NT Road Ambulance Service Scoping Review

Department of Health, Northern Territory Government

Professor Neale Fong
Letter to the Minister for Health

1 December 2017

The Hon Natasha Fyles, MLA
Minister for Health, Attorney General and Minister for Justice
Parliament House
Darwin NT 0800

Dear Minister

NT Road Ambulance Service Scoping Review

I thank you for the opportunity to provide this report on the Scoping Review.

I wish to thank officers of your department and all the stakeholders involved in some way in road ambulance service and its many interfaces, for their generous and positive support throughout the consultation process. The scale of response to invitations to meet was commendable.

The NT does have significant challenges when it comes to providing a quality, responsive and equitable service for its population.

Notwithstanding these challenges, the road ambulance service functions well. It is time however, to move from functioning to performing. There are many aspects that require significant reform. They are whole of health, and specific to the major provider, St John Ambulance NT. These findings and suggested reforms are outlined in the report.

Overall the actual clinical and administrative staff from all the stakeholder organisations and the community volunteers involved in ambulance services provide high quality care.

Organisational changes are recommended, and I look forward with a great deal of optimism to all stakeholders coming together to discuss the issues outlined, and moving quickly to support the enabling of the recommendations.

I commend the Review to you.

Yours sincerely

Dr Neale Fong
Independent Reviewer
NT Road Ambulance Service Scoping Review
Acknowledgements

I would like to acknowledge and thank the Review’s support team of Nicole Cameron, NT Department of Health and Donelle Rivett, Paxon Group who effectively managed the administration requirements of the review, as well as assisting with research and preparation of this Report. Ms Ashlea Ladd from SJAANT was also of great assistance in providing information from that organisation for the review. The work of the Consultative Committee chaired by former Deputy CEO NT Health Janet Anderson PSM was also of valuable assistance.

Professor Neale Fong
Independent Reviewer
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Executive Summary

The management of road ambulance services is a complex business with numerous stakeholders and with very high community and patient expectations. In the Northern Territory (NT) the road ambulance service, which includes emergency response and patient transport, call taking, triage, dispatch and retrieval, overall functions well.

However, though the service is functioning satisfactorily, it now needs to move to new stage of performance excellence. A functioning model of service can often be a result of individuals’ extraordinary commitment to ‘make things work’, rather than through a planned, coordinated and well implemented system. There are numerous areas the Review has found that require significant improvement and greater collaboration.

The Review did find that there is an abundance of ideas, thinking and enthusiasm to make change, but the stakeholders in the sector are overly focused on organisational self-interest, rather than achieving the best outcome for Territorians. There is a great need for closer partnerships between the major road ambulance provider and the health system (hospitals and health clinics) and other medical retrieval providers. Many examples of poor communication and a lack of leadership and goodwill to achieve better outcomes were identified.

The Review was concerned to hear from ambulance officers and senior management in SJAANT that organisational culture change was long overdue, and that leadership had not addressed key issues for improvement of its service. This pertained especially to workload management issues, training, career pathways and opportunities and staff health and wellbeing.

However, recognition should be given to some significant change initiatives led by SJAANT, particularly with respect to clinical governance, over the last eighteen months, to bring about service and corporate improvements. Overall ambulance officers have seen this as positive change.

The Department of Health (DoH) as the contract manager, has developed a much-improved framework for contracting with SJAANT through the current contract (2016-2021), characterised by moving from a model of ‘granting’ money, to a contract for services model, with key performance indicators (KPIs) and monitoring requirements. However, this too requires more robust engagement and sophisticated monitoring, with greater direct involvement from Health Service Providers.

Involvement of health service providers (HSPs) in future development, management and monitoring of the SJAANT Contract is a priority, particularly with the need to ensure collaborative and consistent approaches to clinical protocols and complex decision making relating to dispatch coordination.

Legislation should be brought into the NT Parliament to regulate ambulance service provision, thus safeguarding this aspect of the NT health service for all Territorians.

It is Reviewer’s opinion that many of the concerns and issues that have been identified through this Review can be remedied by diligent and collaborative
discussions and negotiations between all the relevant stakeholders in the current structural model.

It is not the Reviewer’s opinion that bringing the management of the road ambulance under the Department of Health is the right solution to address all the concerns and issues raised by the Review. However, the key stakeholders, and SJAANT as the major provider, should all be required to make swift changes to address many of the findings and recommendations of this Review, and be held to strict account on their implementation.
1 Introduction

1.1 Background and Definition of Ambulance Services

Ambulance services serve as an integral part of the health system and have a critical role in preparing for, providing and enhancing:

- emergency and non-emergency pre-hospital and out-of-hospital patient care and transport;
- inter-hospital patient transport including the movement of critical patients;
- specialised rescue services;
- the ambulance component of multi-casualty events; and
- the community’s capacity to respond to emergencies.¹

Ambulance service organisations are the primary agencies involved in providing services for ambulance events. State and Territory governments provide ambulance services in most jurisdictions except for WA and NT where, St John Ambulance is under contract to the respective governments as the primary provider of ambulance services (Table 1).

In a limited number of cases, other organisations provide specialist services such as aeromedical transport for emergencies.

Table 1 - Delivery and scope of activity of ambulance service organisations

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Umbrella Department</th>
<th>Ambulance Service Provider(s)</th>
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<tbody>
<tr>
<td>NSW</td>
<td>NSW Health</td>
<td>NSW Ambulance – a division of the Ministry of Health reporting to the Minister for Health</td>
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<tr>
<td>VIC</td>
<td>Victorian Department of Health and Human Services</td>
<td>Ambulance Victoria – a separate statutory body reporting to the Minister for Ambulance Services</td>
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<tr>
<td>QLD</td>
<td>Queensland Department of Health</td>
<td>Queensland Ambulance Service – a division of the Department of Health.</td>
</tr>
<tr>
<td>WA</td>
<td>WA Department of Health</td>
<td>St John Ambulance WA – an incorporated not for profit organisation under contract to the WA Government.</td>
</tr>
<tr>
<td>SA</td>
<td>SA Health</td>
<td>SA Ambulance Service – an incorporated entity under the SA Health Care Act.</td>
</tr>
<tr>
<td>TAS</td>
<td>Department of Health and Human Services</td>
<td>Ambulance Tasmania – a statutory service of the Department of Health and Human Services.</td>
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</tbody>
</table>

1.2 Scope of Review

The Minister for Health, the Hon Natasha Fyles MLA announced on 8 February 2017 an independent review of the NT road ambulance services to consider and gain an understanding of the future of road ambulance services in the NT.

For the review process, the Minister committed to working with the current road ambulance service providers, St John Ambulance Australia NT Inc. (SJAANT) and United Voice, the key union representing paramedics, patient transport and communications employees.

The NT Road Ambulance Services Scoping Review (Review) was established to:

- Identify contemporary best practice in the delivery of road ambulance services by comparison against road ambulance services elsewhere that operate in a context relevant to the NT;
- Consider the need for future regulation of road ambulance services in the NT;
- Identify future workforce requirements for a contemporary road ambulance service in the NT including the training, development and retention of the ambulance services workforce; and
- Examine the interface between road ambulance services and other health emergency services to maximise the efficiency and effectiveness of emergency responses including the interface with aeromedical services.

While aeromedical patient emergency and transport services were not in scope, the interface between road ambulance and aeromedical services was considered in the review due to their operational interdependence.

The NT Department of Health (DoH) contracts aeromedical services through the Royal Flying Doctor Service (RFDS) in the Central Australia region, and CareFlight Limited in the Top End region.

The Review’s Terms of Reference approved by the Minister for Health (July 2017) are available in Appendix A.
1.3 **Review Governance – Consultative Committee**

Dr Neale Fong, the independent reviewer, led the Review with governance oversight provided by the Review Consultative Committee. The Review Consultative Committee was chaired by Ms Janet Anderson, former Deputy Chief Executive, Department of Health with member representation from:

- St John Ambulance Australia NT (SJAANT)
- United Voice
- Top End Health Service (TEHS)
- Central Australian Health Service (CAHS)
- Department of Health ((DoH))

The full list of Members is available in Appendix B.

1.4 **Review Method**

The Review Consultative Committee and Independent Reviewer jointly agreed the method and conduct of the review prior to commencement of the review. The intent of the review was to provide the NT Government with considered advice and identification of strategic directions for road ambulance services as per the Terms of Reference.

A four-stage process for the review was utilised consisting of desktop reviews, data/benchmarking analysis, and consultation. Figure 1 provides a high-level description of the method implemented.

Figure 1 - NT Road Ambulance Service Scoping Review method

<table>
<thead>
<tr>
<th>Stage 1 - Desktop Review</th>
<th>Stage 2 - Research</th>
<th>Stage 3 - Consultation</th>
<th>Stage 4 - Review Report</th>
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</thead>
<tbody>
<tr>
<td>• Confirm scope, parameters and assumptions.</td>
<td>• Describe current service model.</td>
<td>• Stakeholder consultation and site visits.</td>
<td>• Identification of key issues.</td>
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<td>• Confirm stakeholder consultation.</td>
<td>• Service benchmarking.</td>
<td>• Identification of strategic and operational issues (geographic, workforce).</td>
<td>• Recommendations.</td>
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<tr>
<td>• Information requirements.</td>
<td>• Professional development, governance, and safety performance metrics.</td>
<td>• Legislation and regulation models.</td>
<td></td>
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<tr>
<td>• Deliverables agreement.</td>
<td>• Funding models,</td>
<td>• Environmental (market place) implications.</td>
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The Independent Reviewer met with over 140 individuals across the regions and attended sites including SJAANT’s centres and sub stations, hospitals, primary health centres, and Aboriginal community controlled health organisations (ACCHO) across the NT. In addition to consultations, the Independent Reviewer received a small number of written submissions.

A full list of individuals and organisations consulted by the Independent Reviewer is available in Appendix C.
In advance of consultation meetings, the Independent Reviewer was provided with a considerable amount of documentation and in particular from SJAANT.

1.5 Structure of the Report

This report provides information on the findings and recommendations of the Independent Reviewer as laid down in the Terms of Reference.

- Chapter 1 introduces ambulance services scope and methodology for the review.
- Chapter 2 provides an overview of the current NT road ambulance service and interface with other health care providers and aeromedical retrieval services.
- Chapter 3 provides summary of other ambulance services in Australia and identifies key benchmarking data for comparison with NT road ambulance services.
- Chapter 4 discusses the general themes identified by the Independent Reviewer emerging from consultations undertaken and submissions received.
- Chapter 5 discusses the SJAANT specific themes identified by the Independent Reviewer emerging from consultations undertaken and submissions received.
- Chapter 6 provides discussion of the Independent Reviewer’s key findings.
- Chapter 7 provides a list of recommendations from the review.
2 NT Ambulance Service Model

2.1 NT Population Distribution

The NT’s population is spread across a diverse range of locations, from urban centres in Darwin, Alice Springs and Palmerston, to remote and very remote locations. The distribution of the population is an important issue as it influences policies around service provision, economic performance and the socio-economic wellbeing of communities.

The 2016 NT estimated population was 245,000 with 59 percent of the population residing in the urban area of Darwin and Greater Darwin (Palmerston and Litchfield), 19.5 percent of the population reside in remote areas and 21.5 percent of the population residing in very remote areas.

The Aboriginal and Torres Strait Islander (hereafter referred to as Aboriginal) resident population is estimated at 74,509, approximately 30 percent of the total NT population, with the majority residing in very remote areas (58 percent) where health status decreases, and higher rates of disease are reported.

The major challenges for service delivery of any type in the NT relate to geography and distance, a dispersed population, inequitable access to infrastructure for rural and remote areas and related resource distribution. The ability to achieve economies of scale and equity of service provision is severely hampered by these factors and compounded when services require a higher level of specialisation and capability such as provision of first response medical care and emergency treatment, retrieval and transport.

These factors influence the ability to sustain consistent and equitable service delivery to the standard expected from a modern high performing ambulance service.

2.2 NT Pre-Hospital and Emergency Ambulance Service Providers

The NT Government through the Department of Health (DoH) contracts with a number of pre-hospital and emergency service providers, along with other patient transport services forming an integrated network providing Territory-wide ambulance services.

Road pre-hospital emergency ambulance and Patient Transport Services (PTS) in the NT are currently provided by:

---

2 ABS Census data classifies the urban centre of Darwin as ‘outer regional for population distribution statistics.

3 ABS (2017) Regional population growth Australia 2016 (cat. no 3218.00) (released 28 July 2017). Canberra


• SJAANT through provision of emergency ambulance road transport services generally within a 150-kilometre radius of each NT major urban centre defined contractually as Darwin CBD, Darwin, Palmerston, Greater Darwin Region (including Litchfield, Cox Peninsula, Finniess and Coomalie), Katherine, Nhulunbuy, Tennant Creek, and Alice Springs; and
• A network of community-based primary health centres (PHCs) located outside the 150-kilometre radius who provide remote emergency patient transport and first responder services using resources of either DoH, Aboriginal Community-Controlled Health Organisations (ACCHOs) or Community Controlled Organisations (CCO), in concert with SJAANT and aeromedical providers.

2.3 St Johns Ambulance Australia NT Inc. (SJAANT)

SJAANT is the primary provider of road ambulance services in the NT. SJAANT is affiliated with St John Ambulance Australia (SJAA). Nationally SJAA consists of eight separate state based organisations.

SJAANT has been funded by the NT Government to provide pre-hospital and emergency road ambulance (including patient transport) services since 1995. The current contract (five plus five-year option) commenced 1 February 2016 and provided a 35 percent increase in funding to support growth and service improvement. The previous contact (five plus an exercised three-year option) did not include growth funding or allow for additional services during the eight-year period.

SJAANT is also contracted to provide communications, dispatch and coordination for all NT triple zero (000) ambulance emergency calls.

Darwin has four ambulance centres located strategically in Parap, Casuarina, Palmerston and Humpty Doo, each nominally providing a base for one 24/7 (168 hours a week) emergency road transport ambulance with a crew of two ambulance officers, (sometimes a graduate paramedic forms this crew) for a total of 712 hours per week of emergency road transport ambulance services per centre.\(^6\)

In addition to pre-hospital and emergency road transport services, SJAANT provides patient transport services. Patient transport services are provided in:
• Alice Springs – one crew 12/7; and
• Darwin – one crew 24/7 and a second crew 24/2.

PTS crews consist of two patient transport officers (PTO). PTOs are not required to be qualified paramedics.

Table 2 summarises SJAANT’s service model, locations and resources for each centre and operational facility:

\(^6\) An additional ‘K’ ambulance crew is rostered from 3pm to 11pm Monday to Friday (a further 40 hours a week).
## Table 2 – Service Structure for SJAANT

<table>
<thead>
<tr>
<th>Station Location</th>
<th>Casuarina</th>
<th>Parap</th>
<th>Palmerston</th>
<th>Humpty Doo</th>
<th>JESC</th>
<th>Katherine</th>
<th>Nhulumbuy</th>
<th>Alice Springs</th>
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<td>Command vehicle/single response</td>
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2.4 **NT Rural and Remote Emergency Patient Transport**

All primary health centres (PHCs) including public sector (TEHS or CAHS) or non-government services (eg ACCHOs) are involved in provision of road ambulance services. This may be as first responders or then emergency transport through ‘halfway meets’. They may also provide end-to-end emergency patient transport, that is, from the location of the incident or PHC to the nearest local hospital. This issue is discussed in greater detail in Section 4.3.

The closest PHC generally provides emergency road patient transport and first response capability for locations outside of the 150 kilometres ‘as the crow flies’ radius.

Figures 2 and 3 provide locations of all PHC (public or NGO) located in the TEHS and CAHS regions. However, mobilisation and approach can vary significantly in the different regions due to local nuances, road conditions, demand pressures and resource availability.

Figure 2 - Location of PHC Clinics by Provider in TEHS
2.5 NT Department of Health – Patient Transport Services

TEHS and CAHS are funded by the DoH to provide public health care services to all Territorians divided by a geographical boarder between the Barkly Region and the Katherine and East Arnhem Regions.

**Top End Health Service (TEHS)**

Royal Darwin Hospital (RDH) operates two internal patient transport services. Top End Patient Transport Service provides patient transport by road for Patient Assisted Transport Services (PATS) eligible patients coming from rural and remote areas to support local renal dialysis patients and for selected individual outpatient appointments.

The other service is the ‘ambulance’ vehicle with stretcher capability operated by RDH for on-site patient transfer requirements. This vehicle is utilised to transfer critically ill patients from the RDH helipad to and from the RDH Emergency Department (ED) or other relevant clinical areas, for example between Intensive Care Unit (ICU), the Allan Walker Cancer Centre and RDH.

For rotary wing medical or critical care transfer from Darwin Airport, the RDH ambulance vehicle is also driven by an RDH staff member, usually a Personal Care
Attendant, and the aeromedical retrieval crew from CareFlight accompany the patient and are responsible for the patient care during the road transfer phase.

The Katherine health region funds a patient transport bus from Katherine to Darwin return every Monday to Friday, leaving at 7am and returning at 4pm. This service is predominantly for PATS clients, and it supports non-emergency inter-hospital patient transfer where a medical escort is not required.

Central Australian Health Service (CAHS)

CAHS operates a centralised model incorporating public services in the Alice Springs and Barkly Regions with Alice Springs Hospital (ASH) providing hospital management and clinical governance for Tennant Creek Hospital (TCH).

CAHS provides medical retrieval specialist staff for all RFDS medical escorts and aeromedical retrievals. This service also provides medical retrieval specialist staff for select road ambulance transfers for a faster clinical specialist response for specific critical incidents in rural and remote areas.

In addition to emergency ambulance and retrieval services, CAHS utilises the ‘Bush Bus’ transport service for patients. The Bush Bus is a twice-weekly service between Alice Springs, Tennant Creek and remote communities. Eligibility for this service is as per the PATS scheme.

2.6 Other Non-Government Providers of Patient Transport Services

Non-Government Organisations (NGO)

ACCHOs provide primary health clinics in some rural remote locations and provide emergency patient transport in the same way as PHCs run by TEHS and CAHS provide this service. These organisations note they are not funded to provide this service but as they are the only provider in the location, the moral and clinical responsibility rests with them to respond and transport.

Commercial

Taxis (where they available) are often utilised to transfer patients to and from dialysis appointments or after hours when family or friends are unable to pick them up. In Nhulunbuy, a remote taxi provides a patient transport service and at times this can be over a long distance and cost the client a significant amount.

In Darwin, other first aid and patient transport providers exist however, they provide these services primarily on a contract basis for large commercial operations such as mining and gas operators.

Aeromedical services

The RFDS in Central Australia and CareFlight in the Top End are contracted by the DoH to provide aeromedical medical retrieval and low acuity patient transport services. Aeromedical services are not in scope for the review except for the interface between road ambulance services, including communication, decision making, and dispatch requirements for a coordinated aeromedical and road ambulance response. This issue will be referred to in later chapters.
Some other small commercial and not-for-profit (for example Mission Aviation Fellowship (MAF)) air services also provide retrieval and transport services, notably in East Arnhem.

### 2.7 NT Road Ambulance Model Funding

As the provision of pre-hospital and road ambulance services is undertaken by multiple agencies, including SJAANT, PHCs and health services, the overall expenditure on road ambulance services is difficult to quantify.

Table 3 provides a breakdown of SJAANT’s source of revenue funding, noting that in 2015/16, government grants/contributions totalled $25 million. However, this does not include other State/Territory and Commonwealth contributions for road ambulance transport through PHCs, ACCHOs and health services.

**Table 3 – Source of SJAANT ambulance service organisation revenue ($’000)**

<table>
<thead>
<tr>
<th>Revenue sources</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government grants/contributions</td>
<td>$22.3</td>
<td>$23.9</td>
<td>$25.0</td>
</tr>
<tr>
<td>Patient transport fees</td>
<td>$2.9</td>
<td>$2.9</td>
<td>$2.8</td>
</tr>
<tr>
<td>Subscriptions/Other</td>
<td>$1.1</td>
<td>$1.2</td>
<td>$0.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$26.3</strong></td>
<td><strong>$28.0</strong></td>
<td><strong>$28.6</strong></td>
</tr>
</tbody>
</table>

Prior to the current DoH/SJAANT contract (2016-2021), the SJAANT received a block grant with which they were expected to manage within. In addition, SJAANT has an independent arm that fund raises through first aid training, first aid coverage at community and sporting events, and the sale of first aid consumables.

### 2.8 Road Ambulance Activity Statistics and Trends

**Road Ambulance Activity 2009/10 - 2013/14**

A 2015 DoH ambulance planning report noted that during 2009/10 – 2013/14 Top End ambulance service use increased beyond population growth (6 percent compared with 2 percent population growth per annum). Notably, Katherine had an annual increase of 8.7 percent, which was over eight times the population increase (1 percent), and Nhulumbuy had a slight increase at 1.2 percent.

While no growth data was available in this report for Central Australia, it was noted that in 2013/14 the total number of ambulance was 12,629 (Alice Springs 10,744 trips and Tennant Creek 1,885).

---

Table 4 - Number of ambulance trips NT 2009/10-2013/14

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top End</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DN</td>
<td>15,592</td>
<td>16,549</td>
<td>17,947</td>
<td>18,205</td>
<td>19,439</td>
<td>87,732</td>
</tr>
<tr>
<td>KA</td>
<td>2,763</td>
<td>3,027</td>
<td>3,235</td>
<td>3,272</td>
<td>3,852</td>
<td>16,149</td>
</tr>
<tr>
<td>NH</td>
<td>925</td>
<td>955</td>
<td>1,008</td>
<td>909</td>
<td>968</td>
<td>4,765</td>
</tr>
<tr>
<td>Top End Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>108,646</td>
</tr>
<tr>
<td>Central Australia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10,744</td>
</tr>
<tr>
<td>TC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,885</td>
</tr>
<tr>
<td>Central Australia Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12,629</td>
</tr>
</tbody>
</table>

SJAANT Activity Data

SJAANT Data - Number of Ambulance Attendances by Code

In 2016/17 SJAANT ambulance officers attended 52,726 incidents. Priority Code 1 accounted for 31 percent of the calls, Code 2 accounted for 35 percent of incidents, and 28 percent of incidents were a Code 3 attendance. This represents a 13 percent growth in ambulance attendances from 2015/16 (46,596 attendances).

Table 5 – Ambulance Attendance by Code – Annual Growth

<table>
<thead>
<tr>
<th>Code</th>
<th>2015/16</th>
<th>2016/17</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code 1</td>
<td>15,322</td>
<td>16,419</td>
<td>7.16%</td>
</tr>
<tr>
<td>Code 2</td>
<td>17,191</td>
<td>18,201</td>
<td>5.88%</td>
</tr>
<tr>
<td>Code 3</td>
<td>4,027</td>
<td>15,005</td>
<td>272.61%</td>
</tr>
<tr>
<td>Code Not Entered</td>
<td>10,056</td>
<td>3,101</td>
<td>-69.16%</td>
</tr>
<tr>
<td>Total</td>
<td>46,596</td>
<td>52,726</td>
<td>13.16%</td>
</tr>
</tbody>
</table>

All centres/stations demonstrated an increase in activity over from 2015/16 to 2016/17. Notably, Nhulunbuy had a 30 percent increase in activity, albeit a small overall number increase. However, it is acknowledged that this centre has a single ambulance crew on site for each 24/7 roster.

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8 Prior to February 2017 Code Not Entered cases are dispatched without being logged through the ProQA system. These were primarily inter-service and/or pre-booked transports cases. Post February 2017, SJAANT’s operating procedure changed requiring ambulance crews to manually enter code to Code 3 for these cases.

9 Source: SJAANT data
Figure 4 – Ambulance Attendances by Code

Table 6 - Incidents by Station/Centre

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top End</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darwin</td>
<td>21,346</td>
<td>22,729</td>
<td>6%</td>
</tr>
<tr>
<td>Katherine</td>
<td>3,256</td>
<td>3,812</td>
<td>17%</td>
</tr>
<tr>
<td>Nhulunbuy</td>
<td>920</td>
<td>1,193</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Central Australia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alice Springs</td>
<td>11,579</td>
<td>12,782</td>
<td>10%</td>
</tr>
<tr>
<td>Tennant Creek</td>
<td>2,258</td>
<td>2,407</td>
<td>7%</td>
</tr>
</tbody>
</table>

**SJAANT Data - Call Volume and Emergency Call Centre (ECC) Percentage**

Call volumes to the general call centre number and Triple 000 (ECC) have increased by 14 percent since 2013/14. Of these calls, the percentage of ECC calls has increased from 30.67 percent to 32.71 percent.
2.9 NT Communications and Coordination of Dispatch System

**Triple 000 and Triage Service Model**

SJAANT operate a NT wide emergency Triple 000, triage and communications service. Operation centres are located in Darwin and Alice Springs and are responsible for:

- Responding to Triple 000 emergency ambulance calls and calls from specific service providers (hospitals, PHC and rural medical practitioner (RMP)) for road ambulance and non-urgent road transport needs;
- Provision of protocol driven call triage process for all calls;
- Dispatch of the appropriate ambulance or non-emergency patient transport resource; and
- Coordination for emergency ambulance and non-emergency patient transport incidents.

SJAANT’s Darwin operations are located within the Joint Emergency Services Communications Centre (JESCC) where all other emergency services are coordinated (fire, police and emergency services).

The second communications centre is based in Alice Springs with the operation of the dual location model for a single NT wide service established to maintain business continuity. The Alice Springs ambulance call centre provides the redundancy option for NT Triple 000 ambulance calls if the JESCC based service is off line.

Both centres are staffed with Emergency Medical Dispatch (EMD) officers with a communications supervisor rostered on every shift. An Emergency Communications
Centre Manager has been appointed in the previous six months with operational and strategic oversight of call centres and EMD officers for SJAANT.

There is one EMD trainer for the Territory (a new position) operating within business hours, however this role appears to have other additional responsibilities.

The process of triage and dispatch for all Triple 000 calls is undertaken using an Advance Medical Priority System (AMPS). SJAANT use the structured computer based call taking system ProQA. Using this system, EMDs lead callers through a structured set of questions and enter their responses into ProQA to provide a code assigning a priority for the dispatch of the ambulance. Priorities range from Priority 1 (potentially life-threatening emergency) to Priority 3 (non-urgent booked call), and determine how quickly ambulances need to arrive at the scene.

ProQA is patented software and used in other Australian states and territories ambulance services.

When appropriate, a call can be transferred to the secondary triage service ‘Health Direct’. Health Direct is a 24/7 free health advice and information service staffed by registered nurses. However, it was reported that many calls are returned to the call centre as the client wanted to be taken to hospital.

Alternate models for secondary triage that are within the ambulance communications environment are currently under consideration as there is a view that Territorians would respond better to a local person who is a paramedic or registered nurse than someone from another part of the country without local knowledge which is frequently the case for ‘Health Direct’.

A recent review of JESCC by the NT Police Fire and Emergency Services (PFES), has made several recommendations to improve the redundancy plan for the call centre, including NT Triple 000 ambulance calls. Into the future, this would negate the need for SJAANT’s Alice Springs centre to provide the business continuity plan for Darwin based ambulance emergency response, communications and dispatch functions.

Role of Rural Medical Practitioners (RMP)

Primary health care services in remote areas of the NT are provided by telephone consultation through the Rural Medical Practitioner (RMP) program (DoH)\(^1\). In addition to primary health care consultations, the RMP provides decision making for medical retrieval services (road and air). RMPs provide services on a 24-hour duty roster, and are typically based in the NT, however, due to the virtual nature of the service, RMPs can be located in other Australian states and overseas.

TEHS and CAHS manage separate RMP programs, based on geography and historical service models, ensuring that medical retrieval and patient transport coordination is efficient, effective, clinically safe and value for money.

Decision making for emergency medical retrieval and non-emergency patient transport services is the responsibility of the Duty RMP who has the clinical capability to identify, manage and plan for patients requiring air or road transport.

The Duty RMP initiates the medical retrieval and remains responsible for the clinical management of the patient until the patient is transferred into the care of another Medical Practitioner, either during the retrieval process or on arrival at the regional hospital.

In 2015/16, TEHS centralised the RMP program to a Darwin location. Prior to this, health services located in East Arnhem and Katherine regions were supported by locally based medical practitioners from Gove District Hospital (GDH) and Katherine Hospital respectively.

Communications Systems and ICT

There is a single communications line linking Katherine, Darwin and Alice Springs supporting all emergency ambulance dispatch and communications. A separate line exists for Tennant Creek and Nhulunbuy due to insufficient digital coverage. However, a single communications line will link all locations in the NT when the digital network is upgraded.

The information provided to ambulance officers on dispatch is provided via pager and includes the basic core information including address/general location, gender, and job code, which defines the priority level, response required and incident type. There is no further information given due to the single communication line, EMD officers need to keep the dispatch line open to ensure call demand and priority needs can be communicated.

The computer aided dispatch (CAD) system used in the communications centre provides additional case data, which could be available in vehicle via implementation of the Mobile Data Terminal (MDT) and is discussed further in Section 5.6.

2.10 Half-way Meets as Part of the Road Ambulance Response

PHC services located in rural and remote areas have access vehicles that can be converted for use as an ambulance. These vehicles form part of the road ambulance response with the ability to meet road ambulances at designated points and/or half-way meets.

When SJAANT receives a Triple 000 call requiring a high priority response, and the incident is within the nominal 150-kilometre radius, the EMD dispatches an ambulance (if available). The EMD will then notify the nearest PHC and the Duty RMP.

If the patient is outside the nominal 150-kilometre radius, either SJAANT or the PHC (depending on who received the call), will contact the Duty RMP to activate the medical retrieval response (road or aeromedical) and coordination. At this stage, a multi-person teleconference is commenced between all relevant service providers.

Once approval to transport the patient by road as a half-way meet has been made, the remote PHC will utilise their available emergency transport vehicle and staff, to take the patient directly to the closest ED or to a rendezvous point with SJAANT.
This rendezvous point should be no further than 150 kilometres from the SJAANT ambulance station. These long-distance ambulance trips limit the capacity and response by ambulances in towns as it removes out of circulation an ambulance. This is especially problematic where a SJAANT stations have only one ambulance crew.

2.11 Aeromedical Services

Background

There are two aeromedical services in the NT operating in the Top End and Central Australia regions.

CareFlight NT operates critical care retrieval services for the Top End community utilising fixed wing and rotary wing aviation resources. CareFlight provides medical and clinical resources, liaising with RDH. This service is available 24/7. Low acuity transport services from communities and smaller hospitals is also provided.

Coordination, prioritisation and treatment is by specialist medical physicians in emergency and critical care, many of whom also have joint appointments at RDH.

Aeromedical retrieval services in Central Australia are provided by the RFDS under a long-standing arrangement with the Australian and NT Governments. This service is managed by CAHS. When medical retrieval to a hospital is required, this is arranged with the RFDS and SJAANT.

Doctors from the retrieval team are based at Alice Springs Hospital. When highly specialised care is required, the retrieval service transfers patients to major hospitals in Adelaide and beyond.

Low Acuity Patient Transport (LAPT)

In the Top End region, a low acuity patient transport fixed wing service operates from Darwin, Monday to Friday (0700-1630). This service is contracted to CareFlight, under the coordination of the Duty RMP.

CareFlight staff this service with a medical practitioner and a registered nurse to provide non-emergency patient transport from remote communities.

Additionally, CareFlight base a second fixed wing plane and crew (RN only) in Nhulunbuy to further support remote aerial patient transport requirements in the East Arnhem Region. This service provides low acuity patient transfers as a medical doctor is not rostered on location with the asset.
3 Ambulance Services in Australia

3.1 Introduction

Chapter 3 provides a comparison of ambulance services in Australia. Benchmarking data from the Report on Government Services\(^1\) provides the comparative data. However, it is recognised that the direct benchmarking of NT ambulance services with other States and Territories is problematic, with demographics, population distribution and geographical distances requiring consideration when attempting to compare service scope and performance.

3.2 Ambulance Services Legislation

In most Australian jurisdictions ambulance services are generally understood to include two separate, but related components:

a) the provision of pre-hospital emergency care or ‘first response’ health care; and

b) the transport of the sick or injured (to hospital or between health care facilities).

In New South Wales, Tasmania, Queensland and the Australian Capital Territory, ambulance services are defined through legislation as services that relate to the provision of first aid, medical treatment, emergency treatment and/or other pre-hospital care to, and the transport of, the sick and injured.\(^11\)

In Victorian legislation, ambulance services have been defined as services required to:

a) Respond rapidly to requests for help in a medical emergency;

b) Provide specialised medical skills to maintain life and to reduce injuries in emergency situations and while moving people requiring those skills;

c) Provide specialised transport facilities to move people requiring emergency medical treatment;

d) Provide services for which specialised medical or transport skills are necessary; and

e) foster public education in first aid.\(^12\)

These legislative provisions do not suggest that the key or essential part of providing ambulance services is patient transport. Providing first aid or emergency medical care is providing ambulance services whether or not that care is associated with patient transport.\(^11\) Therefore, it could be argued that an organisation that provides on-site paramedics who provide prehospital care (at least in New South Wales, Tasmania, Queensland and the Australian Capital Territory),

---


\(^11\) Ambulance Services Act 1986 (Vic)
Queensland and the Australian Capital Territory is providing an ambulance services regardless of whether or not they transport the patient either on site or to a public/private hospital.\textsuperscript{11}

This contrasts with South Australian legislation that identifies that a critical component for an ambulance service is patient transport. A service that provides onsite pre-hospital medical care but does not transport the patient to ‘a hospital or other place to receive medical care’ is not providing an ambulance service.\textsuperscript{11}

<table>
<thead>
<tr>
<th>State/Territory Ambulance Service</th>
<th>Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Ambulance Service</td>
<td>Emergencies Act 2004 (ACT)</td>
</tr>
<tr>
<td>Ambulance Service of NSW</td>
<td>Health Services Act 1997 (NSW)</td>
</tr>
<tr>
<td>Queensland Ambulance Service</td>
<td>Ambulance Service Act 1991 (Qld)</td>
</tr>
<tr>
<td>The SA Ambulance Service Inc.</td>
<td>Health Care Act 2008 (SA)</td>
</tr>
<tr>
<td>Tasmanian Ambulance Service Inc.</td>
<td>Ambulance Service Act 1982 (Tas)</td>
</tr>
<tr>
<td>Ambulance Victoria</td>
<td>Ambulance Services Act 1986 (Vic)</td>
</tr>
<tr>
<td>St John Ambulance Service WA</td>
<td>No legislation</td>
</tr>
<tr>
<td>St John Ambulance Association NT</td>
<td>No legislation</td>
</tr>
</tbody>
</table>

In the NT and WA, the provision of ambulance services is not regulated by legislation and as such there is no legal definition of what constitutes an ambulance service.\textsuperscript{11}

### 3.3 Service Delivery Models

Table 9 describes the service model attributes of the following ambulance services:

- Queensland Ambulance Service
- NSW Ambulance
- Ambulance Tasmania
- Ambulance Victoria
- Australian Capital Territory Ambulance Service
- South Australia Ambulance Service
- St John Ambulance Australia WA Inc.
- St John Ambulance Australia NT Inc.
## Table 8 – Summary Australian Ambulance Service Models

<table>
<thead>
<tr>
<th>Service Model</th>
<th>Queensland Ambulance Service</th>
<th>Ambulance Victoria</th>
<th>Ambulance Tasmania</th>
<th>NSW Ambulance</th>
<th>ACT Ambulance Service</th>
<th>SA Ambulance Service</th>
<th>SJAWA</th>
<th>SJAANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (DoH)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Government – Other Department</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Emergency Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-Government service</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes (excl Kimberley Region).</td>
<td>Yes</td>
</tr>
<tr>
<td>Jurisdictional wide service</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>ACT + SE NSW</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Regional operational structure</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes (excl Kimberley Region)</td>
<td>Yes</td>
</tr>
<tr>
<td>Emergency medical response and pre-hospital care</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-Emergency Patient Transport</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Inter-facility ambulance transport</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Na</td>
</tr>
<tr>
<td>Aero-medical retrieval - Fixed Wing</td>
<td>Coord</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>RFDS</td>
<td>RFDS</td>
<td>RFDS/ CareFlight</td>
</tr>
<tr>
<td>Aero-medical retrieval/ rescue – Rotary (Helmet)</td>
<td>Coord</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No (Provided by Care Flight only in Top End)</td>
<td>No</td>
</tr>
</tbody>
</table>

*ACT = Australian Capital Territory; NSW = New South Wales; SA = South Australia; SJAWA = Southern JAWA Service; SJAANT = Southern JAWA Ambulance Network; DEFES = Department of Defence.*
<table>
<thead>
<tr>
<th>Service</th>
<th>Queensland Ambulance Service</th>
<th>Ambulance Victoria</th>
<th>Ambulance Tasmania</th>
<th>NSW Ambulance</th>
<th>ACT Ambulance Service</th>
<th>SA Ambulance Service</th>
<th>SJAWA</th>
<th>SJAANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casualty room services</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Urgent Care Centres</td>
<td>No</td>
</tr>
<tr>
<td>Emergency call taking, triage, dispatch and coordination</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Coordination of rotary &amp; fixed-wing aero-medical responses</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Rotary only</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>State-wide communications centre</td>
<td>No</td>
<td>na</td>
<td>Yes</td>
<td>na</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Joint emergency communications &amp; coordination centre</td>
<td>Na</td>
<td>na</td>
<td>No</td>
<td>na</td>
<td>Yes</td>
<td>Yes – standby incident room</td>
<td>No</td>
<td>Partial</td>
</tr>
<tr>
<td>Planning and coordination of major incidents and disasters</td>
<td>Yes</td>
<td>Yes – health only</td>
<td>Yes - all</td>
<td>Yes: health only</td>
<td>Yes</td>
<td>Yes – health only</td>
<td>Yes (as above)</td>
<td>Yes</td>
</tr>
<tr>
<td>First Aid training, community education, first aid at public events</td>
<td>Yes</td>
<td>na</td>
<td>Yes</td>
<td>Yes</td>
<td>na</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Volunteers supplementing local ambulance services</td>
<td>Yes/ rural and remote</td>
<td>Yes/rural</td>
<td>Yes/ not in major cities</td>
<td>Yes</td>
<td>na</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes: remote only</td>
</tr>
<tr>
<td>Volunteer only stations/ crews</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Volunteer run first aid, fund-raising and community services</td>
<td>Na</td>
<td>na</td>
<td>Partial</td>
<td>Partial</td>
<td>na</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Commercial activities</td>
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<td>na</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
3.4 Demand for Ambulance Services

Nationally in 2015-16, ambulance services in Australia reported:

- 3.4 million incidents — events that result in a demand for ambulance resources to respond — (145.1 incidents per 1000 people);
- 4.3 million responses — where an ambulance vehicle(s) are sent to an incident (178.1 responses per 1000 people). There can be multiple responses sent to a single incident. There can also be responses to incidents that do not have people requiring treatment and/or transport; and
- 3.2 million patients assessed, treated or transported by ambulance service organisations (136.8 patients per 1000 people).

In comparison, NT reported ambulances incidents, responses and patient per 1000 people was above the national average with:

- Incidents per 1000 people – 169.5
- Responses per 1000 people – 201.8
- Patients per 1000 people – 195.2

Figure 6 - Reported ambulance incidents, responses and patients, per 1000 people, 2015-16

3.5 Funding for Ambulance Services

In most jurisdictions, State and Territory governments are both the funders and providers of pre-hospital emergency care services except for Western Australia and NT that operate an outsourced or contracted model for these services.

Total expenditure on ambulance services was $3.0 billion in 2015-16, which was funded from a mix of revenue sources. Total revenue of ambulance services grew at an annual average growth rate of 3.7 per cent from 2011-12.
3.6 Ambulance Services’ Structure

Emergency Pre-Hospital Care and Transport

Emergency ambulance calls are either considered Priority (Code or Category 1) – emergency medical care required with lights and sirens or ’Urgent’ (Code or Category 2) – emergency medical care required without lights and sirens.

Emergency ambulances can be defined by the equipment they contain and/or the skills of the crew responding to the emergency. Clinical capability in emergency vehicles varies across the country. For example, the ACT Ambulance Service requires at least one Intensive Care Paramedic (ICP) on every emergency ambulance, which is considered the highest level of pre-hospital care provided by an ambulance service in Australia.

Some road ambulance service models employ rapid response vehicles that enable quick deployment to metropolitan emergencies – both pre-and inter-hospital. This are known as SPRINT in SA, and First Intervention Vehicles in the ACT.

SPRINT operates across metropolitan Adelaide in all wheel drive (AWD) vehicles, or via bicycle carrying a medical kit, oxygen and defibrillator, for major events with high pedestrian traffic. SPRINT paramedics provide first response emergency treatment and an ambulance dispatched if patient transport is required. SA Ambulance Service (SAAS) is trialling a Motorbike Response Unit (MRU) for central city deployment during major events.

In country areas, different models of community first responders are employed such as Community Responders (SASS) and Community Emergency Response Teams (CERT) teams of Ambulance Victoria (AV) and Ambulance Tasmania (AT). These services utilise volunteer ambulance officers stationed in local rural areas.

Improved focus on patient care has developed with the introduction of the Extended Care Paramedic (ECP) program in AT and SAAS. In this model, patients are often
treated in their home without being transported to hospital or referred to their GP. ECP’s are ICPs have advanced training and clinical decision-making capability.

Emergency Medical Retrieval Coordination

Critical care neonatal, paediatric and adult medical retrieval services occur via road ambulance, fixed wing or rotary wing aircraft. The service model varies in the jurisdictions. A major service component of medical retrieval is the coordination, usually undertaken by a single communications centre. This facility is provided by the respective jurisdictional ambulance service in all cases. For example, in South Australia the SAAS Emergency Operations Centre proves coordination, clinical advice and tasking.

The provision of specialist clinical support and advice to the health services and the jurisdictional ambulance clinical staff is a critical aspect of most emergency retrieval coordination centres.

AT has combined the road ambulance and aero-medical inter-facility transfers along with mobile critical care requirements for patient movements into the Aeromedical and Medical Retrieval Division (AMMRD). This centralises operations, coordination and clinical oversight of these critical patient movements.

Non-Emergency Patient Transport Services

Non-emergency patient transport (NEPT) is for patients who require clinical monitoring or supervision during transport, but do not require a time critical ambulance response.

Most NEPT transfers occur between hospitals, or between home and hospital. Some aged care patients may also be transported to and from specialist health appointments and rehabilitation. In some jurisdictions, NEPT also includes transfers of mental health patients. The majority of non-emergency patient transports are provided by road, with a small number undertaken by air services.

In recent years, there has been a trend by governments to outsource NEPT services, as a response to reducing pressure on the emergency response services, and seeking improved value for money.

Table 9 – Non-Emergency Patient Transport (NEPT) Service Models by State/Territory

<table>
<thead>
<tr>
<th>State/Territory Patient Transport Service</th>
<th>Model of Service Delivery</th>
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</thead>
<tbody>
<tr>
<td>ACT</td>
<td>ACT Ambulance</td>
</tr>
<tr>
<td>NSW</td>
<td>Panel of NEPT service providers</td>
</tr>
<tr>
<td>Queensland</td>
<td>Panel of NEPT service providers (limited)</td>
</tr>
<tr>
<td>South Australia</td>
<td>SA Ambulance</td>
</tr>
<tr>
<td>Tasmania</td>
<td>Panel of NEPT service providers</td>
</tr>
<tr>
<td>Victoria</td>
<td>Panel of NEPT service providers</td>
</tr>
<tr>
<td>Western Australia</td>
<td>Panel of NEPT service providers</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>Provided as part of SJAANT Contract</td>
</tr>
</tbody>
</table>
3.7 **Ambulance Services’ Clinical Benchmarking**

Clinical outcomes are a key measure to determine the effectiveness of the ambulance service. Across Australian jurisdictions, standard indicators of clinical outcomes reported in the ROGS include:

- cardiac survival rates;
- pain reduction; and
- patient satisfaction.

The above measures are useful indicators but have limitations:

- Heart attacks are only a small proportion of emergency indicators;
- While pain reduction and satisfaction provide better coverage of the full range of emergency indicators they rely on the patient’s subjective assessments, which are not necessarily an accurate assessment of clinical outcomes.

Nonetheless, the measures have the advantage of being recorded for all jurisdictions over a number of years and hence provide comparability.

**Figure 8 - Cardiac survival rates (%) by jurisdiction for 2015/16**

![Cardiac survival rates graph]

Figure 8 indicates NT compared well with the Australian average and with most other jurisdictions. Due to low reported numbers, caution is identified in full comparison of these results.

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Figure 9 - Percentage of patients who report a clinically meaningful pain reduction

![Bar graph showing percentage of patients who report a clinically meaningful pain reduction across different states and territories in Australia. The graph compares the pain reduction percentages for the years 2014-15 and 2015-16. The states and territories are: NSW, Vic (c), Qld (c), WA (c), SA, Tas, ACT, NT (c), and Aust.]
Figure 9 shows pain reduction rates by jurisdiction for the 2014/15 and 2015/16 based on ROGS data. NT had similar results to other jurisdictions.

Figure 10 - Proportion of ambulance users who were satisfied or very satisfied with the ambulance service, 2016

Using 2016 ROGS data, it was found that all Australian jurisdictions, including NT (96 percent), had a high proportion of patients satisfied with paramedic treatment and services.

It should be noted that when benchmarking national KPIs, different delivery contexts, locations, and types of clients can affect the equity, effectiveness and efficiency of ambulance services, and therefore the benchmarking.
4 Key Issues and Themes – Part A General and Territory Wide Issues

Background

Chapters 4 and 5 summarise key issues and themes emerging from consultation by the Independent Reviewer. These chapters also draw on information in Chapters 2 and 3 that describe the NT model and the various approaches to pre-hospital and ambulance services in Australia.

The themes arising have been carefully considered by the Independent Reviewer, and inform the findings and recommendations in the following chapters 6 and 7.

Issues raised in consultations that clearly fell outside the Terms of Reference of the Independent Reviewer have not been discussed in this Report.

Chapter 4 (Part A) addresses the key issues and themes relating to pre-hospital and road ambulance services in the NT including:

- Factors influencing demand and management of demand;
- Call centre, communications and coordination of dispatch;
- Half-way meets;
- Homelands;
- Aeromedical interface;
- Palmerston Regional Hospital patient transport services; and
- Legislation and regulation.

Chapter 5 (Part B) addresses the key issues and themes specific to SJAANT, that as the major provider of road ambulance services plays a critical role in determining the quality and effectiveness of services in the NT including:

- Ambulance workforce;
- Leadership and management;
- Health and well-being;
- Clinical governance;
- Training and professional development;
- Equipment, technology and infrastructure; and
- Contract, funding and financing.

4.1 Factors Influencing Demand and Management of Demand

Context

Resource management of road ambulance services is complex as the response capacity is not a linear relationship between calls received and ambulances dispatched, matched to available ambulance vehicles and crew numbers. Addressing demand is not just about adding more crews. That said, there has been significant growth in ambulance trips and reported increase in ambulance officer workload pressures.
A Multitude of Influences

Demand is influenced by many factors including:

- Type of incident complexity (e.g. single of multiple motor vehicle accident, criminal incident, attempted suicide);
- Patient needs (e.g. cardiac arrest, pre-existing morbidities, child drowning);
- Location of incident;
- Availability of crews (logistics as crews may already be on jobs);
- Availability of patient transport options and vehicles;
- Frequency of transfer aeromedical patients from airport location to hospitals (thus tying up ambulance capacity);
- Call centre capability in decision-making and coordination of dispatch;
- Population growth and location;
- Lack of secondary triage and other referral options for crews to transport to;
- Half-way meets (responding to calls a long way from base removes capacity); and
- Unnecessary or inappropriate call outs (many for low acuity patient transport to hospital (driven through poor understanding of the role of ambulance in community – lack of health literacy).

Figure 11 - Ambulance demand influencers
The impact of increasing demand has seen a resulting high workload for SJAANT crews and therefore impacts on the available resources to facilitate allocation of the appropriate resource within the required response time.

Resources have been added to the current SJAANT contract, but the availability and access to information to better understand managing demand is poor. It is noted that some of the data provided by the DoH is not consistent with data provided by SJAANT. This situation needs to be rectified if managing demand and the resource requirement is to be matched accurately. More robust information systems and collection, and tighter contract management are the solutions.

The paucity of robust data analysis relates in some way to the current emergency patient medical record (EPMR) system in use called SIREN. A new EPMR system is under evaluation by SJAANT however, for now, SIREN has challenges in data extraction that has impacted the ability of the Review to provide robust demand and utilisation analysis.

The Reviewer is informed that the extraction of ambulance specific data from the CAD system will assist in the future, however this approach is relatively new. Over time it will also contribute to the capability of SJAANT and the DoH to undertake robust demand, utilisation and incident response time analysis.

There is no doubt that SJAANT’s investment in ICT systems capability has been below what is required. The resultant effect is a service which is not optimally informed.

Rural and remote areas have additional requirements when considering demand pressures, resource allocation and response time expectations. Community activities such as football games and funerals can result in unpredictable spikes in demand.

**SJAANT Model of Dispatch and Centre Locations**

SJAANT’s model provides for pre-hospital and emergency road ambulance transport, patient transport services (PTS) and a single responder capacity (available in most locations), with utilisation of operational management staff as an ambulance crew back-up for times of high demand.

When an emergency ambulance crew is dispatched to an incident, it is by definition ‘unavailable’ and unable to respond to other incidents. However, an ambulance crew can be diverted to a higher priority incident if they are in transit or en-route to a lower priority incident. One option is that the lower priority incident may be referred to PTS and the ambulance crew redeployed to the high priority incident. The logistical management of dispatching ambulance crews and dealing with grading or re-grading priority is complex and discussed later in this chapter.

One of the smaller challenges specific to Darwin and Palmerston centres is the current policy of ‘return to station’ (the ambulance centre from which their shift commenced). This model somewhat limits the flexibility of response times for the ambulance crews, as up until recently, the ambulance crew’s meals and personal gear has been kept at
the centre where their shift commenced. Time could be saved and therefore better demand management provided if this policy was reworked.

The one positive with the ‘return to base’ model is that there are computer and training resources at the base staff can utilise for professional development whilst awaiting allocation of a job, though on-road paramedics reported that this is seldom used due to time pressures.

However, the critical issue likely relates more to the location of the various ambulance centres. For example, an ambulance can be dispatched from the Parap to Adelaide River, and not from the Humpty Doo station as that ambulance crew may be on a job. The Parap ambulance crew, when completing the job must return to Parap.

Consultation with on-road paramedics and SJANNT management identified a preference for a large ambulance centre base built more centrally in Greater Darwin, for example in Berrimah or Palmerston to address this issue.

**New Ambulance Vehicle Capacity**

SJANNT are moving to best practice in vehicle assets with the upgrade of their ambulance fleet over the next two years. However new ambulance vehicles will have only one patient stretcher as opposed to the older ambulance vehicles with a two-patient stretcher capacity. The old ambulance vehicles were frequently used to transport more than one patient even when clinically unsafe to do, and in time of high demand.

Introduction of the upgraded ambulance fleet to one patient to one ambulance crew, is expected to impact on service flexibility, especially when SJANNT transport aeromedical patients between the airport/hospital.

**Re-Grading of Call Priority**

SJANNT have employed some strategies to address demand. For example, PTS may be the first responders to a chest pain incident even though the required and preferred response is a paramedic crew, who may not be as close or even available to respond (on another priority call). This strategy is used as PTOs are trained in CPR and early initiation of CPR has a positive impact on patient outcomes.

In these cases, there can be a knock-on effect for PTS and delays in response times for low acuity patients reportedly of up to six hours. In addition, there is no certainty that the patient will still be at the location further impacting on PTS utilisation and resource availability.
Technology to Reduce Time Wastage

SJANNT introduced the SIREN platform (EPMR) in 2013 to replace the previous paper based patient record system.

During consultation, ambulance officers raised concerns around the time taken to complete the ‘case card’ or EPMR record due to the large number of data fields, required for patient transfers to hospital or instances when an ambulance was not required (ANR).

At the time of implementation, SIREN was not specifically tailored to the requirements of SJAANT, and as a result it is reported that there are over 700 fields available for a data response in the EPMR.

SJAANT have reported that in practical terms, only a small number of data fields are required to have information inputted to provide sufficient patient data and clinical details.

On-road paramedics also noted that access to a suitable location in the busier hospitals of RDH and ASH to complete the EPMR once the patient had been handed over to ED staff was an issue, with staff forced to physically ‘make do’, which again impacted on their ability to complete the EPMR record, and get back on the road.

SJAANT have indicated they are moving to tailor SIREN. In tailoring SIREN ambulance officers will require training on the updated system to support the streamlined process.

Enhanced decision making by Paramedics, and Alternate Referral Pathways

During the consultation many ambulance officers referred to a large volume of low acuity patient transfers to hospital by ambulance where a primary health care response and/or no medical response was likely the most appropriate response.

Currently all people attended to by the ambulance are taken to the hospital regardless if their requirement for immediate or delayed medical care is obvious or not. If a patient states they want to go to the hospital, the ambulance crew must take them even if the reason for the transport to hospital is not due to illness.  

This policy was implemented partly in response to coronial incidents with subsequent recommendations from the coroner.

The only exception to this is if the person voluntarily agrees that they do not need to attend hospital but rather attend a GP or PHC.

18 It was reported in consultations that some patients called an ambulance and knew how to game the ProQA system to ensure one was dispatched. The issue was particularly referenced with respect to Aboriginal communities just out of Alice Springs and Tennant Creek. Ambulance officers expressed great frustration at this apparent misuse of the system and its resources.
As a core part of these discussions the introduction of alternate paramedicine service models were discussed. The ability to undertake higher levels of pre-hospital care without the need to transfer to hospital was a successful part of SJAANT a few years ago with the Extended Care Paramedic (ECP) program where ECPs were able to ‘see and treat’/‘treat and release’, or refer to another primary health care service. The current practice which limits autonomy, leads to a defensive response model. This in turn can be costlier to the system overall.

In other states ambulance services have a variety of models where ‘see and treat’ or primary care can be part of the response. Most of these utilise more highly trained personnel (such as ECPs) and ensure that a rigorous clinical governance protocol is in place.

In addition, if more options than the public hospitals were available for ambulance officers to transfer patients to, this would impact favourably on availability of crews, as distances and travel times would be reduced.

For example, an ambulance crew dispatched from the Palmerston base could pick up a patient in Palmerston and take them to the Palmerston Super Clinic rather than to RDH, and then be back on the road much sooner and available for a further call out.\(^{19}\)

Establishment of an alternative referral pathways requires the cooperation of primary care services in the local area, 24/7 access to services such as the Palmerston Super Clinic, and bulk billing arrangements for these services. Darwin, Alice Springs and Katherine all have an adequate level of primary care services in hours to support development of appropriate referral protocols. Such protocols could assist in reducing clinical risk and importantly help lessen the load at hospital EDs. Discussions with representatives of the Darwin Primary Health Network (PHN) indicated a willingness to work to identify referral pathways as an alternative to hospital EDs, and this should be further explored.

**Ambulance Not Required**

The paramedic can assess the patient as not requiring transport to hospital and this is called Ambulance Not Required (ANR). It is infrequently used due both to the heavy documentation requirements, and concerns of litigation over a potential adverse patient incident (the defensive response approach mentioned earlier). In addition, the ambulance service is by nature and tradition very conservative in its approach to making decisions to not transport to hospital.

**Use of Patient Transport Service Crews**

The introduction of PTS has been very positive for the service, and with increased qualifications these ambulance officers, are and will form a critical part of the future road ambulance service.

\(^{19}\) This does occur occasionally. The Palmerston Super Clinic now charges for treatment after 600pm and so this has impacted the ability of the ambulance service to take willing patients to this service.
However, in the Darwin Region and Alice Springs the Call Centre or ambulance crews themselves can refer a patient to PTS for transfer to hospital rather than tying up an emergency resource with a low acuity transfer. The impact of these referrals and corresponding workload can mean significant delayed response times for normal and planned PTS.

In regional/remote areas PTS is not available due to it being economically unviable.

**Education in Communities**

Education of communities in the reasons why an ambulance might be called and particularly, the reasons why they should not, is essential. Increased education is considered by many to be the more productive strategy for reducing unnecessary and/or inappropriate call outs, rather than more complex protocols. Increased use of interpreters in the central triage stage was also discussed and seen to be useful.

Other mitigation strategies such as a reduction in alcohol abuse, improvements in living conditions particularly for town camps in and around Alice Springs and increasing support to reduce other social issues such as domestic abuse would have a positive impact on all Territorians access to scarce and precious ambulance services.

In Alice Springs special mention was made of the health status and behaviour of people in the town camps most of which are located within a 10-15-kilometre radius of the town centre. The ambulance is often called and used as a de-facto taxi service. As mentioned earlier in this report it was reported that callers know how to ‘play the system’ and use the right language to ensure the EMD officers has no alternative but to dispatch an ambulance. The impact is inefficient, expensive and often unnecessary transport and can lead to more urgent and life-threatening calls not being responded to appropriately.

Similar experiences were relayed to the Reviewer in other locations.

**Inter Facility Transport Options - Katherine**

Discussions in Katherine identified a high demand on ambulance services including patient transfers from KDH to an offsite diagnostic CT service. SJAANT is required to support transfer of patients needing a stretcher and/or a medical escort to have a diagnostic CT. KDH has alleviated some of this demand via an existing patient transport service (e.g. car) where the clinical risk is deemed acceptable. However, it provides another example of where demand on the ambulance could be better managed.

CareFlight aeromedical transfers can also be delayed due to the ambulance being ‘off-line’ and used to transfer CT patients. CareFlight have recently suggested a trial having their ambulance in Katherine that would be crewed by the aeromedical retrieval crew (pilot as driver and nurse and doctor). This is worthy of consideration.

**Formal Geographical Boundaries**

Geographical boundaries set for the road ambulance service were identified as impacting on ambulance demand and resource utilisation. The formal 150-kilometre response (‘as the crow flies’ boundary) set out in the SJAANT service contract has particular impact on ambulance utilisation and availability in the rural and remote
centres of Katherine, Nhulunbuy, Tennant Creek, Alice Springs and Humpty Doo (Darwin region).20

Dispatching SJAANT to an incident in the 150-kilometre range is reasonable in most circumstances. For an incident that is approximately 150 kilometres away by sealed direct road, the impact is a minimum of three and a half to four hours response for one ambulance crew. However, there are some locations within this boundary where travel time was reported to be up to an eight-hour return trip not including clinical treatment and handover time. Road conditions, seasonal impacts and road travel distance impact the overall travel time.

These incidents naturally reduce the available ambulance resources in these rural and remote areas for the equivalent times. In locations with only one 24/7 crew (Katherine, Nhulunbuy and Tennant Creek), it results in the ambulance not being available to respond to any other critical incident for many hours.

The major impact on demand in Greater Darwin Region is for locations beyond Adelaide River, to Gunn Point, and Dundee beach.

It was reported that the real ‘radius’ has been informally set for Nhulunbuy and Alice Springs at 80 and 100 kilometres respectively due to the need to have ambulance availability in the higher population regions.21

4.2 Call Centre, Communications and Coordination of Dispatch

Context

Receiving calls, dispatch and coordination of road ambulance is largely uncomplicated for most urban incidents and those located within the larger population centres like Katherine, Nhulunbuy and Tennant Creek. This is also true for most incidents falling within the outer boundaries of the main population centres up to approximately the 100-kilometre radius mark.

However, there is an undoubted challenge in managing the dispatch process for the rather arbitrary 150-kilometre boundary for provision of ambulance services and further challenges when aeromedical retrieval is required either within or outside of this 150-kilometre radius.

20 Refer to Appendices D, E and F for SJAANT referral and response policies.
21 Other issues include challenges with transfer of patients in a direction not aligned with the normal ‘patient flow’ and as such, cross-border patient and PATS issues are created on top of an already complicated system e.g. in the Katherine region Timber Creek is 280 kilometres to Katherine and 225 Kilometres to Kununurra and patients are frequently transferred to Katherine when they identify culturally to Kununurra. However, if they do end up in Kununurra, on repatriation, the Western Australian Government or PATS do not formally cover the funding of the patient back to their community.
Call Centre Volumes and Capacity

There has been a steady increase in the number of calls to 000 for an ambulance over the last few years as discussed in chapter 2. The current SJAANT call centre has four Emergency Medical Dispatch (EMD) officers rostered on 12-hour shifts providing 24/7 call taking and dispatch. These staff rotate between call taking and dispatch roles on a four-hourly basis. Three EMDs are located at JESCC (Darwin) and one EMD is located at the Alice Springs call centre.

For each 12-hour shift, up to three EMDs take calls, and one EMD provides dispatch service. In addition to these positions, an EMD Shift Supervisor provides management and intra/inter organisational communications and coordination.

The EMD shift supervisor can be located in Alice Springs and this can be challenging at times as the ability to be on the phone and non-verbally signal other EMD operators for critical tasks in an active call is not possible when the supervisor only has a phone at their disposal.

The EMD team in Alice Springs operates with a ‘mumble system’ to keep them linked with the communications occurring in JESCC and is the only mechanism available to link the SJAANT communications centre team in with territory wide communications.

Triage and Clinical Oversight in the Call Centre

The ProQA system utilised in the emergency call centre to classify emergency calls is rightly a risk averse system. It is intended to address the risk of under-prioritisation by call takers by tending to assume a ‘worst case’ scenario and restricting call takers’ and dispatchers’ individual discretion.

Call takers are not permitted to deviate from the question format of the ProQA system. However, the communications supervisors have the authority to ‘downgrade’ a code if there is strong evidence that the ProQA system may have allocated a higher code than is required. For this to occur the call taker must engage the supervisor who will then talk with the person on the other end of the phone, ask some additional questions, and then decide, all of which must be documented.

There has been a trend in other Australian ambulance jurisdictions to enhance the clinical support in emergency call centres with the introduction of specialist paramedics and/or access to experienced nursing or medical professionals, with the additional clinical support designed to both support the call centre dispatching and on-road paramedics.

Neither communications centre locations (Alice Springs or Darwin) have clinical oversight in the initial triage process or in the responding dispatch decisions.

The reality is, to better manage clinical risk in these circumstances, a secondary triage system provided by a qualified clinical person e.g. ICP/ ECP/ paramedic or an experienced nurse or doctor, may be better suited to make decisions relating to downgrading a code.

SJAANT have moved recently to add more clinical experience to the Call Centre, and this is not to be overly critical of those supervisors currently undertaking a very complex role.
Rural and Remote Decision Making for Dispatch/Retrieval

As discussed earlier the rural and remote PHC clinics, be they DoH or ACCHO/CCO operated, work with the RMP as the core decision maker to respond to emergency situations and to transfer sick and/or injured people to the most appropriate hospital. This process is complex and resource intensive as there can be multiple parties involved including:

- SJAANT communications (EMD);
- DoH Rural Medical Practitioner (RMP);
- Aero-medical retrieval partners (region specific);
- Officer in Charge/ Station Officer (SJAANT ambulance centre);
- PHC emergency transport and/or Clinic RN;
- Hospital DMS and/or trauma coordinator (regional e.g. GDH, KDH, ASH, RDH); and
- Specialist consultant clinicians e.g. obstetrician, paediatrician.

At present the RMP is the approver of and decision maker for emergency retrieval (road or air), including low acuity aeromedical patient transfer.

When a RMP receives a call for emergency rural and remote decision making, this call will usually come from the PHC clinic RN or AHW (via the RDH Switchboard) or the SJAANT EMD. They will report the patient location, clinical condition and any other information as comprehensively as possible to the RMP.

A call can also come direct to the SJAANT call centre from a PHC or via Triple 000. In the Top End, the EMD contacts the RMP via the RDH switch board, who then pages the on-call RMP to urgently contact SJAANT.

The EMD will contact the relevant PHC (if not already informed) so they are aware of the potential for an emergency road transport. For a RMP to contact the SJAANT call centre this can take some time, (though rare, up to half an hour has been recorded), and the Duty RMP is not always local to the area.

At the time the EMD notifies the PHC, a text will also be sent to the aeromedical service provider for the relevant region to enable readiness (activation) for a potential aeromedical retrieval response. The preparations for a rotary wing response can take approximately 20 minutes, and this can be stood down if an alternate first-response road ambulance is deemed sufficient or appropriate.

The clinical management of the patient is the responsibility of the Duty RMP until the decision regarding the retrieval option is made.

The Duty RMP has limited line of sight (if any) on logistical or operational availability of road and/or aerial assets, but generally does possess local geographical knowledge, so the impact of a decision to retrieve on the ongoing local emergency ambulance capacity is a considered one.\(^{22}\)

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\(^{22}\) There are some ongoing clinical needs in the remote areas (e.g. obstetrics) that would benefit from a regional model for decision making and clinical leadership rather than the current
4.3 **Half-way Meets**

Dispatch coordination of the halfway meet situation poses a further issue for capacity and resource utilisation for SJAANT and PHCs in outer rural and remote areas (beyond the 150-kilometre boundary).

The decision, to dispatch an emergency road ambulance from single crew centres (Katherine, Nhulunbuy and Tennant Creek) has the immediate impact of removing this resource from the local area. As discussed earlier it can mean that the emergency road ambulance is unavailable to respond to any other incident for many hours. This is true even if the call out is within the SJAANT 150km service delivery boundary.

Experiences shared from the PHC staff and SJAANT identified that resources can be tied up between four to twelve hours, and even some lengthier times, when they do not have the benefit of a half way meet and must travel the full distance to the nearest hospital. This is particularly true around the Tennant Creek and Katherine regions.

Resource availability also affects PHCs where an emergency response is provided by the rostered or on-call clinical team. This team could include two people, one or two RNs and/or a driver, and potentially two vehicles depending on road conditions. Having a minimum of two people is a safety issue and many designated drivers are not on-call after hours. Due to the requirement for down time, the clinic and/or on-call emergency response may then be unavailable for other patient needs for a significant period – this can be up to twelve hours.

It is also a challenge for remote community based primary care service providers to resource PHC with appropriately experienced registered nurses who can deliver both a primary health care focus, the main priority, alongside an emergency and trauma first response capability. This is a rare capability for any RN as both aspects are in a sense specialist in nature and attract different people who aspire to quite different career pathways.

4.4 **Homelands**

The movement of Aboriginal people some decades ago to their traditional homelands has been an ongoing issue both for aboriginal people and for the Commonwealth and NT Governments for many years now. Policy initiatives to try and determine how best to provide services have been fraught with difficulties. Issues of equity of access to road ambulance and first responder services between community PHCs based on their location, especially those living in more remote areas such is recognised.

Specifically, the Reviewer met with representatives from the Laynhapuy Homelands, where many small communities do not have any immediate access to primary care, centralised RMP program. Local RMPs would likely have better knowledge of the patient and a related increased ability to assess likely clinical risk.

23 In some PHCs this may result in the entire team leaving the community.
though there are around four locations where some form of health care can be provided. In addition, some locations are simply not accessible by automobile during the wet season except by aeroplane.

The Review team were informed that airstrips in the Laynhapuy Homelands are approximately 1000 metres in length, and are generally not capable of receiving a dual propeller fixed wing aircraft such as those operated by aeromedical retrieval services. The required airstrip length for these aircraft is approximately 1200 metres. It was also identified that these locations are generally too far for a rotary wing aircraft to travel without access to refuelling facilities.

In an emergency, Aboriginal Health Workers (AHW) located on site will coordinate the medical evacuation of a patient either by air or road however the majority of time, they drive all the way into Nhulunbuy or, through the support of the Laynhapuy Homelands Aboriginal Corporation (Laynha), aeromedical transport is arranged and paid for by Laynha.

This transport sometimes must be modified to enable a stretcher to be placed in the body of the aircraft, however this level of medical evacuation is not to the standard of services provided to other remote facilities for such a purpose.

Language was also noted as a barrier for understanding the nature of the incident and/or patient condition for an appropriate medical retrieval process to be tasked and dispatched. However, this issue needs to be further explored as interpreters are available through the local hospital and even through RDH if necessary.

Suggestions were made about the potential for a paramedicine model for larger remote communities, like Laynhapuy, where specialist first responders could work in partnership with PHC staff providing a supported primary care paramedicine model. Such a model may also be viable in communities with larger populations like Galiwinku, Milingimbi and Groote Eylandt.

4.5 Aeromedical Interface

Context

The issue of aeromedical and road ambulance interface has elements related to triage, decision making and coordination of dispatch, and clinical governance.

Other factors impacting demand and resource management include:

- the provision of the ‘door to door’ aeromedical retrieval hospital service model;
- extended on-ground transfer waiting periods; and
- availability of CareFlight’s rotary wing assets.

Door-to-Door Transfer

The provision of ‘door to door’ support for the patient retrieval varies by location and service provider.

For aeromedical retrieval flights to Darwin (RDH), the CareFlight aeromedical team is required to accompany the patient between the airport and hospital in the RDH transport vehicle or if this is not available, in a SJAANT ambulance. Delays in the
ambulance meeting the airplane (either paramedic or PTS crewed) impact on CareFlight’s ability to turnaround aeromedical assets. Generally, PTS crews are dispatched for pickups, but this will be dependent on patient acuity and vehicle/crew availability.

For aeromedical retrieval flights to and from Katherine, the CareFlight aeromedical team is expected to accompany the patient in an SJAANT ambulance to and from the airport and KDH. Availability of the ambulance may cause undue delays of patient handover at the Katherine airport.

Anecdotal evidence noted that the impact of potential ambulance unavailability in Katherine results in the decision by the aeromedical provider to bypass KDH and continue to Darwin, in instances where the patient could have been treated at KDH. This impacts patient transport management, and eventually requires additional resources to repatriate patients back to Katherine.

Geographically, the Katherine airport is located 20 minutes from KDH, requiring a 40-minute round trip to support air retrieval services. This presents challenges for local ambulance demand and resource management. As noted earlier CareFlight have suggested an option to the current arrangements.

For aeromedical retrieval flights to and from Alice Springs by RFDS, the medical team is supplied by ASH.

New Ambulance Vehicle Compatibility and Aeromedical Transfers

As previously referenced, the staged replacement of the old SJAANT ambulance fleet, will result in the new vehicles having only one patient stretcher (which is best practice). Although a second patient stretcher can be formatted, the move to one patient per ambulance movement will have an impact on turnaround times and waiting times for aeromedical retrievals.

Rotary Wing (TEHS and CareFlight)

The Top End medical retrieval helicopter, which is part of CareFlight's fleet, was referred to by many in the consultation rounds as often being unavailable. It was the prevailing view from stakeholders that the dispatch of a fixed wing aircraft when the rotary craft would have been more appropriate due to the location of the incident is a scenario that occurs too frequently.

This is especially noted for Katherine where the prevailing view was that dispatch of a rotary wing craft would provide a faster access to clinical care, a quicker patient transfer time and thus allowing maximisation of scarce local ambulance resources for other responses.

CareFlight informed the Review that availability of the helicopter is affected by many factors including scheduled and unscheduled maintenance requirements, and staff crewing hours (mandated by CASA).
It was recognised that in the Greater Darwin Region and remote Top End PHC clinics some communities and locations are too far away for a rotary wing craft dispatch and require road emergency transport to either the closest appropriate airstrip for a fixed wing or rotary wing craft evacuation to the nearest hospital.

Under some circumstances double or even triple handling of patients occur, which may be avoidable with increased use and dispatch of the rotary wing craft which can land closer to critical incidents.

**Retrieval Model Change in CAHS**

The ASH retrieval service currently provides the medical escort and first response service for the RFDS and for some select road ambulance emergency patient transport critical incidents in and around Alice Springs. Selection of these particular combined medical escort and road ambulance responses is not consistent nor is there any known formal or informal service agreement and criteria agreed by the relevant parties (ASH and SJAANT).

In Central Australia the RMP model for decision-making with respect to all rural and remote medical retrievals outside of the Alice Springs ‘town boundary’, stated as approximately a 30-kilometre radius from the centre of town, will cease in early 2018. A new Medical Retrieval and Coordination (MRC) Service that will operate from the ASH Emergency Department will provide this function.

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24 CareFlight Contract Report August 2017. Online represents that the rotary wing craft was available. Offline represents the time the RW was not available for tasking.
The intent of this change is to provide a comprehensive and centralised decision making, logistics coordination, clinical first response and medical escort service, quite distinct from what is currently provided through the multi-entity decision making process.

The new MRC service will enable largely hospital based (ASH) consultants with training in retrieval medicine, to make pre-hospital care decisions including what form of retrieval is required. Existing RMP resources will be brought into the new MRC structure.

There is some risk that having a FACEM led model of decision-making over dispatch allocations (that is road or air) may lead to a lowering of the threshold for deciding priorities and dispatching the various modes of transport. That said time should be given to bed down the model and then evaluate.

4.6 Palmerston Regional Hospital – Patient Transport Services

Patient transport services have made an improvement to managing demand in Darwin and Alice Springs.

The staged opening of the new Palmerston Regional Hospital (PRH) in late 2018 will create several issues for TEHS.

PRH will have an ED with estimated attendances of 12,000 – 15,000 patients in the first year of operations. Protocols for patient transfer between PRH and RDH are currently under development. In the first stages of PRH’s operation, current clinical protocols utilised in TEHS should apply. If a patient in the PRH ED or ward requires transfer these decision-making protocols already exist and should be utilised. It is recognised that there will be a high volume of patients requiring transfer to RDH.

PRH will also create a demand for non-emergency patient transport, especially for in-patients requiring access to the diagnostic MRI (located at RDH), some outpatient appointments, and from time to time, surgical procedures.

No firm estimation of volume to transfers has been developed at the time of this report.

A feasibility study to define the best options for TEHS to provide inter hospital transfer could include:

- Development of in-house (TEHS) service;
- Extending services provided by SJAANT through the current contract; and
- Market sounding for an independent provider who would meet specific criteria.
4.7 Legislation and Regulation

Context

The issue of legislation and regulation of the ambulance service is not part of the argument as to whether the NT Government should own and manage an ambulance service.

For example, SAAS is governed by the Health Care Act (2008), which became effective from 1 July 2008. Under this Act, the functions of SAAS are transferred to SA Health. The Act maintains SAAS as an identifiable incorporated entity.

Other jurisdictions may also include dispatch and coordination for aeromedical retrieval service under legislation.

As noted, WA and the NT are the only two jurisdictions where a non-government organisation manages the service, which in both cases is a St John Ambulance affiliated organisation.

Legislation and Regulation of Ambulance Services

Currently there is no legislation covering the provision of pre-hospital emergency ambulance responses or patient transport services including inter-hospital transport services.

Any individual could buy a vehicle, place a flashing light or siren on the roof and purport to be an ambulance provider.

Clearly there is risk in this for patients (who may assume the provider had bona fides qualifications and experience) and for the Government who have a role in regulating functions and setting standards that protect their citizens.

Because of the potential growth of private providers in PTS and potentially other first responder services (groups currently engaged by private corporations for the delivery of on-site services e.g. mine sites, gas production), it’s the Reviewer’s view that legislation for the regulation of ambulance service can assist in providing protective measures and therefore lessen service risk for the general community.

Workplace Protection

In addition, a regulated ambulance service could provide paramedics and PTS crews greater protection in the workplace from violent assaults. It is noted that it is a greater criminal offence to assault a police officer than an ambulance officer.

National Registration of Paramedics

In 2010 the National Registration and Accreditation Scheme for Health Professionals (National Scheme) was established to ensure the safety of consumers of health services provided by registered health practitioners. Under this National Scheme, National Boards for those registered health professions and the Australian Health Practitioner Regulation Agency (AHPRA) work together to ensure that practitioners are appropriately qualified and competent to practise as a registered health profession.

Paramedics are currently not required to be registered in any state or territory. However, the title ‘paramedic’ is protected under legislation in New South Wales,
South Australia and Tasmania and may only be used by paramedics holding qualifications set out in the relevant state legislation.

The proposed regulation of paramedics is being considered as part of the Health Practitioner Regulation National Law and Other Legislation Amendment Bill and will establish the Paramedicine Board of Australia under the National Scheme.

Once the Amendment Bill is finalised, it will be passed to Queensland and Western Australia for enactment by their respective Parliaments. If the Amendment Bill is passed in Queensland, the changes will apply automatically in all other states and territories, except for Western Australia, which must pass its own legislation, and South Australia where regulations must be made to adopt the changes.

Subject to the Amendment Bill being passed, paramedics will be able to be registered nationally for the first time in Australia. At this stage, registration of paramedics is expected to commence around September 2018.

**Mental Health - involuntary treatment order**

The provision under the NT Mental Health Act and Related Services Act (2002) for paramedics to place a patient under an involuntary mental health treatment order is currently available for the NT ambulance personnel.\(^{(25)}\) However, this power has not transferred operationally within SJAANT. The reason for this is not entirely clear however, it likely relates to the SJAANT wanting to avoid this difficult area of patient management and transport.

During the consultation ambulance officers expressed in the main that they were willing and indeed would prefer to be able to enact this legislative right, as it would provide a more expedient pathway in circumstances where a patient does clearly require treatment for a mental health disorder. As it stands, a full ambulance crew awaits the arrival of the police prior to transferring of the patient to hospital.

\(^{(25)}\) NT Mental Health and Related Services Act (2002). Part 4 Administration – Item 31. Powers of ambulance officers to detain for 6 hours. An ambulance officer may detain a person being conveyed in an ambulance for up to 6 hours where the ambulance officer believes, on reasonable grounds, that the person may fulfil the criteria for involuntary admission.
5 Key Themes and Issues – Part B Issues Specific to SJAANT

5.1 Ambulance Workforce

Staffing Levels, Rostering, Leave Provision

The staffing profile naturally differs across each ambulance centre within the NT. Ideally, each 24/7 ambulance roster requires eight paramedics with two additional paramedics to provide rostered leave relief. This model is applied in all Darwin centres, Katherine and Alice Springs for both ambulance and patient transport where provided.

In the major centres of Darwin, Alice Springs and Katherine, ambulance crews (all 24/7) operate 12-hour shifts, four days on/ four day off with a 1: 4-month annual leave roster. This results in one month of annual leave for every five-month period.

Katherine and Tennant Creek are supported by a non-rostered Officer in Charge (OIC) during business hours Monday-Friday and Alice Springs along with all ambulance centres in Darwin are supported by non-rostered Station Officers (SOs) (rotational) with 24/7 cover.

Tennant Creek operates with six FTE and from the 25 September, Nhulunbuy will operate with five FTE to provide this 24/7 capability.

In Nhulunbuy and to a lesser extent Tennant Creek, the provision of 24/7 emergency road ambulance is provided with a 96 hour on-call roster model. It was noted that the 96-hour roster enabled crews to then take 96 hours off (4 days). It was noted that ambulance crews in these centres prefer this roster as 4 days makes leaving town during their down time worthwhile and viable. Staff also saw it as a positive attraction and retention issue. Without this roster arrangement it was felt that recruiting staff to these two areas might be more difficult.

This model raises some concern as the potential for a crew to work for longer than twelve hours without a break and the option for stand-down relief is possible.

However, the model is supported by the crews and has received no negative attention from United Voice. Tennant Creek is slightly better positioned than Nhulunbuy as the OIC is not on the ambulance crew roster.

In Nhulunbuy, with the OIC being on-roster, there is no redundancy during this 96-hour period for provision of a back-up single first responder capability. When the OIC is on days off they are ‘on-call’ to provide this capability if required.

Some locations provide greater leave flexibility (Darwin and Alice Springs), but ambulance officers perceptions were shared that leave flexibility restrictive and person dependant (favouritism).

There are also a disproportional number of graduates in Alice Springs as compared to Darwin for the level of service provision and the efficiency of having EMD staff located in both Alice Springs and Darwin should be considered.
Overtime and Fatigue Management

Anecdotally many ambulance officers are working some form of overtime during their off days. This may be back-fill to form a ‘scratch crew, during the twelve hour shift either as a ‘mealy rate’, or in additional hours due to allocation of a new job prior to shift change-time.

This is a major concern from a workplace occupational health and safety (OHS) perspective and puts SJAANT at risk of OHS issues and poor patient outcomes resulting from staff fatigue. Opportunities to enhance fatigue management practices were raised by ambulance officers at each consultation session.

It is noted that reform of fatigue management systems and protocols are a part of a SJAANT Board/Senior Management recently approved five-year plan.

The current EBA provisions for fatigue management require ambulance officers to have a 30-minute break every four hours. If this requirement is not met, ambulance officers are paid double time for the period until they are able to have a full 30-minute break (called a ‘mealy rate’).

The use of ‘scratch crews’ to manage workload pressures effectively uses ambulance officers on rostered time off or on annual leave and is considered by the Reviewer to be a poor management option.

Workload management and Role of the OICs and SOs

One of the strategies employed by SJAANT to manage high demand scenarios in both rural and remote and urban centres is for the OIC/SO to attend call-outs in the first responder vehicle or an alternate ambulance asset. This generally works well but is only available when the relevant staff member is rostered on.

For Darwin, in times of high demand, there are more available resources to implement this informal backup model. However, these senior officers (paramedics/ICPs, and one qualified ECP) have existing management roles.

The Consultation heard reports where a significant proportion of Casuarina office administration and management roles with clinical expertise were deployed on active first response or clinical back up to support peak demand and critical incident responses. This is probably rare but likely underscores the lean staffing model that SJAANT employ.

In Katherine and Tennant Creek this single first responder capacity is formally available during business hours however the OIC is also on-call outside of business hours and continues to provide this back-up capability beyond their rostered hours. In Nhulunbuy the OIC is effectively on-call 24/7.

Intensive Care Paramedics

A trial of ICP Single Response Units is being implemented by SJAANT in the next year for Greater Darwin and potentially in Alice Springs.

This will provide a rostered resource with specialist skills available to back-up ambulance crews and provide an expedient first response service. This is dependent on the appropriate number of qualified and recently trained (refresher course) ICPs being available.
Volunteers

The role of volunteers in SJAANT is operationally separate from the ambulance service and does not form a formal component of the pre-hospital and emergency road transport delivery model. The commercial operations and the volunteer service are separately incorporated bodies.

The SJAANT volunteer workforce provides first aid at events and is only considered for active operational support when a critical incident response is required (notably in Alice Springs and Darwin).

It is challenging to achieve a stable and sustainable volunteer workforce. In remote settings, many volunteers are employed SJAANT staff or health personnel who themselves are involved in rosters.

In the rural and remote centre, the SJAANT volunteer workforce can undertake operational roles in times of high demand and to support fatigue management on an ad-hoc basis. There are a small number of volunteers available for this work in Katherine, Nhulunbuy and Tennant Creek, noting that some are active SJAANT employed paramedics.

Volunteer SJAANT members who have achieved the appropriate skills can also operate as a scratch crew however this is not enacted in Darwin and Alice Springs except for major incident responses. This model is generally frowned upon by the paramedic workforce and is seen as unprofessional, particularly now tertiary qualifications are required for paramedicine. There is a strong desire (voiced by the United Voice especially), to remove the reliance on volunteers for a first response capability even.

The opportunity to integrate volunteers into the emergency first response model and as part of an on-call roster does exist but requires focus on good recruitment plans and retention through enhanced training and skills maintenance.

The model of an operational volunteer network (rostered) is used widely in Australia, however the challenges for the NT relate to maintaining a level of volunteers to support the paramedic workforce on a more consistent rostered basis, and the capacity to ensure their ongoing clinical capability is developed and maintained.

Many jurisdictions (WA in particular) rely heavily on a volunteer model to provide emergency response and PTS services. In WA, a Community Paramedic role was introduced around six years ago, their primary role being supporting the volunteers in local towns. They assist in recruiting, education and training and will if necessary be part of the emergency response. WA has over 5000 volunteers on its books, but many of these are only involved in events support in Perth and larger cities around the state.
5.2 Leadership and Management

Context

A new Constitution was implemented, and a new Board of Governance was appointed including a new Board Chair in late 2015. It is noted that the corporate governance, management and operational structure of SJAANT has been undergoing recent changes as part of a broader service improvement and reform agenda supported by the new contract and additional funding.

Included in these changes has been the endorsement in August 2017 of a SJAANT Strategic Plan 2017-2020, with clear mission and values statements, key focus areas with objectives and strategic priorities for the next four-year period. Key performance indicators are aligned to each focus area, the majority providing a quantitative mechanism to measure progress.

Although SJAANT is in the middle of a significant reform program, the impact of which is evident to the majority of middle and senior management, it is reported that this is less evident to the front-line staff and related operational partners and stakeholders.

Partnerships in the Wider Health System

The need for SJAANT to develop improved partnerships within the NT Health sector, especially with other first responders and health service providers (TEHS, CareFlight, and CAHS especially) is critical.

Overall there is optimism regarding service modernisation and the desire to undertake priority service improvement activities. There should be recognition of the enormous task being undertaken by SJAANT, albeit at a late stage.

The impact of this reform program on changing organisational culture is unsurprisingly, a slow process. During the consultation period, definitive statements were used about SJAANT moving ‘in the right direction’ and that ‘the ship is turning’, more noticeable over the last twelve months. There were multiple references to the past where the system and management of SJAANT was more person-based rather than a merit based system.

The most important aspect within this reform program is promotion of a no-blame culture, empowerment and organisational transparency. It will be achieved through improved internal communications, clear performance measures and improved data and information.

This approach will enable management and operations to work together to deliver a safe, high performing service and will support development of an improved culture over time.

Organisational Culture and Transparency

SJAANT leadership need to take the organisation into being a modern ambulance service. Historically, the organisation seems to have lacked the leadership capability to empower and grow the staff.
The culture of the organisation is noticeably improving and many of the staff reported the small size of the organisation allows a more personalised approach and supports ‘easy communication’.

The collegial support between operational staff was evident; however, the smaller locations had a heavy reliance on each other for support. Workplace culture in these locations is heavily influenced by individual personalities; an experience shared across other remote service providers.

Staff raised issues of bullying and harassment and it was a view that management did not possess a reasonable level of confidentiality, or the fortitude to deal with these issues. These issues combined to produce a high level of distrust and defensive staff engagement. Examples were provided of no follow up of serious allegations of bullying and harassment. It was not possible for the Reviewer (nor fair, given that there was no opportunity for the SJAANT management to respond to these allegations), to follow through on these anecdotes from ambulance officers.

The implementation of a SJAANT middle management program provided to 39 middle managers in mid-August and has been the first of its kind for the organisation. The desire by staff to have a higher level of communication and transparency is unsurprising. This includes the provision of performance, activity and relevant budget information for staff working in operational management roles. The Reviewer was concerned that this quite basic management information had not been made available to staff (SOs and OICs).

There is a recognition that not all change can be implemented immediately. The current SJAANT business planning process will provide clarity and prioritisation of organisational improvement strategies.

5.3 Health and Wellbeing

Context

The 2016 Independent Oversight Panel Review of St John Ambulance Health and Wellbeing, and Workplace Culture26 of the ambulance service in WA identified a significant body of literature highlighting higher risks and psychological disorders associated with emergency service personnel. Specifically, the reports literature review identified:

- Evidence from a variety of research indicates that the cumulative impact of trauma exposure increases the risk of PTSD and other adverse health outcomes. Thus, it is important to consider lifetime trauma history, accumulated in the course of an emergency service career and the risk of suicide.

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• Evidence indicates that emergency service personnel have a significant risk of developing posttraumatic stress disorder during their working career. The risk is more than double the general population and is higher than for police officers or firefighters.

• Exposure to traumatic events is a specific risk factor for suicidal ideation and suicide attempt.

• There is a relationship between physical and psychological morbidity.

• The adverse health outcomes of an ambulance officer are related to a matrix of factors, including the cumulative traumatic stress involved in the role, organisational factors and individual risk factors.

• A percentage of individuals exposed to traumatic events have a progressive development of symptoms with the passage of time, which supports the need for early identification of symptoms in emergency service workers because it highlights significant levels of current morbidity and the future risk to the workforce.

• Organisational and workplace factors including social aspects of the work environment are predictors of PTSD, burnout and fatigue. These include lack of social support from colleagues, lack of social support from supervisors and poor communication.

• There appears to be a link between length of service and less recovery time between incidents and higher levels of burnout and posttraumatic stress symptoms. Moreover, experienced staff are expected or feel they are expected to cope better and as a consequence were more reluctant to express their distress. It highlighted that managerial staff may have tended to be less alert to the needs of these experienced staff and the early warning signs of difficulties in this group.

• The mental health consequences of bullying and harassment have been well documented in a variety of occupations.

• People with PTSD, mood disorders and substance abuse disorders have been shown to have an increased rate of suicide, with approximately 90% of people who attempt suicide having a psychiatric disorder, such as depression, and posttraumatic stress disorder.

• Completed suicide is generally preceded by some form of suicidal expression such as ideation, plans or attempts. Thus, identifying and focusing on suicidal thoughts and behaviours provides effective opportunities to prevent suicide deaths.

• There is a positive relationship between cumulative trauma exposure and likelihood of suicidality.

Early in 2017, the NT News published an article that listed the results of the survey undertaken of the SJAANT staff who were members of the ambulance officers’ union (United Voice). The survey was highly critical of the SJAANT’s organisational capacity in addressing OHS issues. This included a lack of an OHS framework and members not receiving appropriate support such as counselling following traumatic incidents.
Globally there is now a good understanding of the effects on mental health and wellbeing of first responders.

**Variety and Level of Support Services**

The Reviewer can cite a reported high level of workload stress and whilst there are current systems and programs available for mental health and wellbeing support such as peer support, Employee Assistance Support (EAS) with individual psychologist sessions, more can be done to provide individual support including early education about maintaining personal mental health and strategies to manage the occupational mental health risks associated with ambulance work.

Informally, a high level of care and collegiate support exists between paramedics in and out of work hours and this seems to be the major source of creating individual and team resilience for many on-road paramedics.

More formally, whilst the peer support and EAS systems are available, peer support requires a more structured framework. For example, the provision of a formal activation protocol for peer support processes and follow-up.

This more structured peer support program is under development led by the WHS manager as a component of the Mental Health and Wellbeing program of work.

The WHS Manager has responsibility for the SJAANT Mental Health Strategy, a priority initiative in progress. In addition to the ESA and peer support programs, SJAANT has developed a training program ‘First Aid for the mind’. The challenge, as with all training for operational SJAANT staff, is to enable a flexible rostering model to undertake these programs.

Early changes to the peer support framework include a new training program and the introduction of a peer support 1800 telephone number where an on-duty peer support member can provide immediate support or re-direct the person calling to an alternate peer support member.

The intention of the on-referral to another peer support team member is to cater for the personal requirements of individuals as no one peer support team member will suit all individuals. This is a good step in ensuring the system improve utilisation of the peer support program.

At a workplace level, not all staff were not aware of peer support personnel and how to access them. Communication of these key elements will be fundamental to embed over 30 new peer support personnel.

Training in peer support was considered a critical component to adequately prepare those who volunteer for and are accepted as peer support members. Previously training was provided as an on-line module and the general consensus was that this was insufficient in providing a consistent program for peer support.

New training (off-line and paid) is being undertaken for peer support personnel delivered by an experienced QAS psychologist on loan to SJAANT for this work.

Key to these changes in the HWB and WHS programs will be the collection of data that will enable SJAANT to identify areas of their workforce at high or higher risk than others either by location, or by experience e.g. graduates.
Confidentiality must be maintained and indeed is a core foundation of all work being undertaken by the HWB and WHS programs. There is also room for increasing more individualised approaches to dealing with traumatic incidents, periods of high stress and the longer cumulative effects of the job.

Specifically, this should include the call centre EMD’s where they felt at times like the ‘poor cousins’ to the ambulance officers. They experience high levels of occupational stress including verbal abuse from callers in the triage and communications processes.

The NT Emergency Services Chaplain is accessible to the ambulance staff and the person in this role is well known and respected. Development of a shared approach to wellbeing support models across first responder services in the NT as a potential opportunity to enable enhanced mental health and wellbeing services received a generally positive response.

**Incident Debriefing**

A formal debrief process for critical incidents was identified however its implementation is inconsistent and dependent on location. For example, it is easier to implement in Darwin and Alice Springs with access to more resources for roster cover. Flexibility in accessing these debriefs was variable, but ambulance officers’ consensus was that there was no ‘right way’ to implement debriefs as individuals handled incidents differently.

Nevertheless, the experience from other first responder services identifies the need to monitor trauma exposure and the cumulative effect of frequent exposure to stressful situation.

**Personal Safety**

The message communicated in the Review consultations from the majority of ambulance officers in the Top End region was a general sense of feeling safe at work with a relatively low risk of occupational violence (for example, physical or verbal abuse from attending incidents). Naturally there were serious examples of where situations had required police support or decision to not attend.

This was not the case for Alice Springs. It is noted that the relationship between the Alice Springs police and SJAANT is supportive and police do undertake to provide security advice and support for the team in Alice Springs. This support extends to providing real time notification of situations in town camps that were unsafe for SJAANT staff to enter until further notice.

There was a high degree of comfort and confidence from ambulance officers that management would support and backup them up if they declined to attend an incident.

Police response times were not raised as an issue with the only exception noted by a very remote PHC clinic where they may be asked to attend as a first responder to an
emergency, and where the location was at an unknown site, or on a weekend or night when police resources were limited and therefore the support unavailable.27

The most serious safety concern in the Top End related to the availability of consistent communications capability especially in Nhulunbuy. Currently ambulance officers in Darwin have a duress button on their personal radio and this is easily deployed.

The comparator for Nhulunbuy is a mobile phone to activate police attendance via verbal communications and a GPS based duress alarm which reportedly at the time of the consultation had not been ‘tested’. The response expectation and indeed resource response is unclear to staff. The mobile is only practical in town limits including the airport and in Ski Beach and Yirrkala communities with mobile phone coverage.

The use of body cams for safety was not considered useful but not necessary, as it was more of a deterrent than actual harm prevention tool.

SJAANT has established an Occupational Violence Working Group and works together with other Council of Ambulance Authorities (CAA) members to share knowledge regarding the ideas, opportunities and key strategies to significantly reduce the risk and likelihood of physical harm to staff due to occupational factors. The WHS Manager is a part of this working group and provides on the job risk assessment training and support for operational staff.

**Workplace Health and Safety**

The WHS Manager has key responsibility for ensuring safe workplace practices and will go on shift from time to time to explore how to improve situational awareness. A more systematic approach to undertaking dynamic risk assessments, improving situational awareness skills, teaching de-escalation techniques and some self-defence skills are all a part of the WHS improvement plan.

The tracking of lost time due to injury and injury rates has been provided for the five-year period to 2016/17. The trend downward for LTI and particularly for workers compensation is related to a renewed focus on managing injuries occurring at work in the first week of injury. This has greatly reduced the number of workers compensation claims required and is a positive overall for the staff and the organisation.

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27 Across the NT ambulance service there is capability to red flag a location where a single response has been assessed as not safe. In such a circumstance the police are contacted to provide a joint response.
5.4 Clinical Governance

Context

Clinical governance for ambulance services in the NT has suffered historically from a lack of direction, clinical oversight and an absence of a clinical governance framework.

Some areas of concern include a lack of assurance processes about formalised clinical learning opportunities such as clinical audits, case reviews, individual and crew feedback hot debriefs, low level of engagement in regular mortality and morbidity meetings and poor provision of formalised clinical competency training for ambulance officers.

The role and function of the SJAANT Medical Director position was unclear to many front-line staff. Staff who had worked interstate in other ambulance services where formal clinical governance frameworks and activities were in place, commented on the comparative paucity in the NT.

There is evidence of a limited consultation and unilateral decision making with the various stakeholders about clinical protocol development and/or change in clinical equipment selection.

For example, there are three different stretchers in use across PHCs, aeromedical service providers and SJAANT. A recent change in SJAANT clinical protocol to move from a hard to a soft collar for management of potential cervical spinal injury whilst

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28 Source: SJAANT data
aligning to ambulance services in other jurisdictions does not align with the NT wide hospital clinical protocol (hard collar in-situ until the neck is ‘cleared’).

**Recognition of Recent Improvements**

Recently a significant body of work has been undertaken by the SJAANT Clinical Services Unit (CSU) within a new reform program. Whilst this change process has commenced there is evidence that a robust approach to improved clinical governance has yet to permeate to the frontline services.

Clinical governance mechanisms have been strengthened with the establishment of the CSU with support roles including: a manager (ICP) and two patient safety officers. The role of the CSU is to improve clinical outcomes through auditing, surveillance mechanisms and outcomes monitoring. This unit is also responsible for the delivery of clinical on the job training and development, and implementation of mandatory training standards and performance development programs.

A recent example of clinical improvements led by the CSU was the release of updated Drug Therapy Protocols in July 2017.

This unit, though relatively new, is a critical step in implementing clinical governance mechanisms, along with the Clinical Governance Framework recently approved (September 2017). This framework includes a systematic approach to clinical audit and mandatory training amongst other key elements.

**Working with Health Service Providers**

A mechanism implemented under the current contract to provide a committee for clinical oversight and performance for specified indicators has not really been tested to date, with only one meeting occurring in the last calendar year.

The Medical Retrieval Operations Committee (MROC) appears to have operated as a default mechanism for the SJAANT clinical governance committee however it is more of an advisory committee for retrieval operations rather than one of clinical governance oversight.

More needs to be done to develop clinical governance and protocols between all stakeholders. HSPs must take a stronger lead role in the committee structures.

**Clinical Audit, Case Review and Feedback on Clinical Performance**

Every organisation should provide feedback mechanisms for staff so that they continually learn and improve performance. In the health space recording and analysing patient outcomes through system-wide information collection is a very basic requirement.

The ability to review the overall emergency first response episode of care from extraction through to admission to hospital would support the growth and learning of the paramedic crews. Mechanisms which support sharing of clinical decisions (post arrival ED) and patient outcomes could provide an enhanced understanding of clinical capability, required technical capacity and resources and ultimately positively impact the patient journeys and experiences through increased clinical learnings.

The Reviewers found the absence of a formal audit program very concerning.
There is also some concern that the level of clinical expectation placed on PTS officers is too great. Currently PTOs have training to Certificate Level Three and this is being extended to a Certificate Level Four in the near future.

There is little to no feedback or training for PTS crews as they are only meant to be providing a low-acuity patient transport service.

There were some references to hot debriefs in the EDs as learning opportunities, but this was not the norm.

**Mandatory skills assessment and maintenance**

The need to have established systems, processes and tools to ensure clinical skills competency and their ongoing maintenance for all paramedics is a basic requirement for all paramedics including ICP’s, many who may be in a management or administrative roles but who are required to attend an incident as a first responder or as clinical back-up.

The Reviewers did note that mandatory training for skills maintenance is currently being developed as a biennial requirement and linked formally to the Ochre Card that has a two-year expiry date. A new role (Patient Safety Officer) is being recruited in the near future to undertake this work.

There is a strong desire expressed by the CSU and paramedic staff, for the CSU staff to spend more time in local centres supporting face to face training. This is also the case for clinical on-road support which is provided in other jurisdictions via ICP single clinical/ first responder models.

### 5.5 Training and Professional Development

**Induction of Graduates**

A general induction program is provided for all staff and a more formalised program for new graduates. The staff induction program includes a conversation regarding roles and responsibilities regarding workplace health and safety and including manual handling, risk assessment, situational awareness and de-escalation techniques.

Senior ambulance officers and current graduates expressed concerns at the short length of the program (7-9 months) to qualify and them be offered employment. This could lead to new graduated officer on a crew with a relatively inexperienced officer, which was seen as increasing clinical risk.

**Use of MindFlash**

As part of the current reform process, SJAAANT has identified high priority training needs related to operational safety for all relevant staff on equipment in active use. The development of ‘MindFlash’ a PowerPoint e-learning tool has been implemented to ensure all staff undertake equipment training.

The back-log of equipment training required was significant at the beginning of 2016 though this has improved through the MindFlash program. Staff can access this
mandatory training whilst at ambulance centres waiting for dispatch or on their rostered time off or during formal ARL periods.

The ‘hands on’ learning approach to complement MindFlash for new equipment training has been a ‘train the trainer’ (TTT) model. The TTT model is known for having challenges in ensuring a consistent training package is delivered as smaller centres in particular have more challenges in ensuring adequate time for staff to attend.

Face to face training is largely conducted in Casuarina due to the available training room spaces and formal scheduled face to face training is paid training. The need to implement the TTT model was linked to workload and lack of available resources to deliver face to face training in all locations from CSU resources.

It is noted that training for new equipment has been through face to face training e.g. the new ambulances.

**Ongoing Education**

It was observed that many staff, mostly paramedics but also some PTO’s, are highly self-motivated and have either undertaken or are currently studying education and continuous learning opportunities outside of SJAANT. As options are limited in the NT for roles like ECP and ICP’s this is an admirable situation.

Many of the current studies being undertaken were tertiary level (postgraduate) aligned with the growing professionalisation of paramedicine. Ultimately these studies, which are largely self-funded, will enable paramedics to undertake more specialist roles and progress their career pathway.

**Study Leave**

Regarding funded training and the allowance for study leave, ambulance officers are allocated two weeks paid study leave, as per the EBA. The actual availability of paid study leave however, is discretionary. Staff within the SJAANT described a feeling that study leave approval was biased and dependent on personal relationships with superiors.

For rural and remote ambulance locations there is a mechanism for paramedics to undertake rotations to Darwin (for Katherine and Nhulunbuy) and Alice Springs (for Tennant Creek) for two to four weeks to support skills maintenance and, for OICs to strengthen management and leadership skills and experience. The major impediment is the requirement for staff to be back-filled which can be a challenge particularly for Nhulunbuy and Tennant Creek.

**Future Opportunities in Education and Training**

There is significant potential for collaborative and integrated approaches to training between health service providers, the SJAANT, the National Critical Care and Trauma Response Centre (NCCTRC), CareFlight and the RFDS.

As funding for development of courses and employment of full-time trainers and educators is limited, such integrated and shared approaches should be encouraged and actively developed. Such a formalised approach will support improved relationship management and development, front-line team work and may even
develop alternate career pathways for some individuals in the ambulance and retrieval services.

Call Centres and EMD Training and Education

Training for EMD staff was identified as an issue by the Reviewer. A six-week induction and training program is provided for new EMD staff for the ProQA system and protocols for call taking and triage systems. EMD personnel employed typically do not have a health, first response or emergency management background.

Following the initial training, the Reviewer found an absence of ongoing training for these communication specialists.

The SJAANT call centre is co-located with the police, fire and emergency services call response staff at the JESCC. The SJAANT team are witness to regular weekly police training sessions in-class or practical sessions. This does create a motivational divide for the EMD staff about feeling cared for and valued as team members.

Mentorship Program

A Mentorship program has been developed to support graduate paramedics and each graduate is allocated a paramedic mentor for the 12-month program. There were concerns raised regarding access to mentors which related to the rostering model. A mentor with a permanent partner is unlikely to be rostered on with his/ her graduate for active mentoring time.

Current mentors believe there is inadequate initial training and follow-up resources for mentors to ensure a quality graduate induction.

Performance Appraisal, Professional Development and Planning

Up until 2017, the use of feedback, performance appraisal and professional development plans (PDP) for staff has been severely lacking. The consensus across all locations was if you “haven’t heard anything you are doing fine”.

Recently in the reform program SJAANT have given an undertaking that all staff will have a PDP completed annually. This recent promise has already prompted some staff to undertake this process. The opportunity to clearly identify learning needs and provide professional development responses is critical.

The provision of a well understood policy, training and formal tool for the PDP process for line managers will be a major step forward and improvement.

Front line clinical support is also a critical mechanism for ongoing professional development, though it is more ad hoc due to the paucity of experienced and highly trained paramedics on the road.

The new trial of Critical Response Team (CRT) that will be staffed by an ICP in a single response vehicle in Darwin and potentially Alice Springs will provide a greater opportunity for on road teaching and learning. Previously the presence of a ‘front line’ clinical support staff member was only used if there was a problem and staff held a level of caution and fear of ‘being watched’ or being caught out for doing something wrong.
The Review was informed that staff in the CSU will also be tasked to undertake more clinical support time as a part of paramedic professional development and skills maintenance.

Management and Leadership Training

Recently SJAANT has undertaken leadership training programs for staff in management positions, and identified emerging leaders.

In additional to leadership training, the program covered mental health and wellbeing. This will contribute significantly to ensuring the messaging about the importance of mental health and wellbeing. This training has been considered a highly successful exercise and is expected to continue.

Career Pathways and Progression

There is a lack of a clear pathway for career progression within the organisation. Currently there is no clear process of how one progresses through the organisation which has led to a frustrated workforce, churn and many resignations. Many senior officers commented on the lack of transparency in decisions regarding staff promotion and a feeling of ‘jobs for a certain clique’ within SJAANT.

The change from VET training to a degree qualified paramedicine model for SJAANT led to the dissolution of the Paramedic Training Academy and the cessation of local access to ICP training. For a NT paramedic to progress to an ICP, they must seek training (Masters in Paramedicine) interstate.

In the current SJAANT structure, ICP positions are limited once a paramedic has qualified. However, the organisation’s new CRT model in Darwin and Alice Springs, will utilise ICP positions. It seems logical that an ICP career pathway be re-established as soon as possible.

The re-establishment of the ECP as an approved model of service delivery for SJAANT within the context of a modern ambulance service model was strongly supported amongst ambulance officers and senior staff.

There were varying views as to suitable locations for the ECPs with a consistent view that local communities and town camps with high volume workloads maybe sensible starting locations, and where other service providers such as ACCHO providers could work collaboratively with the ECP to manage and support appropriate low acuity patients in a community setting.

5.6 Equipment, Technology and Infrastructure

Equipment

The recent SJAANT staff survey conducted in 2017 provided several opportunities for improvement in equipment. Management has responded rapidly to the information and outcomes from this survey.

Some examples include the rollout out of new kits for all ambulances. These kits were developed in a consultative way and are complemented by a new ambulance vehicle design. The design includes some ‘firsts’ in Australia such as installation of solar
panels, a systematised approach to equipment location and storage, a large focus on ergonomics and safe working loads.

Work to identify patient safety improvements and to reduce operational complexity included alignment of policy and protocols, including drug therapy and treatment guidelines, and streamlining of clinical equipment utilised between the various service interface points e.g. ambulance, hospitals and aero-medical providers, is required.

Technology

The current EMR system used by SJAANT is SIREN. The NT is the only jurisdiction in Australia to use this platform. Newer systems reflect improvements in technology and are more intuitive and user friendly. One impact of this system includes more time to complete the SJAANT incident record documentation at the hospital and a lack of patient information flags such as clinical alerts e.g. diabetic.

The ability to collate and provide trend data on individual, team or station performance to enable internal benchmarking and individual and service improvement also seen as lacking. It is not known whether this is an IT system deficiency or simply a lack of utilising modern management tools, which are readily available.

There is one ambulance communication ‘line’ from dispatch to operational emergency ambulance and patient transport crews for Darwin and Katherine. This is to allow for the communications centre to know what is happening across the NT. Nhulunbuy and Tennant Creek each have a separate line. This is insufficient.

Implementation of an MDT in ambulance vehicles as per police is strongly supported, as the level of information available in the MDT platform is what is seen by EMD officers. However, they can only verbally impart time critical information via the single line communications to ensure the line is not ‘held up’. Data on the MDT will enable crews to be better prepared for the incident they are responding to.

5.7 Contract, Financing and Funding

Utilisation Review

The SJAANT service contract with NT Health is based on active hours as a measurement of utilisation of resources for the ambulance services. However, this indicator, which is basically hours of service provision, should not be the sole determinant for agreed resource deployment and service levels.

Service levels based on hours reflect on one dimension of the factor which influence demand (see Section 4), and do not adequately reflect the ambulance demand and workload. Such metrics should be part of a group of demand management key performance indicators, mainly to be used for an urban setting (major population centre) along with: ambulance mobilisation and response times; incident type (priority) and response required; and associated trends of peak demand and utilisation.
However, these utilisation metrics are probably ineffective measures to support determination of resource needs for rural and remote areas, as they are unable to take local service delivery and geographical nuances into consideration.

The ideal model for determining rural and remote service requirements and resource deployment must consider equity of patient access and allow for system redundancy for emergency response. The consensus view was that police and fire services as the other ‘first responders’ had the benefit of this form of ‘worst case scenario’ modelling for resource allocation whereas the NT road ambulance and other medical emergency services did not.

Aligned with resource deployment, the Reviewer identified concerns on the difficulty of progressing service schedule improvements as outlined in the current service contract. Concern was expressed about the structure of the contract management processes and governance.

**Contract Governance**

Although out of scope of this Review, it appears that the two governance committees set up under the current DoH/SJAANT contract, the Ambulance Services Contract Governance Committee (Contract Committee) and the Ambulance Services Clinical Governance Committee (Clinical Committee) require review. The contract committee needs to be the conduit for all discussions regarding demand management as well as the very complex issue of coordination of dispatch, including the aeromedical interfaces. The clinical committee, is currently established to provide high level strategic advice to the contract committee, review of standards, quality and policy development, and evaluation of new service models. This committee is chaired by SJAANT, however, the Reviewer considers that this committee should be chaired by a HSP Director of Medical Services.

MROC and JAMSO are the operational committees that support medical retrieval (both road and air) for the TEHS and CAHS, and while not necessarily related to the contract governance, their Terms of Reference and operations should be reviewed, to ensure they align with the overall governance framework.

As stated earlier, the greater involvement of HSPs in these committees is critical in ensuring there is clear separation of strategic and ongoing operational issues.

**Funding, Fees and Finance**

SJAANT run efficiently financially. Ambulance spending per capita is the second lowest in the nation.¹ The scope of the Review was not to examine the financial efficiency of the SJAANT. However, consideration should be given to the level of funding relative to the issues raised in this report around workload (sufficient crews and vehicles to allow redundancy for training, professional development and well-being measures). That said, the Reviewer if of the opinion that the relationship between demand, and projected demand is not linear.

Managing demand is not simply achieved through allocating more funding to the SJAANT, notwithstanding the current baseline per capita spend is likely too low.

There were concerns expressed by ACCHOs who provide PHC services, of funding equity issues, as they are not specifically funded for provision of first responder emergency and medical retrieval services. Many times, their clinic staff in the troop
carriers will be asked to respond to incidents and sometimes transport all the way to
the major centres. In the urban centres the SJAANT is funded to provide the
emergency response service.

The issue of fees charged to non-healthcare card holders for access to emergency
treatment and medical evacuation was also raised as being an impediment for some
patients (especially indigenous people in town camps), to call an ambulance. The
delay in calling due to the financial cost can lead to deterioration in the individuals’
health status and so a perverse outcome is derived.

The equity issue related to aeromedical services is another consideration for
government but is out of scope of this review.
6 Findings

6.1 Part A – General and Territory-Wide Issues

General Findings

Finding 1

The NT road ambulance service (emergency response and patient transport) which includes call taking, triage, dispatch and retrieval, overall functions well but has numerous areas which require significant improvement. Like many services within the Health Sector, much of the functioning results from individuals’ personal commitment to ‘make things work’, rather than a result of a planned, coordinated and well implemented system.

Finding 2

The Review found that there is an abundance of ideas, thinking and enthusiasm to make change, but the stakeholders in the sector are overly focused on organisational self-interest, rather than achieving the best outcome for all Territorians.

Finding 3

The Review was concerned to hear from ambulance officers and senior management in SJAANT that change in organisational culture was long overdue and that leadership had not adequately addressed key issues for improvement of the service.

Finding 4

Recognition should be given to some significant change initiatives, particularly with respect to clinical governance led by the SJAANT over the last eighteen months to bring about service and corporate improvements. Overall ambulance officers have seen this as positive change.

Finding 5

The Department of Health (DoH) who is the contract manager, has developed a much-improved framework for contracting with SJAANT through the current contract (2016-2021), characterised by moving from a model of ‘granting’ money, to a contract for services model, with KPIs and monitoring requirements.

Finding 6

Involvement of health service providers in future development, management and monitoring of the SJAANT Contract is a priority, particularly with the ongoing need to ensure collaborative and consistent approaches to clinical protocols and complex decision making, mostly relating to dispatch coordination.
Factors influencing demand and management of demand

Finding 7
Managing ambulance demand is a complex set of influences that is poorly understood and not clearly articulated by all key ambulance stakeholders (internal and external), resulting in fragmented NT ambulance service provision.

Finding 8
Inability to effectively manage ambulance demand has led to considerable workload pressures and stresses on ambulance officers.

Finding 9
The capacity of the DoH and SJAANT data systems to cross-reference and analyse population demographics, ambulance utilisation, and incident response time required to inform demand management and resource requirements is inadequate.

Finding 10
The future capacity to extract ambulance specific data from the Computer Aided Dispatch (CAD) system though relatively new will assist in managing ambulance demand.

Finding 11
In Greater Darwin the SJAANT policy of ‘return to station’ greatly limits flexibility for road ambulance response.

Finding 12
Insufficient thought and planning was given to the impact on relevant stakeholders and ambulance demand with the introduction of the new ambulance vehicle fleet.

Finding 13
The process of data entry into the existing SIREN platform is burdensome and time-consuming resulting in resources being tied up, turnaround times prolonged and ultimately excessive workloads.

Finding 14
The modification of the e-Patient Medical Record (EPMR) has the potential to reduce on-road ambulance officer data entry time by 5 – 10 minutes for each job, depending on incident complexity and ambulance officer experience.

Finding 15
The current SJAANT approach does not include a sufficient diversity of strategies with the potential mechanisms to free up resources for incident responses. These include: the single vehicle first response with use of an Intensive Care Paramedic (ICP) capability; new referral pathways, and; use of Extended Care Paramedics (ECP),
Finding 16
An increased ability and capacity to make decisions regarding transport to local primary health care services, or not to transfer a patient to hospital was strongly supported by all ambulance officers. Models exist elsewhere to support enhanced decision making regarding appropriate transport using tools such as: a formal checklist; employment of ECPs encompassing ‘see and treat’ or ‘treat and release’ models; and increased level of clinical support from the Communications Centre.

Finding 17
The SJAANT pilot ECP program introduced in 2013/14 and funded by the Commonwealth was deemed to be very successful and provided greater options to manage ambulance demand, introduce ‘see and treat’ or ‘treat and release’ options and to provide career pathways for ambulance officers.

Finding 18
The amount of paperwork associated with not transporting a patient (ANR – ambulance not required) to a health facility is too great of a negative influence on ambulance officers making appropriate and clinically sound decisions, thus leading to a potential waste of resources.

Finding 19
There is apparent inefficiency in having a paramedic crew respond to incidents, make an assessment, and then refer on to Patient Transport Service (PTS) for transport.

Finding 20
Establishment of an alternative referral pathways requires the cooperation of primary care services in the local area, 24/7 access to services such as the Palmerston Super Clinic, and preferably bulk billing arrangements for these services. The Palmerston Super Clinic now charges for treatment after 6.00pm and this has impacted the ability of the ambulance service to take willing patients to this service.

Finding 21
Darwin, Alice Springs and Katherine all have an adequate level of primary care services in hours to support development of appropriate alternative referral protocols to receive patients. Such protocols could assist in reducing clinical risk and increasing ambulance availability through transporting patients to closer facilities.

Finding 22
A whole system response is required to mitigate misuse of the ambulance service by unnecessary call outs. This is best done through community education programs to improve health literacy.

Finding 23
Use of the Katherine ambulance for transfers to the privately-owned Computerised Tomography (CT) provider is inefficient and has a wider impact on ambulance availability for emergency response and aeromedical transfers.
Finding 24
Although geographical boundaries for ambulance response are set out in the DoH/SJAANT Contract, there is a degree of arbitrariness when it comes to decision-making for appropriate response and dispatch, either by road or by air.

Call Centre, Communications and Coordination of Dispatch
Finding 25
The decision-making process and communication lines for dispatch of road ambulance and/or aeromedical retrieval is convoluted, complex and at high risk for failure or near misses in patient retrieval. A fragmented and therefore suboptimal incident response is the result.

Finding 26
The organisational structure and capacity of the Call Centre and its dual location (Darwin and Alice Springs) is not optimal in providing efficient and effective decision-making, particularly with the increase in often complex and stressful 000 calls and dispatch. Greater cooperation with the other first responder services is required.

Finding 27
Dispatch of appropriate assets (road or air) is a complex issue, and for aeromedical retrieval operators, logistical issues such as aircraft availability and staff crewing hours must be considered.

Finding 28
The establishment and operation of the Joint Emergency Services Centre (JESC) is a positive foundation on which to improve coordination and dispatch. Centralisation of the Call Centre and dispatch functions in the JESC provides enhanced coordination, consistent clinical decision making, efficient triage and dispatch, which will improve workforce productivity and staff morale and provide a safer service.

Finding 29
The need for Primary Health Clinics (PHCs) or SJAANT communications to go through hospital switchboards can lead to unnecessary and critical time delays in contacting Remote Medical Practitioners (RMPs) and is out-dated in a modern health service.

Finding 30
The current model of half-way meets or rendezvous, though generally expedient for all parties, leaves both ends of the transport event exposed and vulnerable to being unavailable for long periods, either in the remote communities or in the major urban centres.
Finding 31
Noting the complexity of the Homelands, they are currently disadvantaged in terms of road ambulance service provision and some basic services expected and provided for other Territorians are unavailable. There is also a funding discrepancy in that Homeland’s health services are not directly funded for ambulance/evacuation services.

Finding 32
Coordination of dispatch by air or road requires a much greater degree of coordination and goodwill between all parties to enable an efficient and clinically appropriate retrieval system. There has been a reluctance to cooperate stemming from concern over control hierarchy and ‘turf issues’.

Finding 33
Having the CareFlight helicopter (rotary wing) unavailable for long periods does not provide a sufficient range of options for coordinating overall emergency response.

Finding 34
Central Australia Health Service (CAHS) and Alice Springs Hospital (ASH) staff have developed an innovative model of patient retrieval coordination, which combines the current roles of RMPs with medical retrieval specialists. Caution is required to ensure there is not an over utilisation of resources through lowering of the threshold for use of medical retrieval escorts.

Palmerston Regional Hospital (PRH) – Inter-hospital Patient Transport
Finding 35
Top End Health Service (TEHS) have made good progress in determining the requirements and protocols for patient transport and transfer related to the new PRH.

Legislation and regulation
Finding 36
Currently there is no legislation covering the provision of pre-hospital emergency ambulance responses or patient transport services including inter-hospital (facility) transport services.

Finding 37
There is risk for patients, the wider community and for the NT Government in an unregulated ambulance service and patient transport environment.

Finding 38
The NT Government should continue its support for the recognition of the Paramedic as a health profession under the new Commonwealth Law and ensure its swift implementation.
Finding 39
Most ambulance officers supported the activation of policy and protocols enabling them to enact Section 9 of the Mental Health Act to deal with involuntary detention of mentally unwell patients.

Finding 40
Despite views expressed in the public domain, the Reviewer in consulting with ambulance officers and other stakeholders did not find a prevailing view that the ambulance service be brought back in-house to be managed by the NT Government. The view was that issues pertaining to improving the ambulance service would not prima facie be solved by the strategy to bring it in-house.

6.2 Part B – Issues Specific to SJAANT

Ambulance Workforce

Finding 41
The SJAANT and the DOH (Contract Manager) do not have a sophisticated understanding or set of metrics which aligns activity growth with workforce staffing and resource requirements. Demonstrable and recorded growth in activity over time should result in the two parties meeting to mutually manage staffing levels (to manage demand) and subsequent required budget adjustments or strategies.

Finding 42
The 96-hour roster in place in Tennant Creek and Nhulunbuy contradicts the contemporary direction for health professionals with respect to safe working hours. It was noted that this situation was not raised by ambulance officers or its representative body as being a negative issue in terms of fatigue or workload pressure.

Finding 43
Clear mandatory stand-down policies to deal with fatigue management are not readily evident or enacted. If a stand-down or backfill is required, the most likely solution will be an overtime arrangement provided by a peer on rostered days off or on recreation leave.

Finding 44
Existing data recording systems are inadequate to effectively manage ambulance officer overtime, shift swaps and leave requests.

Finding 45
In rural and remote areas, the Officers in Charge (OICs) have a greater potential risk of burnout. No formal stand-down mechanisms are available in these locations.
Finding 46
Insufficient numbers of Intensive Care Paramedics (ICPs) have been designed as part of the SJAANT service model and could be a critical clinical support for graduate paramedics and experienced ambulance officers to support ongoing learning and improvement.

Finding 47
The use of volunteers is widespread in all jurisdictions and must play a role in remote and rural locations due to economies of scale and workforce numbers. The volunteer model however must include enhanced training (to at least the level soon required by Patient Transport Officer Certificate IV in Health Care), increased ongoing mandatory skills training, a more robust recruitment and induction process, and greater clinical supervision through more ICPs and ECPs employed in the service.

Finding 48
The need to maintain and further develop the professional role of paramedics was expressed strongly in stakeholder consultations as a reason to maintain the operational separation of volunteers and professional paramedics.

Leadership and Management
Finding 49
The planning, policy development, coordination and quality service improvement frameworks are fragmented. A fully integrated approach of service model for road ambulance is required.

Finding 50
Anecdotal evidence collected during consultation and from union survey results depict a poor organisational culture within SJAANT. Instances of bullying, some breaches of confidentiality, lack of formal HR procedures and effective feedback mechanisms were described.

Finding 51
The Review found that there was a significant lack of activity data and general management information made available to Station Officers (SOs), OICs and ambulance officers to assist in evaluating their ongoing performance.

Health and Wellbeing
Finding 52
The introduction of the revamped peer support program to improve the level of mental health and well-being services in the SJAANT is welcomed
Finding 53
More mental health awareness training through open conversation, staff engagement, and more formalised education programs regarding the potential risk of and challenges in maintaining good mental health and wellbeing is required.

Finding 54
Ambulance officers consider that overall SJAANT provide a high level of personal safety for staff, however some locations where violent behaviour was more prevalent, were identified.

Finding 55
The Mental Health Project Officer position currently being recruited will provide much needed resource to improve workplace health and safety.

Clinical Governance

Finding 56
There is limited evidence of service integration and engagement among NT health providers involved in ambulance and aeromedical response and retrieval. There are significant opportunities for collaboration and cooperation for development of clinical protocols between SJAANT and all other stakeholders to improve safety, quality and efficiency.

Finding 57
Case card audits undertaken by SOs or OICs are random and insufficient to provide meaningful feedback to ambulance officers to ensure sustained quality in ambulance provision. When clinical audits were carried out ambulance officers described the process as punitive rather than educative.

Finding 58
No organised system of clinical audit was identified in either ambulance or call centre operations. The Review was informed of recent decisions to engage independent third-party auditors to carry out this function.

Finding 59
The absence of mandatory and regular competency assessment for skills and knowledge (recertification processes) to assure high quality service outcomes for Territorians is of concern.

Finding 60
Individual ambulance officers are to be applauded for taking steps to manage and ensure their own clinical accountability despite minimal time being allocated or available in shifts.
Training and Professional Development

Finding 61
SJAANT training programs are not at satisfactory level for a high-quality service organisation. Reliance on ambulance officers providing peer-to-peer training is not acceptable.

Finding 62
There is an over-reliance on on-line learning tools for provision of ongoing training within SJAANT, as against class-room and face-to-face learning and close clinical supervision.

Finding 63
SJAANT have not collaborated sufficiently in training programs (eg. with RDH and ASH Emergency Departments, MedStar program at CareFlight).

Finding 64
Structured training is extremely difficult to access due to rostering and workload pressures. Almost all training for ambulance officers is taken during staff rostered days off. The level of official staff professional development and training which is recorded is therefore extremely low. This is not acceptable and SJAANT have a duty of care to ensure ongoing education and training as part of paid hours.

Finding 65
No evidence of annual mandatory training or re-accreditation of CPR skills and defibrillation practice was identified.

Finding 66
Paid study leave is available but rarely accessed due to ambulance officer workload pressures and rostering practices. This prevents career pathway development and is a disincentive in retaining staff in the NT.

Finding 67
The recent addition of an Emergency Medical Dispatch (EMD) Education Officer to the Communications team is a positive step to improving staff retention and quality outcomes in call-taking and dispatch.

Finding 68
There is limited if any feedback on clinical performance, professional behaviours and no evidence of a formal Professional Development and Planning program having been implemented.

Equipment, Technology and Infrastructure

Finding 69
Ambulance officers report that updates of equipment are not provided regularly enough to enable them to adequately perform their duties. However, the Reviewer identified no significant substantiated evidence of this.
Finding 70
Update of the ambulance fleet is a positive step towards ensuring high grade equipment, but ambulance officers were critical of the induction training in use of the new vehicles, again due to workload pressures.

Finding 71
Introduction of new and innovative technology, especially in telecommunications, is slow and lags the rest of the country. Whilst acknowledging NT’s difficult telecommunication environment (including coverage for mobile phone, satellite phones and Wi-Fi/internet access), a reactive rather than proactive approach to improve this has been taken by SJAANT. No SJAANT Information Technology and Communications (ICT) strategic plan to lead the organisation into the future was identified.

Finding 72
A planning model for the location of SJAANT centres has been developed to take in to account the new PRH but was not sighted by the Review team. Any such plan should take into account a sub-standard centre at Gove Hospital and the optimal location of Greater Darwin centres.

Contract, Financing and Funding

Finding 73
NT spends the second lowest resources per capita on road ambulance services (WA is the lowest). Due to the complex needs and geography of the NT, it is the Reviewers option that this too low.

Finding 74
The SJAANT membership fee system and charging structure is inefficient resulting in large bad debts all of which are normally written off (basically funded in the Contract). Due to this, the fee model does not deter inappropriate or nuisance calls.

Finding 75
The charging structure can act as a deterrent to some legitimate patients in calling for an ambulance, so at times delaying or denying these patients accessing medical care. This was especially reported in indigenous town communities and camps close to Alice Springs.

Finding 76
SJAANT claim investment in new equipment and capital infrastructure is a result of being unfunded for these activities. However, this appears to be reflective of the previous grant method mentality and does not recognise the capacity to negotiate for future funds for investment.
# 7 Recommendations

## 7.1 Part A – General and Territory Wide Issues

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<thead>
<tr>
<th>Recommendations</th>
<th>Now</th>
<th>Future</th>
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<tbody>
<tr>
<td><strong>Factors influencing demand and management of demand</strong> <em>(page 28)</em></td>
<td></td>
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<tr>
<td><strong>Recommendation 1</strong></td>
<td>✓</td>
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<tr>
<td>That the number of required data fields in the current EPMR be reduced to improve ambulance efficiencies and turnaround times.</td>
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<td><strong>Recommendation 2</strong></td>
<td>✓</td>
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<tr>
<td>The Extended Care Paramedic (ECP) model, in locations with high ambulance demand, especially where low-acuity patient transfers predominate, should be implemented.</td>
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<tr>
<td><strong>Recommendation 3</strong></td>
<td>✓</td>
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<tr>
<td>Implement increased clinical oversight and introduce secondary triage in the Communications Call Centre, especially to deal with calls from urban centres, as there are more destination options for taking patients to.</td>
<td></td>
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<tr>
<td><strong>Recommendation 4</strong></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Identify alternative referral pathways for patients in consultation with the Primary Health Network (PHN), private primary health care and GP services, PHCs, and SJAANT, especially in the urban centres.</td>
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<tr>
<td><strong>Recommendation 5</strong></td>
<td>✓</td>
<td></td>
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<tr>
<td>Elders and community leaders, especially in Aboriginal communities near to major centres, be enlisted as part of leadership and education programs to ensure appropriate behaviour towards the calling and use of ambulances.</td>
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<tr>
<td><strong>Recommendation 6</strong></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>KDH should establish its own in-house ambulance capacity to transfer patients for off-site diagnostic CT services, and work in partnership with CareFlight to develop a more efficient airport and hospital transport option.</td>
<td></td>
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</tr>
<tr>
<td><strong>Recommendation 7</strong></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Consideration is given to increasing PTS to alleviate workload pressures, especially for Darwin, Alice Springs and Katherine, during Monday to Friday.</td>
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</tbody>
</table>
### Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Now</th>
<th>Future</th>
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<tbody>
<tr>
<td><strong>Recommendation 8</strong></td>
<td></td>
<td>✔</td>
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<tr>
<td>Introduce single vehicle response model, with appropriately trained staff, such as ICPs, for rapid response to priority incidents and to provide clinical back up.</td>
<td></td>
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<tr>
<td><strong>Recommendation 9</strong></td>
<td>✔</td>
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<tr>
<td>Review and develop a more specific set of protocols to improve and optimise dispatch of ambulance, due to the complexity of dispatch coordination.</td>
<td></td>
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<tr>
<td><strong>Recommendation 10</strong></td>
<td>✔</td>
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<tr>
<td>Explore greater aeromedical options in all ambulance dispatch decisions, as part of a wider review of aeromedical services.</td>
<td></td>
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<tr>
<td><strong>Call Centre, Communications and Coordination of Dispatch</strong>&lt;br&gt;(page 35)</td>
<td></td>
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</tr>
<tr>
<td><strong>Recommendation 11</strong></td>
<td>✔</td>
<td></td>
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<tr>
<td>Install videoconferencing technology to assist in improving real-time visual and audio communication between all stakeholders involved in decision-making and dispatch.</td>
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<tr>
<td><strong>Recommendation 12</strong></td>
<td>✔</td>
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<tr>
<td>Explore a single SJAANT Communications Centre/Call Centre (located in JESCC) to triage all Triple 000 calls to coordinate and dispatch all medical retrieval and critical care patient transport.</td>
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<tr>
<td><strong>Recommendation 13</strong></td>
<td>✔</td>
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<tr>
<td>Review the RMP model and associated communication pathways (including the current need to go through hospital switchboards), protocols and stakeholder coordination.</td>
<td></td>
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<tr>
<td><strong>Recommendation 14</strong></td>
<td>✔</td>
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<tr>
<td>Establish direct communications channels between external PHCs and SJAANT to hospital EDs and/or RMPs.</td>
<td></td>
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<tr>
<td><strong>Recommendation 15</strong></td>
<td>✔</td>
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<tr>
<td>Explore the potential to increase aeromedical involvement in halfway meets, as part of a wider review of aeromedical services.</td>
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<tr>
<td><strong>Recommendation 16</strong></td>
<td>✔</td>
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<tr>
<td>Further work be done to identify options in the Homelands where the development of a hub and spoke model to improve patient evacuation might be implemented.</td>
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<tr>
<td>Recommendations</td>
<td>Now</td>
<td>Future</td>
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<tr>
<td><strong>Recommendation 17</strong>&lt;br&gt; An economic cost benefit analysis is conducted of road versus aeromedical retrieval, to assess the potential value in increasing the availability of rotary wing assets, as part of a wider review of aeromedical services.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation 18</strong>&lt;br&gt; Support the implementation of the new CAHS/ASH medical retrieval service, with appropriate evaluation.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Palmerston Regional Hospital – Patient Transport Services</strong>&lt;br&gt; <em>(page 42)</em></td>
<td></td>
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</tr>
<tr>
<td><strong>Recommendation 19</strong>&lt;br&gt; Conduct a feasibility study to ascertain the optimal approach for inter hospital transfers between PRH and RDH.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation 20</strong>&lt;br&gt; Patients who require transfer from PRH, and who are assessed as requiring an ambulance, should utilise the SJAANT services as per current protocols.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation 21</strong>&lt;br&gt; Decisions regarding patients who require transfer from PRH and who require nursing and/or medical escort, should use current criteria and protocols.</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation 22</strong>&lt;br&gt; Any resource implications for SJAANT emanating from the new PRH, form part of ongoing discussions with the contract manager (DoH and the TEHS).</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Legislation and Regulation</strong>&lt;br&gt; <em>(page 43)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation 23</strong>&lt;br&gt; Introduce new legislation regulating the provision of pre-hospital emergency ambulance and patient transport services, including inter-hospital transport services, to the NT Parliament, to better protect the health of all Territorians.</td>
<td>✓</td>
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</tr>
</tbody>
</table>
### 7.2 Part B – Issues Specific to SJAANT

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Now</th>
<th>Future</th>
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</thead>
<tbody>
<tr>
<td><strong>Ambulance Workforce</strong> <em>(page 45)</em></td>
<td></td>
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<tr>
<td><strong>Recommendation 24</strong></td>
<td>✔</td>
<td></td>
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<tr>
<td>That additional base and/or relief crews be activated when demand thresholds are reached, recognising that fatigue management is a major factor in assessing ambulance officers’ workload, and managing overall demand.</td>
<td></td>
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<tr>
<td><strong>Recommendation 25</strong></td>
<td>✔</td>
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<tr>
<td>Increase the number of Intensive Care Paramedics and re-establish Extended Care Paramedics to assist in demand management, and to provide further career pathways for ambulance officers.</td>
<td></td>
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<tr>
<td><strong>Recommendation 26</strong></td>
<td>✔</td>
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<tr>
<td>Retain and strengthen the appropriate use of volunteers, especially in remote and regional locations.</td>
<td></td>
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<tr>
<td><strong>Recommendation 27</strong></td>
<td>✔</td>
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<tr>
<td>Implement a marketing campaign to recruit more volunteers from the community, and encourage their involvement as a potential career pathway to becoming ambulance officers.</td>
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<tr>
<td><strong>Recommendation 28</strong></td>
<td>✔</td>
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<tr>
<td>Strengthen clinical governance regarding volunteer involvement through consideration of the WA Community Paramedic model, increased education and skills training, all to ensure high quality service outcomes.</td>
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<tr>
<td><strong>Leadership and Management</strong> <em>(page 48)</em></td>
<td></td>
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</tr>
<tr>
<td><strong>Recommendation 29</strong></td>
<td>✔</td>
<td></td>
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<tr>
<td>Develop an integrated policy framework and plan for all emergency medical response by all stakeholders in the NT health sector.</td>
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<tr>
<td><strong>Health and Wellbeing</strong> <em>(page 49)</em></td>
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<tr>
<td><strong>Recommendation 30</strong></td>
<td>✔</td>
<td></td>
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<tr>
<td>Provide radios with duress alarms similar to the NT Police, to ambulance officers in all locations in the NT as a continuing staff safety improvement program.</td>
<td></td>
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</tbody>
</table>
Recommendation 31
Funding be sought to support a more comprehensive workplace health and safety program, as a priority.

Recommendation 32
Develop a shared collaborative approach to mental health and wellbeing support across all first responder services in the NT.

Clinical Governance (page 54)

Recommendation 33
Review and further develop clinical protocols in emergency response, in a collaborative approach with all health services, PHCs and SJAANT, as a single and uniform set of NT Emergency Response Clinical Treatment Standards utilising best practice.

Recommendation 34
Review and refocus the clinical governance and operational advisory functions for emergency responses, including the MROC (Medical Response Operations Committee) and JAMSO (Joint Aeromedical Services Operations Committee), with key leadership to be provided the TEHS and CAHS executive directors of medical services.

Recommendation 35
Due to concerns of clinical governance, and noting the recent SJAANT board approval of the new Clinical Governance Framework, the clinical governance implementation plan be reviewed by the contract manager (DoH) immediately.

Recommendation 36
The contract manager (DoH) receives a report on clinical audit outcomes, as part of the approved clinical governance implementation plan, at the 6 and 12-month mark, from commencement of the plan.

Training and Professional Development (page 56)

Recommendation 37
That SJAANT provide a structured training and education program catering for induction, mandatory re-certification, ongoing skills development and education, to the satisfaction of the contract manager, within six months of this report being tabled.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Now</th>
<th>Future</th>
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</thead>
<tbody>
<tr>
<td><strong>Recommendation 38</strong></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Training and professional development be structured into workload and rostering schedules, and ambulance officers training and education time be monitored by the contract manager.</td>
<td></td>
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<tr>
<td><strong>Recommendation 39</strong></td>
<td>✓</td>
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</tr>
<tr>
<td>That the ICP and ECP roles, with appropriate access to training, be established as an opportunity for career pathways, and this to be resourced.</td>
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<tr>
<td><strong>Equipment, Technology and Infrastructure</strong> (page 59)</td>
<td></td>
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<tr>
<td><strong>Recommendation 40</strong></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
| SJAANT develop an ICT implementation plan to achieve equivalence with contemporary ambulance services, to include:  
- EMPR;  
- Call Centre (ProQA tailored for aboriginal patients, and communications officers audit);  
- MDT;  
- CAD and dispatch technology;  
- Videoconferencing;  
- Future mobile phone applications (APPS);  
- Clinical outcome and clinical audit reporting;  
- Radio and mobile and satellite devices; and  
- HR and management systems (learning and development systems, performance appraisal and professional development). | | |
| **Contract, Financing and Funding** (page 60) | | |
| **Recommendation 41** | ✓ | |
| Develop an agreed formula to identify the points at which additional resources be activated or requested, as a flexible model to manage variable demand, or as a permanent investment, due to proven sustained growth in demand. | | |
| **Recommendation 42** | ✓ | |
| A commercial review of the SJAANT contract be undertaken immediately. | | |
| **Recommendation 43** | ✓ | |
| An evaluation of the governance processes of the current contract between DoH and SJAANT be undertaken, including associated operational MROC and JAMSOC committees | | |
Recommendation 44

That a watching brief be held over the current arrangement with SJAANT, and that a review of their responses and their subsequent implementation of necessary and agreed reforms arising from this Review, be conducted in one year from the time of the Government’s acceptance of any, or all recommendations, and that this be in addition to the normal performance measures and reporting, as set out in the current contract.
## 8 Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACCHO</td>
<td>Aboriginal Community Controlled Health Organisation</td>
</tr>
<tr>
<td>AHPRA</td>
<td>Australian Health Practitioners Regulation Agency</td>
</tr>
<tr>
<td>AHW</td>
<td>Aboriginal health worker</td>
</tr>
<tr>
<td>AMPS</td>
<td>Advanced Medical Priority System</td>
</tr>
<tr>
<td>ANR</td>
<td>Ambulance not required</td>
</tr>
<tr>
<td>AO</td>
<td>Ambulance Officer</td>
</tr>
<tr>
<td>ASH</td>
<td>Alice Springs Hospital</td>
</tr>
<tr>
<td>AT</td>
<td>Ambulance Tasmania</td>
</tr>
<tr>
<td>AV</td>
<td>Ambulance Victoria</td>
</tr>
<tr>
<td>CA</td>
<td>Central Australia</td>
</tr>
<tr>
<td>CAA</td>
<td>Council of Ambulance Australia</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer aided dispatch</td>
</tr>
<tr>
<td>CAHS</td>
<td>Central Australia Health Service</td>
</tr>
<tr>
<td>CASA</td>
<td>Civil Aviation Safety Authority</td>
</tr>
<tr>
<td>CCO</td>
<td>Community controlled organisation</td>
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<tr>
<td>CCP</td>
<td>Critical Care Paramedic</td>
</tr>
<tr>
<td>CSU</td>
<td>Clinical Services Unit (SJAANT)</td>
</tr>
<tr>
<td>DMO</td>
<td>Duty Medical Officer</td>
</tr>
<tr>
<td>DoH</td>
<td>Department of Health (Northern Territory)</td>
</tr>
<tr>
<td>EAS</td>
<td>Employee Assistance Support</td>
</tr>
<tr>
<td>ECC</td>
<td>Emergency call centre</td>
</tr>
<tr>
<td>ECP</td>
<td>Extended Care Paramedic</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
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<tr>
<td>EMD</td>
<td>Emergency Medical Dispatch</td>
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<tr>
<td>ePMR</td>
<td>Electronic patient medical record</td>
</tr>
<tr>
<td>FACEM</td>
<td>Fellow Australasian College of Emergency Medicine</td>
</tr>
<tr>
<td>FTE</td>
<td>Full time equivalent</td>
</tr>
<tr>
<td>GDH</td>
<td>Gove District Hospital</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>ICP</td>
<td>Intensive Care Paramedics</td>
</tr>
<tr>
<td>ICT</td>
<td>Information, communications technology</td>
</tr>
<tr>
<td>JAMSOC</td>
<td>Joint Aero-Medical Services Operations Committee</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>JESCC</td>
<td>Joint Emergency Services Communications Centre</td>
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<tr>
<td>KH</td>
<td>Katherine Hospital</td>
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<tr>
<td>MAF</td>
<td>Mission Aviation Fellowship</td>
</tr>
<tr>
<td>MDT</td>
<td>Mobile Data Terminal</td>
</tr>
<tr>
<td>MROC</td>
<td>Medical Retrieval Operations Committee – Top End</td>
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<tr>
<td>NEPT</td>
<td>Non-Emergency Patient Transport</td>
</tr>
<tr>
<td>NT</td>
<td>Northern Territory</td>
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<tr>
<td>OIC</td>
<td>Office in Charge</td>
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<tr>
<td>PATS</td>
<td>Patient Assisted Transport Service</td>
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<tr>
<td>PDP</td>
<td>Professional development program</td>
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<tr>
<td>PFES</td>
<td>Police, Fire and Emergency Services</td>
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<tr>
<td>PHC</td>
<td>Primary Health Care</td>
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<tr>
<td>PHN</td>
<td>Primary Health Network</td>
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<td>PRH</td>
<td>Palmerston Regional Hospital</td>
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<tr>
<td>PS</td>
<td>Peer Support</td>
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<tr>
<td>PTO</td>
<td>Patient Transport Officer</td>
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<tr>
<td>PTS</td>
<td>Patient Transport Service</td>
</tr>
<tr>
<td>PTS</td>
<td>Post-traumatic stress</td>
</tr>
<tr>
<td>PTSD</td>
<td>Post-traumatic stress disorder</td>
</tr>
<tr>
<td>RDH</td>
<td>Royal Darwin Hospital</td>
</tr>
<tr>
<td>RMP</td>
<td>Rural Medical Practitioner</td>
</tr>
<tr>
<td>RN</td>
<td>Registered Nurse</td>
</tr>
<tr>
<td>SAAS</td>
<td>South Australian Ambulance Service</td>
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<tr>
<td>SJAA</td>
<td>St John Ambulance Australia</td>
</tr>
<tr>
<td>SO</td>
<td>Senior Officer</td>
</tr>
<tr>
<td>TCH</td>
<td>Tennant Creek Hospital</td>
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<tr>
<td>TE</td>
<td>Top End</td>
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<tr>
<td>TEHS</td>
<td>Top End Health Service</td>
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<tr>
<td>WHS</td>
<td>Workforce Health and Safety</td>
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Appendices
Appendix A - NT Road Ambulance Service Scoping Review - Terms of Reference

Purpose

This review will examine future directions for road ambulance services in the Northern Territory.

In the Australian context, the term “ambulance services” is generally understood to include two separate but related functions:

- the provision of pre-hospital healthcare (typically emergency treatment but may include first aid or medical treatment); and
- the transport of sick or injured people.

This meaning of ambulance services will be adopted for this review. Therefore, this review will focus on ambulance services, as defined above, that are provided by road across the Northern Territory.

Scope and Objectives

The Road Ambulance Services Scoping Review will:

- Identify contemporary best practice in the delivery of road ambulance services by benchmarking against road ambulance services elsewhere that operate in a context relevant to the Northern Territory;
- Consider the need for future regulation of road ambulance services in the Northern Territory;
- Identify future workforce requirements for a contemporary road ambulance service in the Northern Territory including the training, development and retention of the ambulance services workforce; and
- Examine the interface between road ambulance services and other health related emergency services to maximise the efficiency and effectiveness of emergency responses including the interface with aeromedical services (aeromedical services are not within scope for this review).

Governance

The Scoping Review will be overseen by the Chief Executive Officer (CEO), Department of Health, and undertaken by an independent consultant (Dr Neale Fong). A Review Consultative Committee will be established to facilitate and ensure close consultation with key stakeholders throughout the Review. The Consultative Committee will be chaired by the Deputy CEO, Department of Health and will include executive representation from St John Ambulance Australia NT, United Voice, the two Health Services, and the Department of Health. Project support will be provided through the System Performance and Innovation Division of the Department of Health.
Consultation

Consultation with key stakeholders will be integral to the Scoping Review. Specific opportunities for input will be provided to St John Ambulance Australia NT, United Voice, Top End Health Service, Central Australia Health Service and the Department of Health. These opportunities will include representation on the Consultative Committee as well as an invitation from the independent consultant to provide written comments, and to participate in one-on-one discussions and/or group consultations. Other stakeholders may also be identified for consultation during the Review.

Report to the Minister

The CEO Department of Health will provide a written report to the Minister for Health by 31 October 2017. The Minister has committed to publishing the report upon receiving it.
### Appendix B – Consultative Committee Membership

<table>
<thead>
<tr>
<th>Consultative Committee Member</th>
<th>Position/Organisation</th>
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</thead>
<tbody>
<tr>
<td>Janet Anderson (Chair)</td>
<td>Deputy Chief Executive NT Department of Health</td>
</tr>
<tr>
<td>Dr Stephen Gourley</td>
<td>Emergency Specialist, CAHS</td>
</tr>
<tr>
<td>Angela Brannelly</td>
<td>General Manager Katherine, TEHS</td>
</tr>
<tr>
<td>Dr Maggie Jamieson</td>
<td>Executive Director Strategic Policy and Planning, NT Department of Health</td>
</tr>
<tr>
<td>Joanne May Norton</td>
<td>Senior Director Human Resource Management, NT Department of Health</td>
</tr>
<tr>
<td>Helen Ceron</td>
<td>Executive Director System Performance and Innovation, NT Department of Health</td>
</tr>
<tr>
<td>Ross Coburn</td>
<td>CEO, St John Ambulance Northern Territory</td>
</tr>
<tr>
<td>Matthew Eastman</td>
<td>Director Ambulance Services, St John Ambulance, Northern Territory</td>
</tr>
<tr>
<td>Lorinda Knox</td>
<td>Paramedic Union Delegate, United Voice</td>
</tr>
<tr>
<td>Erina Early</td>
<td>Branch Secretary NT Branch, United Voice</td>
</tr>
<tr>
<td>Dr Neale Fong</td>
<td>Independent Reviewer</td>
</tr>
</tbody>
</table>
## Appendix C – Stakeholder Consultation

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>NT PFES</td>
<td>Mick Wallace</td>
<td>Executive Directors Corporate Services</td>
</tr>
<tr>
<td></td>
<td>Mr James Vernon</td>
<td>Senior Project Officer NT PFES</td>
</tr>
<tr>
<td>OCPE</td>
<td>Libby Doney</td>
<td>Director Strategic Workforce Planning and Development</td>
</tr>
<tr>
<td>SJAANT Managers and Corporate/ Clinical Support</td>
<td>Ross Coburn</td>
<td>Chief Executive</td>
</tr>
<tr>
<td></td>
<td>Malcolm Johnson-Leek</td>
<td>Medical Director</td>
</tr>
<tr>
<td></td>
<td>Matthew Eastham</td>
<td>Director Ambulance Services</td>
</tr>
<tr>
<td></td>
<td>Ali Malik</td>
<td>Chief Finance Officer</td>
</tr>
<tr>
<td></td>
<td>Lisa Bennett</td>
<td>Manager Clinical Services</td>
</tr>
<tr>
<td></td>
<td>Craig Garraway</td>
<td>Manager Emergency Communications Centre</td>
</tr>
<tr>
<td></td>
<td>George Healy</td>
<td>Manager Workplace Health and Safety</td>
</tr>
<tr>
<td></td>
<td>Mark Ferguson</td>
<td>Director of Volunteers</td>
</tr>
<tr>
<td>Regional Managers</td>
<td>Andrew Everingham</td>
<td>Regional Manager Southern</td>
</tr>
<tr>
<td></td>
<td>James Gardiner</td>
<td>Regional Manager - Northern</td>
</tr>
<tr>
<td>SJAANT A/ Officer in Charge Communications</td>
<td>Rob Webster</td>
<td>JESCC (location of consultation only)</td>
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ANNEXURE H

REMOTE AREA REFERRAL RESPONSE POLICY AND GUIDELINES – TOP END HEALTH SERVICE

Annexure to funding contract

Ambulance services in the northern territory
Remote Area Response

Purpose

The purpose of this policy is to ensure appropriate and timely response to emergency incidents within the response area.

Scope

This policy applies to St John Ambulance Australia (NT) Inc. (SJANT) operational personnel.

Responsibilities

Responsibility for amending this policy rests with the Ambulance Management Group and The Chief Executive Officer or their delegate.

Process

St John provide Pre Hospital Emergency Care and transport to the community within 150km of a staffed Ambulance Station.

St John may attend to emergency cases beyond 150km from a staffed ambulance station however, approval from the Duty Manager is required for this to occur.

Remote Areas

For the purpose of this policy it is understood that there may be an overlap between the Ambulance Service and the Remote Area Health Services, with the requirement of a strong working relationship required between each entity.

Areas which may be deemed remote include, but are not limited to the following:
Darwin Region
- Adelaide River Township (South)
- Batchelor Township (South)
- Bark Hut Inn (East)
- Sand Palms Roadhouse, Dundee (West)

Nhulunbuy Region
- 80km along Central Arnhem Road (West)

Katherine Region
- Pine Creek (North)
- Mataranka (South)
- Buntine Hwy Turnoff (West)

Tennant Creek Region
- Banka Banka Station (North)
- Devils Marbles (South)
- 80km along Barkly Hwy (East)

Alice Springs Region
- Connor Well (North)
- Stuarts Well (South)
- Ellery Creek (West)

St John acknowledges that responding to these areas may result in extended response and transport times. Therefore it may be appropriate to refer some cases to allied services to assist with the response and retrieval of the patient.

NOTE: St John will always dispatch a road ambulance to all emergency calls within its response area. These road ambulances will continue towards the incident until such time that the Duty Manager has received credible information that the ambulance is not required or; the care of the patient has been transferred to another appropriate organisation.
**Procedure**

1. Call received by SJA Communications Centre & identified as Emergency in a remote area
2. Notify closest medical clinic who will coordinate with DMO/RMP a health response
3. Closest available ambulance dispatched if within 150km of Ambulance station
4. Outside 100km Duty Manager contacts organisation responsible for coordination of aerial retrievals in region of incident
5. SDO contacts duty manager and decision is made in relation to SDO attending incident
6. Service Duty Officer advised of incident by Communications Supervisor or EMD
7. Aerial Coordinator discusses incident with DM & DMO/RMP. Decision to task air asset with possibility of SO attending as co-ord
8. Aerial retrieval operator notifies Duty Manager of ETA to site (if tasked)
9. Duty Manager makes decision as to ambulance continuing to incident or return to station
10. Duty Manager notifies communications centre and Operations Manager

**Acceptance**

To declare that you have read, fully understand and will comply with this procedure, hold down the Ctrl button and click here. This will open an email, which you then need to send. Do not add any comments to the email as they are lodged electronically and will not be opened or read.
ANNEXURE I

REMOTE AREA REFERRAL RESPONSE POLICY AND GUIDELINES – CENTRAL AUSTRALIA HEALTH SERVICE

Annexure to Funding Contract

Ambulance Services in the Northern Territory
Remote Area Referral Response Policy and Guidelines

Central Australia Health Service

The parties agree to complete the Remote Area Referral Response Policy and Guidelines no later than 31 July 2016. Pending the completion of the Remote Area Referral Response Policy and Guidelines, the following applies from the Commencement Date:

- Remote means any area beyond 150 kilometres from any ambulance station and as such are not covered by this Contract.

- The cost to provide the remote retrieval will be billed to the party requesting the remote retrieval for patients within a remote clinic. For patients involved in trauma outside a health facility the cost will be covered by this contract.

- Response to a request to assist in the retrieval of patients from a Remote community clinic will be dependent on availability. Remote trauma patient not in a health care facility will require a primary response as part of the contractor's obligations.

- Response to a patient within a remote community health facility beyond 150 kilometres of an ambulance centre will need the approval of the Operations Manager or Director of Ambulance Operations before the dispatch of the road ambulance resource. For a response to patients within 150km or outside a remote community health facility Station Officer approval is required. Where such request is made and authorised it is the Contractor's obligation to ensure the party making the request is advised that a charge will apply for the provision of that service which will be on costed to the party making the request.

Where a request to assist with a remote area retrieval is approved, the Contractor will be required to implement a contingency plan to meet the Contractor's obligations under this the Contract for provision of Emergency Road Ambulance and Medical Transportation services prior to dispatching a crew.

A Retrieval Service Medical Team should be activated:

- If the patient is in a remote health facility
- Any major trauma mechanism beyond 30kms from the ambulance station
- 2 or more patients with a traumatic mechanism at any distance from the ambulance station
- At any time the SO/OM/DAO perceives a higher level response need

The Alice Springs Hospital Retrieval Service will define the level of response required to be determined by the appropriate operational requirement and the individual clinical scenario and may involve a St John Ambulance only response, a Medical Retrievalist with SJA ICP or Medical Retrievalist and Retrieval Trained Critical Care RN. The latter may require splitting of SJA crew to facilitate appropriate crew mix.

To assist with assessing whether or not a response for a remote transport will be provided reference will be made to the following guidelines:

The road ambulance may only be tasked when:

- the patient is deemed to be a Clinical Priority One or Clinical Priority Two emergency, and:
• an aero-medical resource cannot be activated within the Clinical Priority required for the survival of the patients, or

• the geographical nature of the patient’s location precludes access via an aero-medical resource. This includes any major trauma where the patient is not currently located in a health facility or area that has an adjacent airstrip.

• if the potential for the patient’s condition or the mechanism of injury identifies that transport to a hospital may be beneficial to patient outcome.

In the event of Neonatal transfers, transfer can only occur with appropriate clinical crew being available for patient care. This would require activation of the Retrieval Service Medical Team

Road ambulances should not be activated when:

• When patients are a Clinical Priority 3, 4 or 5 and therefore it is not immediately life threatening.

• When aero-medical assets are readily available and there is no benefit to activation of St John Ambulance as the community already has an ambulance capable of transporting the patient to an airstrip or medical facility.

• Where aero-medical asset will become available within a time frame that is conducive to patient care.

• There are patient specific factors that require an aero-medical response, i.e. it may also be appropriate to delay the mission until an aero-medical asset is available to avoid constraints of distance, dangers associated with night road use, and space limitations.

In addition the Contractor will determine:

• When it is safe for the ambulance to be dispatched on the case.

• What patients, escorts, luggage and equipment can be transported in the ambulance.

• When it is safe to stop, proceed or continue on a case.

• The speed and the distance that the ambulance can achieve during the evacuation.

• What equipment can be used during the evacuation.

• The restraint of the patients, escorts and luggage during the evacuation.

• Other response option (dependent on time of day) and advise DMO/Retrieval Medical Team;

• If additional clinical support is required and request same through RMP (no dispatch to occur without requested clinical resource).

When there has been activation of a Retrieval Medical Team and ASH staff are part of the clinical crew SJA staff retain operational control of the vehicle at all times
Appendix F - DoH/SJAANT Contract Annexure J – TEHS Rotary Activation Protocol
ANNEXURE J

TOP END HEALTH SERVICE ROTARY ACTIVATION PROTOCOL

Annexure to Funding Contract

Ambulance Services in the Northern Territory
Top End Medical Retrieval Service
PRIMARY AERO MEDICAL ROTARY WING TASKING COORDINATION CRITERIA

This protocol provides tasking coordination criteria for the activation of the CareFlight Rescue Helicopter in response to primary medical incidents across the Top End i.e. to incidents where time, accessibility and clinical capacity could mean that early activation of an aero medical aviation response will result in better patient outcomes.

*CareFlight can be activated PRIOR to any responding clinical staff arriving on scene (prior to a situation report)*

**Key Tasking Considerations:**

**LOCATION**
Distance prevents timely ground access (>150km SJA response radius); OR
Designated geographical location with predetermined preferential aeromedical response (refer Maps).

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<td>Kakadu National Park</td>
<td>Helo = 47 mins</td>
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**REMOTE / DIFFICULT ACCESS**
Terrain prevents timely ground access (within 505 Nautical Miles or 935km Careflight response radius); OR
Winch access required for patient recovery / site access.

**RESOURCE LIMITATIONS**
Simultaneous taskings with insufficient assets or resources to respond effectively; OR
Multiple casualties (>3) at a single site (within 505 nautical miles or 935km Careflight response radius)

Primary Response Protocol v10 - August 2014
**PRIMARY AERO MEDICAL ROTARY WING TASKING COORDINATION CRITERIA**

**CareFlight can be activated PRIOR to any responding clinical staff arriving on scene**
**(PRIOR to a situation report)**

**CLINICAL CONSIDERATIONS**
Life or Limb at risk where reduced time to definitive treatment is known to improve outcomes (>100km to 150km SJA and within 505 nautical miles or 935km Careflight response radius) inclusive of any of the following:

<table>
<thead>
<tr>
<th>SEVERE TRAUMA</th>
<th>SEVERE BURNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVA with ejection / entrapment at scene</td>
<td>20%TBSA or greater</td>
</tr>
<tr>
<td>Penetrating / crush injury to head, neck or torso</td>
<td>Face, Airway or Circumferential involvement</td>
</tr>
<tr>
<td>Amputated / partially amputated limb</td>
<td></td>
</tr>
<tr>
<td>Blast / explosion injury</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMMERSION / NEAR DROWNING EVENT</th>
<th>ENVENOMATION EVENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAR or CPR required</td>
<td>Bite/sting from known poisonous animals</td>
</tr>
<tr>
<td>Signs of Decompression illness/injury</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FALLS</th>
<th>OTHER TIME CRITICAL EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls greater than /&gt;3m, decreased LOC, compound</td>
<td>e.g. AMI, STEMI, intra-cerebral pathology,</td>
</tr>
<tr>
<td>fractures or head, neck, chest or spinal injury.</td>
<td>threatened airway.</td>
</tr>
</tbody>
</table>

**CareFlight Activation Number** 1300 039 447  
**LCU General Enquires** 1300 650 654
000 / Member of Public / Community Clinic
Patient in need of immediate medical care
(not in health care facility)

St John Ambulance (SJA)
Offers immediate telephone advice
as required.

Patient outside range of SJA urban
response =
St John immediately transfer to
CareFlight Logistics Coordination

CareFlight LCU coordinate
conference call with MRC,
SJA and RMP.
RMP approves CareFlight
retrieval

CareFlight MRC provides clinical advice
as required.

RMP
Offers immediate telephone advice
as required.

Task Clinic ambulance vehicle
(depending on geographic location to
accident site).

And

Consecutively task CareFlight
for retrieval from accident site to a
tertiary facility.
CareFlight Helicopter rapid response radius from Darwin - (out and back without a refuel)
CareFlight Helicopter maximum range to a refuel location from Darwin
St John Ambulance maximum range road rescue - 150km