limited resources. Decisions are made based on:
 - Performance monitoring & reporting;
 - Spatial analysis;
 - Statistical modeling (predictive analysis);
 - System Status Management (proactive deployment).

Ontario

Name: Emergency Health Services Branch (EHSB)
 Model: Ambulance services are largely the responsibility of upper tier municipalities, overseen by the Ontario EHSB

Current population: 13.7M
 Size: 1 100 000km²
 Density: 12 people/km²



Policy & Governance

- ▶ Governance structure, service levels, and terms of working relationship are not clearly defined between the Ontario EHSB and the Ministry of Health and Long-Term Care (MOHLTC) centralized services.
- ▶ As a result, the working relationship and role expectations between the two groups are not clearly defined, understood or accepted.
- ▶ EHSB is responsible for ensuring the existence a balanced and integrated system of ambulance services and communications services.
- ▶ EHSB establishes province-wide standards, funding and inspection of land ambulance dispatch services. They provide system oversight of the land ambulance sector, including strategic management, monitoring, compliance, investigation and regulatory roles.
- ▶ EHSB also manages funding and ensures provision of ambulance services to remote areas without municipal organisation.



Technology

- ▶ Perceptions persist that technology has not been keeping up with the latest innovations for ambulance services as the Field Offices are not involved in decisions related to implementation of technology.
- ▶ Technology involved in ambulance dispatch operations appears to be out of date and requires reviewing to determine necessary updates.
- ▶ Interactive computer technology enables a dispatcher in the CACC to link together physicians, Paramedics, other providers of emergency health services and public safety agencies.
- ▶ The computer aided dispatch system also allows the dispatcher to track the status of emergency departments and the availability of health care specialists and beds at most of the advanced care hospitals and health care facilities in the province.



Clinical Governance & Service Standards

- ▶ EHSB is responsible for establishing standards, monitoring, inspection and evaluation of ambulance services. They also investigate complaints that involve ambulance services.
- ▶ Day-to-day monitoring of service delivery occurs through the Central Ambulance Communications Centre. In addition, Ministry staff routinely visit municipalities, designated delivery agents and service providers to address program delivery and standards issues.
- ▶ The ministry also conducts regular quality assurance reviews of ambulance services. These reviews are peer-orientated operational reviews that measure the success of the provider in meeting the requirements for service delivery.
- ▶ Accountability for performance management is currently not clearly defined, and performance issues and trends are not effectively addressed.
- ▶ Data ownership within the EHSB is unclear.
- ▶ Limited access to quality data, capacity to conduct analysis, and accountability of data management hinders the EHSB's ability to gain insight on performance and inform decision making to enhance its performance.



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ED 0218

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