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Aboriginal Road Safety: A review of issues, initiatives and needs in Western Australia: Phase 2

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Abstract

Fatal and serious road injury rates in the Western Australian (WA) Aboriginal population are higher than in Australia as a whole by factors of 2.1 and 1.4 respectively (Australian Institute of Health and Welfare 2015).This report represents the second phase of a project investigating how Aboriginal people in regional and remote WA view road safety, including risk factors and possible solutions. Three Aboriginal communities were visited: Balgo, Yandeyarra and South Hedland. Community members and key informants were interviewed. The main risk factors identified by participants were poor road quality and lack of maintenance, cattle on the road, insufficient and sometimes inappropriate driving education and training, fatigue, drink- and drug-driving and difficulties obtaining a driver's licence. Solutions suggested by the communities include improvement to roads, changes to driving training and education, and licensing procedures, and more modern road safety education materials. Recommendations which would improve Aboriginal road safety are made, based on the suggestions by the community members who were interviewed.

Keywords
Aboriginal road safety, data, risk factors, road safety interventions

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Introduction

Aboriginal people, particularly those living in regional and remote communities, experience high rates of serious and fatal injury on the road. Both fatal and serious road injury rates in the Western Australian (WA) Aboriginal population are higher than among the Australian population as a whole by factors of 2.1 and 1.4 respectively (Henley and Harrison 2013, Australian Institute of Health and Welfare 2015).

This report represents the second phase of a project begun in 2017. Phase One was reported in Brameld and Meuleners (2018).

The specific objectives of phase two of this project are to gain:

1. A contemporary understanding of the road safety issues impacting the Kimberley and Pilbara regions, including the risks and opportunities to remedy these, as perceived by locals. This includes:

   a) Identify what participants consider are the risk factors for road injuries;

   b) Identify what participants consider are their road safety issues;

   c) Identify the strategies participants would like to see implemented to reduce road trauma in their community.

2. An update of programs within Australia that are seeking to target the issues identified by participants.

3. Culturally appropriate, evidence-based recommendations to address issues within Kimberley and Pilbara regions in accordance with the Safe System approach underpinning Towards Zero 2008-2020.

4. To the extent possible, an indication of any road safety benefits/outcomes likely to be realised if a program/strategy/initiative were to be implemented.

5. Identification of the challenges likely to be experienced, relevant to implementation of any appropriate initiative

Methods

Literature Review

This report updated the literature review in Brameld and Meuleners (2018), identifying any new programs or previously unidentified road safety initiatives in Australia in regional and remote areas and/or aimed at Aboriginal people.

Data collection: Interviews with Aboriginal community members

Researchers travelled to three Aboriginal communities in regional and remote WA (Balgo in the Kimberly, and Yandeyarra and South Hedland in the Pilbara) with the Department of Justice Aboriginal Justice Program to conduct interviews with Aboriginal community members. Face-to-face interviews were conducted at the Aboriginal Justice Program Open Day site. They consisted of open-ended discussions around four key questions. Where possible, the researchers spoke with community leaders and other key informants (e.g., driver trainers, medical staff) as well as community members attending the Open Days.

The interviewees were asked the following questions:

- What are the main causes of road injury where you live?

- Do you know any work being done to stop road injury where you live?

- Has any work been done in the past?

- What do you think should be done to stop road injury where you live?

Literature Review

The major programs involving Aboriginal people and road safety, particularly in regional and remote areas of Australia were reviewed. This included those identified in Phase One of this report, both in the literature and by stakeholders. Additional programs identified in this phase of the report include programs to encourage child restraint use in NT and SA and seat belt use in NSW, the introduction of a floor price for alcohol in NT, driving training programs in WA, SA and NSW, and funding from state vehicle licence fee collections to local governments to improve local roads.

<u>Results</u>

Twenty community members and key informants were interviewed in Balgo in April 2019. The key issues identified related to road condition/quality, car maintenance/condition, licensing and driver training, road infrastructure, speed, alcohol and drugs, and animals on the road. Restraint use, fatigue, distracted driving and flooding were mentioned. Participants said that little was being done for road safety in Balgo, although roads had been graded in the past.

They noted the usefulness of the Aboriginal Justice Program (AJP) with helping people get driver training and obtain a licence. Participants stated that improving the condition of roads, improving signage and modifying driver training and licensing might reduce road trauma in and near Balgo.

Six community members and two key informants were interviewed in Yandeyarra in May 2019. The three themes that were consistently mentioned by Yandeyarra community members as being the main risk factors for road injury were alcohol and drink driving, poor road conditions and cattle on the roads. Other issues were overcrowding in vehicles and not using restraints.

Fourteen community members and two key informants were interviewed in South Hedland in May 2019. The main risk factors for road injury identified were fatigue, alcohol and drink-driving, speeding, licensing and driver training, and distracted driving and mobile phone use. Not wearing seatbelts and road conditions were mentioned by fewer community members in South Hedland than in Yandeyarra.

Key informants who did driver training and licensing in South Hedland were also interviewed. They mentioned concerns around the Hazard Perception Test (computer literacy and lack of feedback), difficulties with English language comprehension of the *'Keys4Life'* program and need for an education and training program suited to older people. It is also very difficult for Aboriginal people in regional and remote areas to satisfy the identification requirements for a driver's licence. They suggested changes to the licencing process to make them more appropriate to the needs of and resources available to Aboriginal people in regional and remote areas.

Community members in Yandeyarra and Hedland were negative about what was being done to improve road safety in their communities. However, they did commend the work of the AJP Open Days, specifically the remote licensing teams. The *'Your Licence is Your Life'* program was considered the best resource available. The services on driver education and training

provided by the Bloodwood Tree Association were highly regarded by participants in South Hedland.

Yandeyarra community members suggested the following solutions: modern, culturally appropriate driver education and training resources, improved road condition with more frequent maintenance, better signage, fencing, increased breath-testing and improved relationships with the police. Community members in South Hedland suggested media campaigns to raise awareness of drink- and drug-driving and fatigue, further driver education and training services, and improved road conditions and infrastructure.

Discussion

Aboriginal road safety in regional and remote WA remains a priority. The three communities visited raised similar issues impacting on road safety and similar potential solutions. Of concern was the number of participants who thought that *"nothing"* or very little has or is being done to help with road safety in their community.

Both trips by the C-MARC researchers, however, made it clear that road safety issues are closely related to and influenced by social determinants, including poverty, crime, employment status and employment opportunities in small remote communities such as Balgo and Yandeyarra. The physical and mental health of community members also impacted on road safety. These factors impact on attitudes and uptake of seat belts, child restraints, driver's licences and use of alcohol and drugs.

Improvements to the roads need to be more than 'once-off' investments and require a consistent maintenance schedule. These changes have the potential to encourage tourism and stimulate the economy but may have unintended consequences such as increasing driving speeds and encourage the movement of illicit drugs.

The study was unable to quantify road safety benefits of recommended initiatives but discusses the future evaluation of such initiatives and describes the potential challenges and partnerships required to implement the recommendations.

Recommendations

The following recommendations are made:

1. *Improve road surfaces and ensure regular maintenance of these surfaces.*

2. *Improve signage (speed sign, distance, warnings) and encouraging slower speeds.*

3. *Install cattle-proof fencing in areas with high numbers of animals.*

4. *Ensure safety in the event of a breakdown* – safe rest stop areas, better communications systems to call for help and water stations every 50km.

5. *Fund an up-to-date, culturally sensitive road safety and driver education program for older community members.* Liaise with SDERA to assist in creating a variation on their current program suitable for use for second language English speakers living in regional and remote WA.

6. *Update media campaign materials on risky driving, using culturally appropriate language and humour.*

7. *Review current initiatives to increase use of seat belts and child restraints.*

8. *Supporting community-based road safety initiatives.*

9. *Continue to liaise with the AJP and the remote licensing unit of the Department of Transport.*

10. *Liaise with other government agencies*, including health services, Centrelink and others, to implement a public health approach towards health and safety among community members.

ACKNOWLEDGEMENTS

1. INTRODUCTION

Aboriginal people, particularly those living in regional and remote communities, experience high rates of serious and fatal injury on the road. In 2015, the fatality rate from land transport accidents in Western Australia was 3.4 times higher for the Aboriginal population than the non-Aboriginal population and the fatality rate in Aboriginal males was double that in Aboriginal females (ABS 2016). In 2016, the rate of fatal road injuries in WA was 4.1 times higher for the Aboriginal population compared to the non-Aboriginal population (ABS 2017).

The serious injury rate (injuries requiring hospitalisation) was 1.6 times higher in the Aboriginal population during 2011-13 and higher in males (Australian Institute of Health and Welfare 2015). Trend data suggests that the fatality rate is decreasing, but there has been little change in the serious injury rate in both populations.

National data show that Aboriginal people are over five times as likely to be fatally injured as motor vehicle passengers and pedestrians (Henley and Harrison 2013). Both fatal and serious road injury rates in the Western Australian (WA) Aboriginal population are higher than in Australia as a whole by factors of 2.1 and 1.4 respectively. This probably reflects the state's geography. Over 60% of the state's Aboriginal population live in regional and remote areas (Australian Institute of Health and Welfare 2015). The majority of the state's land mass and roads are in regional and remote areas (Geoscience Australia , Bureau of Infrastructure 2013) where fatal road injury rates of Aboriginal people are up to five times higher than for major cities and serious injury rates are up two times higher (Henley and Harrison 2013).

A continuing focus on road injury in the Aboriginal population in Western Australia is required to address these unacceptably high rates of death and serious injury.

1.1 Aims and objectives

This report represents the second phase of a project begun in 2017. The first phase was reported in Brameld and Meuleners (2018). The principal aims of the project are to:

1. Identify the road safety issues (including needs, risks and recommendations) impacting the Kimberley and Pilbara regions, Western Australia from the local perspective;

2. Make culturally appropriate, evidence-based recommendations to address the identified road safety issues within the Kimberley and the Pilbara, in accordance with the Safe System

approach (adopted within the state government's road safety strategy: Towards Zero 2008-2020).

The specific objectives of phase two of this project are to gain:

1. A contemporary understanding of the road safety issues impacting the Kimberley and Pilbara regions, including the risks and opportunities to remedy these, as perceived by locals. This includes:

   d) Identify what participants consider are the risk factors for road injuries;

   e) Identify what participants consider are their road safety issues;

   f) Identify the strategies participants would like to see implemented to reduce road trauma in their community.

2. An update of programs within Australia that are seeking to target the issues identified by participants.

3. Culturally appropriate, evidence-based recommendations to address issues within Kimberley and Pilbara regions in accordance with the Safe System approach underpinning Towards Zero 2008-2020.

4. To the extent possible, an indication of any road safety benefits/outcomes likely to be realised if a program/strategy/initiative were to be implemented.

5. Identification of the challenges likely to be experienced, relevant to implementation of any appropriate initiative

2. METHODS

2.1 General study design

As described in the introduction, this is the second phase of a research project exploring Aboriginal road safety issues, initiatives and needs in regional and remote Western Australia (WA).

The first phase of the project (Brameld and Meuleners 2018):

1. Reviewed the most recent data (2005-2016) in WA and Australia on road trauma in the Aboriginal population;

2. Identified relevant risk factors for road injury among WA's Aboriginal population and elsewhere;

3. Reviewed road safety initiatives identified through the national and international published literature, and interviews conducted with stakeholders from around Australia regarding current Aboriginal road safety initiatives; and

4. Sought the views of Aboriginal people from the Fitzroy Crossing, the Kimberley, on road safety issues.

Building on this, Phase Two of the project consists of the following key stages:

1. Updating and reviewing current approaches within WA and other Australian jurisdictions to address the issues identified by participants (in Phase One);

2. Conducting interviews to understand the lived experience of Aboriginal people residing in regional and remote WA (i.e., within the Kimberley and Pilbara regions), establish their views on road safety issues in their communities and their suggestions on how to address these issues;

3. Reviewing existing programs within and external to WA targeting the road safety issues identified by participants during the interviews; and

4. Making recommendations regarding:

    a. The current state in WA as relevant to program delivery in the Kimberley and Pilbara to support the issues identified, and

b. Culturally appropriate opportunities (such as programs) from other jurisdictions which could be implemented in WA to support road safety outcomes within the Kimberley and Pilbara regions, including any key challenges and issues associated with this.

2.2 Ethics approval

Ethics approval was sought and granted by Curtin University Human Research Ethics Committee, approval number: HRE2019-0066 (18th February 2019).

2.3 Literature review

This report updated the literature review in Brameld and Meuleners (2018). This included searching the websites of local, state and federal government departments and road safety advocacy organisations in Australia, New Zealand and other countries for which English language documents were available, for initiatives involving Aboriginal road safety. Publications from Austroads were specifically searched for road safety programs in regional and remote Australia. A search was done for any programs or initiatives from the WA Departments of Justice, Transport, Regional Services, Reform Unit, Planning, Lands and Heritage and the Premier and Cabinet. Furthermore, stakeholders across Australia were interviewed as part of a recent Austroads report into regional and remote road safety (Wundersitz, Palamara et al. 2019). Both Dr Brameld and Dr Govorko were part of this project, which sought to identify road safety programs specific to regional and remote areas.

2.4 Data collection: Interviews with Aboriginal community members

Researchers travelled to three Aboriginal communities in regional and remote WA in order to undertake interviews with Aboriginal community members. The interviews aimed to:

- Identify the perceived risk factors for road injury within their communities;

- Document past and current interventions to reduce road injury within the community and their outcomes; and

- Document the perceived road safety needs of the community and its beliefs regarding how to effectively meet those needs.

The researchers liaised with stakeholders from the Department of Justice's Aboriginal Justice Program (AJP) to identify and select Aboriginal communities to include in the study. The AJP

conduct Open Days that allow Aboriginal people to *"...access a range of government agencies including the Registry of Births, Deaths and Marriages, the Sheriff's Office and Centrelink"* (p. 57 Brameld and Meuleners 2018), as well as the Department of Transport Remote Licensing Program. Through the Open Days, Aboriginal people can register events for inclusion in the registry of births, deaths and marriages; query fines and arrange time-to-pay; apply for a driver's license and WA Photo (ID) Card; hand in number plates, and take theory tests and driver assessments. (Please see Appendix 2 for an example of an AJP Open Day flyer outlining the available services.) The Open Days provide these services at a single location in remote areas, removing barriers to obtaining and retaining a licence, as well as providing other benefits to the community such as facilitating employment options for which a driver's licence is required (Brameld and Meuleners 2018).

The Department of Justice have been operating the Open Day program for five years. Over this time, they have developed good relationships with the Aboriginal communities that they visit. The Department of Justice agreed to have C-MARC researchers accompany them to some of the Open Days scheduled for 2018/19 to conduct face-to-face interviews with community members.

Permission was also sought from the respective Aboriginal communities and/or host corporations for the researcher(s) to attend the AJP Open Days and interview community members.

2.4.1 Study locations and open days

The following communities and locations were included as part of this study:

Location 1: Balgo (Wirrimanu) Community

Wirrimanu Community is located in Balgo, approximately 1,780 kilometres north-east of Perth, in the Kimberley region of Western Australia. Balgo is within the Shire of Halls Creek and is approximately 280 kilometres south of Halls Creek by road. As of the 2016 census, the community has a population of 354 people (ABS 2017) and it includes the Wirrimanu Supermarket, Luurnpa Catholic School (K-10), Wirrimanu Aboriginal Corporation administration building, a medical clinic, Warlayirti Art Centre, and a newly developed public swimming pool (Figure 2).

Figure 2.1: Aerial photo of the Balgo town site

In addition, there are two nearby Aboriginal communities: 1) Mulan Community, approximately 44 km west of Balgo; and 2) Billiluna Community, approximately 72 km north-west of Balgo (or approximately 110 km via Balgo Road and Tanami Road).

A 'Request to Visit' form was submitted to the Wirrimanu Aboriginal Corporation and approval was granted. C-MARC researchers, Dr Matthew Govorko and Dr Michelle Hobday travelled to Balgo and attended the AJP Open Days between Tuesday, 9 and Thursday, 11 April 2019. These Open Days provided services to Balgo, Mulan and Billiluna community members.

Location 2: Yandeyarra (Mugarinya) Community

Yandeyarra community is situated 142 kilometres south-east of Port Hedland and is accessed via the Great Northern Highway (Yandeyarra Remote Community School n.d.). It is recommended that a 4WD is used to access the community, especially during November to April when flash flooding can occur on the track and in the surrounding areas. Visitors and local residents need to be self-sufficient as there is no fuel station or general store, which closed in early 2019 (Yandeyarra Remote Community School n.d.). The community has a primary school, Yandeyarra Remote Community School, which has approximately 30 students currently enrolled. Yandeyarra has only had mobile phone reception and access to internet

services since December 2018, when a signal tower was installed and switched on as part of the Australian Government's Mobile Black Spot Program and the WA Government's Regional Telecommunications Project (Yandeyarra Remote Community School n.d.).

Dr Matthew Govorko travelled to Yandeyarra and attended their Open Day held on Tuesday, 28 May 2019.

Location 3: South Hedland (various communities)

South Hedland is a suburb of the Town of Port Hedland. In the 2016 Census, South Hedland had a population of 9,471, with a median age of 30 years old overall and 26 years old among Aboriginal and/or Torres Strait Islanders. A total of 20% (1,940) of the population identify as Aboriginal and/or Torres Strait Islander (ABS 2017). South Hedland has a Coles supermarket, a range of fast food restaurants, a medical centre, an aquatic centre, a public library, various shops and a cinema. The Traditional Custodians of the area are the Kariyarra people.

Dr Matthew Govorko travelled to South Hedland and attended their Open Day held on Wednesday 29 May and Thursday 30 May 2019. Bloodwood Tree Association is a not for profit charitable organisation providing service for at-risk Aboriginal and Torres Strait Islander people affected by social issues. The AJP Open Days were located at their offices in Hamilton Street, South Hedland.

2.4.2 Participant recruitment

The researchers sat or stood near the building where the AJP Open Days were taking place and approached people exiting the building and spending time near the building and asked if they were prepared to speak to them. In some cases, the researchers were approached by one or more community member. Further strategies to recruit community members and key informants included visiting the Warlayirti Art Centre in Balgo, where the artists from the community work and display their art, the Balgo Medical Centre and the Wirrimanu Aboriginal Corporation.

2.4.3 Data collection /Interviews /Questionnaire

Face-to-face interviews were conducted at the Open Day site and consisted of open-ended discussion around four key questions with appropriate background material being presented as necessary. Where possible, the researchers spoke with community leaders and other key informants (i.e., driver trainers, medical staff) as well as community members attending the

Open Days. C-MARC provided catering such as morning tea and/or lunch at the Open Day events to help engage with those attending and to show appreciation for the participants' time.

Basic demographic information including the age group (i.e., 18-25 years, 25-44 years, and 45 years or older), gender and community of residence of each interviewee was recorded. The interviewees were then asked the following questions:

- What are the main causes of road injury where you live?

- Do you know any work being done to stop road injury where you live?

- Has any work been done in the past?

- What do you think should be done to stop road injury where you live?

The researchers made handwritten notes during and immediately after the interviews. The researcher then typed up more detailed notes on a laptop in the evening, after the interviews for the day were complete.

Notes from both researchers (Dr Govorko and Dr Hobday) were completed and collated on return to Perth. Dr Govorko then undertook analysis of the data, including the identification of themes that recurred at each community and across communities.

3.   LITERATURE REVIEW

The following section updates the literature review conducted by Brameld and Meuleners (2018) in the Phase One report. Findings from Phase One are summarised and the review is updated with additional programs relating specifically to Aboriginal people and regional and remote areas. Additional programs were identified by searching relevant Australian publications and websites, as discussed previously. Furthermore, Dr Brameld and Dr Govorko were part of the team of researchers which recently updated the Austroads report into regional and remote road safety (Wundersitz, Palamara et al. 2019). The project involved interviewing stakeholders to identify current initiatives to improve road safety in regional and remote areas, some of which were either specifically aimed at Aboriginal people or reached many Aboriginal people. The results of this were included in this review.

3.1   Road safety issues for Aboriginal people in the Fitzroy Valley

In Phase One of this project, Dr Kate Brameld (2018) conducted interviews in the Fitzroy Valley during November 2017 that aimed to identify current road safety issues for Aboriginal people living in the Kimberley Region. Interviews were conducted with fourteen Aboriginal people, including ten males and four females, who represented eight different communities in the Fitzroy Crossing area. Nine participants were 45-70 years old while five were 18-44 years old. During the interview, each participant was asked, *"What do you think the main road safety risk factors are in this area?"* The key issues identified were alcohol and drugs (ten mentions), road maintenance (nine mentions), licensing and driver training (seven mentions), lighting, cattle on the roads (six mentions each) and speeding (Brameld and Meuleners 2018).

3.2   Summary of programs to address road safety issues in Aboriginal people identified in Phase One

Brameld and Meuleners (2018) also documented current programs that aim to address road safety issues in Aboriginal people, using published literature and interviews with stakeholders.

3.2.1   Identified in literature review

In a literature review covering the period 1995 to 2017, Brameld and Meuleners (2018) identified Aboriginal road safety programs that covered six key categories: 1) alcohol restrictions/alcohol management programs, 2) media campaigns and education targeting road safety, 3) open load legislation, 4) drink-driving programs, 5) driver licensing programs, and

6) Safe System audits. These are briefly summarised in Table 3.1. (For the complete discussion of these programs, please refer to the phase one report, pp 31-44).

Table 3.1: Australian Aboriginal road safety interventions for the period 1995-2017, identified by Brameld and Meuleners (2018)

Program	Location	Period	Primary Aim / Key Outcome	References
Alcohol restrictions / Alcohol management program				
Living with Alcohol	Northern Territory	1992 - 2002	Reductions in the estimated number of road deaths related to alcohol by 34.5% and in road crash injuries requiring hospital treatment by 28.3%	(Stockwell, Chikritzhs et al. 2001)
			Reduced acute alcohol-attributable deaths but specific effect on road trauma not measured	(Chikritzhs, Stockwell et al. 2005)
Tennant Creek Liquor Licensing Restrictions	Northern Territory	1996-98	Reduced acute-alcohol related hospital admissions	(Gray, Saggers et al. 2000)
Alice Springs Alcohol Management Plan	Northern Territory	2006-2008	Reduced alcohol related hospital admissions	(Senior, Chenhall et al. 2009)
Fitzroy Valley Alcohol Restrictions	Western Australia	2007	Reduced hospital admissions for injury	(Kinnane, Farringdon et al. 2009)
Alcohol restrictions and drink driving in remote Indigenous communities	Queensland	2002-2011	Decline in drink driving offences but high range BAC readings remained.	(Fitts, Palk et al. 2013)
Media campaigns and education targeting road safety				
East Kimberley Aboriginal restraints and drink driving media campaign	Western Australia	Early 2000s	Increased consideration for using a seat belt and not drink driving	(Short, Mushquash et al. 2014)
The Crossing Aboriginal Pedestrian Road Safety Project	Fitzroy Crossing, Western Australia	2002-2003	Spot interviews indicated a greater awareness of issues by interviewees. A comparative reduction of injuries during the first 6 months of the project was reported.	(Macaulay, Thomas et al. 2003)
Stop Territory Aboriginal Road Sadness (STARS) – NT Police Indigenous Road Safety Project	Northern Territory	2008	Evaluation report unable to be located	(Fuller 2011)

Program	Location	Period	Primary Aim / Key Outcome	References
Open load legislation				
Open load space project	Western Australia	2001-2005	Coincided with reduced Aboriginal road crash fatalities for people travelling in open load spaces	(Hawkes 2005)
Drink-driving programs				
Development of a drink driving program for regional and remote Aboriginal and TSI communities.	Far North Queensland and northern New South Wales	2011-2012	The study identified the importance of community ownership of drink driving programs	(Fitts and Palk 2014)
Hero to Healing	Far North Queensland	2012	Participants supportive of program	(Fitts and Palk 2016)
Driver licensing programs				
Driving Change program to improve license participation by Aboriginal people in NSW.	New South Wales	2013-present	Increased rates of licensing in target group	(Cullen, Chevalier et al. 2016)
Pilot program in three Aboriginal communities DriveSafe NT Remote	Northern Territory	2012-2014	Increased rates of driver licensing	(Cullen, Chevalier et al. 2017)
Safe System audits				
Safe System Demonstration Project Involving an Indigenous Community	Bidyadanga, Western Australia	2011	Pedestrian crossing built. Fencing repaired. Improved signage and lighting. Education campaigns.	(Senserrick, Yip et al. 2011)

3.2.2 Identified by stakeholders

A series of interviews were conducted with a range of stakeholders in Western Australia and Australia. These interviews revealed a range of initiatives have been developed and implemented across Australia across the following categories: 1) education, 2) media and advertising campaigns, 3) community and stakeholder engagement to better understand the needs of Aboriginal people, 4) driver education and licensing programs, 5) alcohol interlock schemes, 6) public transport, 7) community road safety grants, 7) collection and analysis of Aboriginal crash data, and 8) review of research literature.

Details of all initiatives across the country are contained in the Phase One report, pp 44-62 (Brameld and Meuleners 2018). The initiatives specific to or including WA Aboriginal communities are summarised below:

- Through Road Trauma Trust Account funding, the RSC supports the delivery of the Royal Perth Hospital 'Preventing Alcohol and Risk Related Trauma in Youth' (PARTY program) which includes outreach programs to regional communities and Aboriginal Youth.
- The SDERA 'Keys for Life' program for those aged 15 years and older. It can be tailored to specific population.
- WALGA Roadwise Kimberley runs a competition to design seat belts, including Aboriginal students.
- Monthly appearances by the RSC on Noongar Radio. Drink driving adverts on Goolarri TV.
- The RSC continues to engage with stakeholders and community to understand the needs of Aboriginal people, including engaging with the Department of Justice, the Department of Transport and the Department of Communities.
- The Department of Transport operatives a remote areas licensing unit which focuses on Aboriginal communities. Among other areas, they operate in the Kimberley and the Pilbara. They offer a 'safe driving course', a theory-based alternative to log book hours for remote drivers aged 25 years and older. The DoT also works to help verify birth details of applicants and works with the Department of Justice to create payment plans for outstanding funds, to facilitate licensing or removal of licence suspensions.
- The Aboriginal Driver Training and Education (ADTE) program, a program running over five years from 2012/3 run by the Aboriginal Justice Program with funding from Royalties for Regions.

3.2.3 Identified by Fitzroy Crossing community members

Aboriginal people from Fitzroy Crossing and the surrounding communities identified the following issues: 1) alcohol and drugs, 2) road maintenance, 3) driving licensing and training, 4) lighting, and 5) cattle on the roads. They suggested solutions including improved maintenance of roads by the Shire, increased road safety education, more police enforcement of speeding and drink-driving, and measures to keep cattle off the highway and alert the public to the possible presence of cattle on the road.

3.3 Summary of programs to address road safety issues in Aboriginal people identified in Phase Two (2018-2019)

A further search was undertaken to find new programs or programs that were not identified in Phase One of the project. This involved searching various Austroads reports on regional and remote road safety (Wundersitz, Palamara et al. 2019) and Aboriginal road safety (Rajan, Dabner et al. 2019), as well as WA government agencies.

3.3.1 Child restraints use

Programs to increase the use of child restraints have been initiated in the Northern Territory (NT), New South Wales (NSW) and South Australia (SA) (Wundersitz, Palamara et al. 2019), based on evidence from the United States that found that a variety of strategies including the distribution of child seats and education improves use among Indigenous people (Billie, Crump et al. 2016).

The Northern Territory program, Buckle Up Borroloola (Northern Territory Motor Accidents Compensation Commission 2017), commenced in mid-2017, was described in the Phase One report. The program distributes and fits child restraints in remote communities, aiming to fit 1,800 child restraints across 24 communities by mid-2019.

The New South Wales trial (Porykali, Hunter et al. 2017) has the following elements: restraint distribution, car seat fitting and checking days, information sessions and community events and training of Aboriginal community workers to fit restraints.

In South Australia, the 'On the Right Track Remote' (OTRTR) program has delivered over 400 child safe restraints to Aboriginal people living in the Anangu Pitjantjatjara Yankunyatjara (APY) Lands and Maralinga Tjarutja (MT) Lands (Wundersitz, Palamara et al. 2019). The program includes training provided on fitting and installing the child safe restraint into

vehicles. By the end of June 2019, OTRTR aims to deliver 200 further child safe restraints to the 10 communities and provide training to ensure correct fitting of the restraints.

3.3.2 Seat belt use

The Clip Every Trip program (an ongoing program that started in 2011) encourages seatbelt use in regional and remote NSW. It targets regional and remote male drivers between 30 and 55 years old, including Aboriginal people. In addition, motor vehicle users, including passengers, in regional and remote areas are part of the program. It is delivered through regional TV, as well as through roadside billboards, radio, online and in print.

3.3.3 Alcohol use and drink driving

The NT government introduced a 'floor price' (minimum price per standard drink) in October 2018. International evidence has shown that the introduction of a floor price for alcohol was associated with significantly reduced alcohol-related hospital admissions in Canada (Stockwell, Zhao et al. 2013). The NT floor price measure was introduced together with services providing safe transport and shelter to intoxicated people. This set of measures is likely to significantly impact the Aboriginal communities in NT.

3.3.4 Driver licensing programs

Wunan driver training
The Driving Licence Training Program, funded by the Department of the Attorney General, covers both the Halls Creek & Kununurra areas. The lack of a driver's licence is a major barrier to Aboriginal people looking for jobs. The program provides driver training and assistance to clients with driving offences who have been referred by authorities in the criminal justice system. The program aims to reduce recidivism by facilitating people obtaining jobs. Aboriginal people are assisted with the following: identification, fine payment arrangements, facilitation of court dates and driver's test bookings. A second program, funded by the Department of Transport in Halls Creek and the surrounding communities, aims to improve social mobility and the legal operation of motor vehicles. Information on the programs is on their website (http://wunan.org.au/employment).

Driving Licensing Access Program – New South Wales Roads & Maritime Services (NSW RMS)
The NSW RMS program was discussed in the Phase One report (p 53). As described, the program targets Aboriginal and disadvantaged people. The programs provided include:

i) *Pre Learner Course (*provides culturally appropriate support for people to get their licences, including help with identification, payment plans and debt recovery);

ii) *Get Licenced, Get Legal, Get Work Program* (provides assistance to improve literacy and computer skills so that applicants can pass the Driver Knowledge Test);

iii) *Learner and P Plate Driver Program* (provides supervised professional driving lessons).

3.3.5   Road funding

In 2018, the WA Government approved a five-year State Road Funds to Local Government Agreement. The agreement will see 20% of the total state vehicle licence fee collections going to Local Government (LG) councils, which will result in the funding shared by LGs increasing to an estimated $203.4 million in 2022-23, up from 182.3 million in 2018-19. Moreover, the WA Government committed a further $260 million of funding for other works on the LG road network between 2018-19 and 2021-22.

The annual funding will be split so that approximately two-thirds will go towards state Black Spot allocations, road project grants, direct grants, and strategic and technical support. The remaining one-third will be directed towards Main Roads WA managed programs. Most notably, this includes funding to improve access roads to remote. Aboriginal communities, which will improve the social disadvantage associated with the sub-standard access roads. In addition to this, WA Transport Minister Rita Saffioti stated that, "*There is also a strong commitment to providing opportunities for Aboriginal employment as well as facilitating local economic development through local employment*" (Parkes 2018).

3.4   Summary

The major programs involving Aboriginal people and road safety, particularly in regional and remote areas of Australia were reviewed. This included those identified in Phase One of this report, both in the literature and by stakeholders. Additional programs identified in this phase of the report include programs to encourage child restraint use in NT and SA and seat belt use in NSW, the introduction of a floor price for alcohol in NT, driving training programs in WA, SA and NSW, and funding from state vehicle licence fee collections to local governments to improve local roads.

4. RESULTS: ABORIGINAL COMMUNITY CONSULTATIONS

The results arising from discussions with Aboriginal community members and select key informants are presented below. The results are presented by community, as some of the identified risk factors together with the solutions are specific to the community or region. This section is concluded with a summary bringing together the key themes identified across all communities.

4.1 Balgo (Wirrimanu)

4.1.1 Sample characteristics

A total of 15 interviews involving 20 people were conducted in Balgo between the 9th and 11th of April 2019. The basic demographics of those interviewed are presented in Table 4.1. Twelve of the 15 interviews involved study participants, which included 17 Aboriginal people who lived in Balgo (n=16; 94%) or the nearby Aboriginal community of Billiluna (n=1; 5.9%). Nine (53%) participants were male and eight (47%) were female. One (5.9%) participant was in the 18-24 year old age group, seven (41%) were in the 25-44 year old age group, and nine (53%) were in the 45 years or older age group.

The other three interviews involved 'key informants' who have close ties to the Balgo community and therefore could provide further insight into the road safety issues impacting the community. These key informants included: 1) an Aboriginal male, aged between 25-44 years, based in Halls Creek; 2) a non-Aboriginal male, 45 years of age or older, who works in Balgo (approximately 8 years); and, 3) a non-Aboriginal female, 45 years of age or older, who works in Balgo (approximately 7 years).

Table 4.1: Demographics of people interviewed in Balgo

Factor	Number (n)	Percent (%)
Interviewee		
Participant	17	85%
Key Informant	3	15%
Aboriginal Status		
Aboriginal	18	90%
Non-Aboriginal*	2	10%
Gender		
Male	11	55%
Female	9	45%
Age Group		
18-24 years	1	5%
25-44 years	8	40%
45+ years	11	55%
Community		
Balgo	18	90%
Billiluna	1	5%
Halls Creek	1	5%

*Both were key informants

Figure 4.1: A road in the centre of the Balgo community

4.1.2 Identified risk factors for road injuries

During each interview, participants were asked, *"What are the main causes of road injury where you live?"* The key issues (themes) identified and specific factors raised during the 12 interviews are summarised in Table 4.2. The key issues identified related to road condition/quality (10 interviews), car maintenance/condition (7 interviews), licensing and driver training (6 interviews), road infrastructure (5 interviews), speed, alcohol and drugs, and livestock/animals on the road (3 interviews, respectively). Additionally, restraint use was mentioned in two interviews while other issues, such as fatigue, distracted driving and flooding, were mentioned each in one interview (Table 4.2).

Road condition

> "*From Northern Territory to Balgo, the roads aren't in good condition*"

> - Aboriginal male, 25-44 years of age

During the ten interviews in which road condition was discussed, the most common concern was the poor condition of the surrounding roads, namely the Tanami Road and Balgo Road. These are the main roads used to access Balgo community. The Tanami Rd is 1,035 kilometres in length and runs from a junction off the Great Northern Highway, 17 kilometres south-west of Halls Creek (in WA) to a junction with the Stuart Highway, 19 kilometres north of Alice Springs in the Northern Territory. It is estimated that only 20% of the road is bitumen. The rest is dirt and gravel, which is prone to severe corrugations (van Extel 2013). Participants noted how difficult and dangerous it is driving on this road given the severity of the corrugations. They were particularly concerned about the safety of this road when travelling with children and visiting family in other communities. A participant (Aboriginal male, aged 25 to 44 years) remarked that the condition of the Tanami Road varies across its length; it is in good condition in areas used by tourists, but in poor condition near where Aboriginal communities live. Participants noted the *"rough"* and *"bumpy"* conditions of the roads connecting Balgo to the nearby Aboriginal community of Billiluna, approximately 150 kilometres south of Halls Creek, which can cause drivers to lose control of the vehicle. Participants recalled instances where drivers have rolled their vehicle because of these conditions, with one stating, *"Corrugation is killing people"* (Aboriginal female, age unknown). Therefore, there are strong calls for the roads to be sealed with bitumen up to Halls Creek, with the same concerns existing in Mulan and Billiluna.

The poor-quality roads have other indirect consequences that affect the community, such as damaging whitegoods being transported to communities.

Figure 4.2: Roads inside the Balgo community

Car condition and maintenance

"*Flat tyres and the car is falling apart*".

The condition and maintenance of the car was the second most common theme raised by study participants (seven interviews). Specifically, the participants highlighted that the poor road

condition and corrugations damage the cars, including the car's steering, tyres and loosening numerous nuts and bolts. This in turn makes it difficult for people to maintain their vehicles. Frequently, people in Balgo have to do their own vehicle repairs. They usually carry their own set of tools when travelling along these roads as they often need to conduct running repairs. Drivers regularly experience flat tyres and tyre blowouts, which can cause crashes and breakdowns, and are often due to the poor-quality roads. Furthermore, a participant pointed out that it is difficult to get hold of the correct tyres for a vehicle in Balgo and the surrounding communities.

Figure 4.3: The Balgo petrol station

Licensing and driver training

A further theme established related to licensing and driver training, mentioned in five interviews. The specific issues discussed included the difficulty of obtaining identification (a barrier to obtaining a learner's permit), issues around the theory test, not understanding the licensing process, lack of driving skills, parents teaching their children how to drive, and the young age at which people are learning to drive.

A participant believed that people lack driving skills, particularly in relation to the conditions. For example, the steering wheel moves around because of the corrugations, which can cause drivers to lose control. In contrast, other participants remarked that people in Balgo have the driving skills and knowledge of the roads, but obtaining a licence is difficult for a number of reasons. Firstly, it is partly because of the theory test, which uses words that can be difficult for Aboriginal people to understand. Secondly, there are community members who do not have knowledge of the licensing process and therefore find it difficult to apply for a licence. Some participants thought that the process inhibits Aboriginal people from obtaining a licence. Thirdly, participants pointed out the difficulty of obtaining the required forms of identification for a learner's permit and a driver's licence. Therefore, obtaining a licence is a long process.

There were participants who thought that young people start driving too young – in some cases, at 13 years of age – and stated that young drivers are being taught by parents *"who think they know everything about driving"*. Therefore, young drivers are not receiving an appropriate level of driver training.

Road Infrastructure

With respect to road infrastructure, which was discussed in five interviews, a major issue was the lack of signs. Multiple participants believed that there are not enough signs indicating driving speed on the main road (i.e., no speed limit signs), no warning signs (i.e., for flood-prone sections of road) and limited signs to mark Balgo and Billiluna. A participant stated that the visibility on the road is poor (i.e., poor lighting) while another participant thought that the roads inside the community should be widened. Participants stated that there is a need for better kerbs/shoulders, so that if the centre of the road is in poor condition, people can drive on the edges of the road. Furthermore, if people lose control and go off the side of the road, a better kerb would offer some protection.

Table 4.2: Summary of road safety issues identified by Aboriginal people in Balgo, WA

Theme	Specific factors
Road condition (10[#])	• Poor condition of roads connecting Balgo to other communities (e.g., Billiluna), Halls Creek and the Northern Territory • Too many corrugations, rough, bumpy, difficult and dangerous to drive on • Worst section of road is coming into Balgo (turning off Tanami Rd onto Balgo Rd) • Can cause drivers to lose control of their vehicle (steering difficulties) • Increases travel time (e.g., from Balgo to Billiluna) • Damages cars
Car maintenance/ condition (7)	• Tyres are often a problem (e.g., flats, blow-outs) • Driving with one headlight on at night • Poor road condition and corrugations damage cars (e.g., the steering wheel, tyres, and loosens nuts and bolts), making it difficult to maintain the vehicle • People do their own car repairs • Carry their own tools as they need to do repairs as they travel
Licensing and driver training (6)	• Identification – difficult to get a license and learner's permit due to it being difficult to get hold of forms of identification • Time – takes a long time to get a license • Age – kids start driving too young, sometimes as early as 13, 14, 15 years of age (unlicensed and underage) • Young drivers are taught by parents who "think they know everything about driving" • People lack driving skills for the conditions (e.g., driving on corrugations) • Obtaining license is difficult, partly due to the theory test which can be difficult and uses words that are difficult to understand
Road infrastructure (5)	• Visibility – poor visibility on the road (lighting and signs) • Signs – no signs to show how fast you should drive on the main road, no warning signs (i.e., flood-prone areas, dangerous sections of road, upcoming turns), and need signs to mark communities (e.g., Balgo and Billiluna) • "Roads inside the community should be widened and have kerbs" • Crossing railways can be dangerous
Alcohol and drugs (3)	• Alcohol – being drunk and drink driving • Sleep & alcohol – some people drink too much and fall asleep – they fall asleep at the wheel and crash at the turn between Balgo and Billiluna • **NB:** a participant noted that alcohol is less of a problem than the road conditions
Livestock/animals (3)	• Animals on the road including cattle, horses, kangaroos, dingos and emus

Speed (3)	• Driving too fast, especially for the conditions, such as on the Tanami Rd
Restraint use (2)	• Car seats for kids are too hard to get hold of, therefore some children don't have them • Child seats are expensive and the ones that are available are often for babies so may be too small for young children • "Many people don't wear seat belts, but they drive carefully as they know the roads (and conditions)"
Other (1 mention each)	• Fatigue - driving tired • Roads flooding – south of Balgo the road can become flooded due to the nearby river/creek • Violence – sometimes there is violence and the driver is punched • Distracted driving – driver can be influenced by other people in the car to do something unsafe (MG5) • Riding on the back of the ute • Tourists/visitors – lots of tourists to see the art gallery have accidents as they don't know the road, whereas locals know the road, the bumps and to go slow

[#]Number of interviews in which the issue was raised; n=12 interviews with 17 participants

Key Informants' Responses

The key informants also identified risk factors for road injury in Balgo, expanding on similar issues to those raised by study participants.

All three key informants discussed child restraint use and overloaded vehicles. With respect to restraint use, they stated that kids are often unrestrained and that the laws are not being enforced. However, it was acknowledged that places like Broome are enforcing child restraint laws. Other Aboriginal communities are also enforcing the laws, because their community members frequently travel into Broome. An informant believed that child restraint use is influenced by cultural viewpoints, the attitude being "*if the kid is happy and content, then it's all good*", until an incident occurs. One of the key informants remarked that unrestrained children are not perceived as a problem in the community. This may explain why child restraint use was only identified as a risk factor in two of the 12 participant interviews, with one participant saying that "*Many people don't wear seatbelts but they drive carefully as they know the roads (and conditions)*" (see Table 4.2). An informant went said that people tend to travel relatively slowly within the community (due to poor roads) so the risk is not as high as it otherwise could be. A further issue is that people often do not have their own vehicle so are not in a position to ask for child restraints – and there may not be space for the child restraints as the space is filled by passengers.

An informant also noted that a previous problem was that children sat in the back of utes. This was solved gradually; initially children had to sit in crates in the back of utes and then they were no longer allowed to be in the back at all. It took time and community campaigns, but it was gradually accepted.

Road maintenance was also identified as a risk factor by informants, with the roads being described as *"pretty bad"*, all unsealed outside of Balgo community, and needing to be regraded. Like study participants, the key informants identified the road from Balgo to the turn-off (Tanami Rd) as the worst section of road. It was also noted that drivers get stuck on these roads during the wet season.

In addition to the car maintenance and condition issues raised by the study participants, one of the informants emphasised that there is no budget for maintenance – it is a 'feast or famine' mentality where people cannot afford the running costs after making the initial purchase of the vehicle. Car maintenance often involves do-it-yourself repairs and community members have

to order parts from elsewhere. Consequently, people mainly own and drive older cars because they are easier to maintain.

An informant touched on the prevalence of unlicensed driving and emphasised the difficulty of obtaining a driver's license for Aboriginal people in Balgo and the surrounding communities. Having a driver's licence impacts other areas of life; for example, it is connected to employment opportunities as it is often a prerequisite. The levels of English in tests are a barrier to those who speak English as a second language.

Other issues brought up by the informants included limited public transport (only three vehicles with a Medium Rigid (MR) licence in the community and a single 22-seater bus), pedestrian safety, and alcohol and drugs. In particular, alcohol and drugs were addressed by two informants who acknowledged that there is heavy alcohol use and that alcohol kills. This is despite the fact that Balgo is a 'dry' community. Furthermore, an informant discussed drug use (i.e., ganja) within the community, saying that it affects driving but does not kill (as with alcohol).

4.1.3 Previous and current road safety initiatives identified

"*Not much here for road safety*"

– Study participant, Aboriginal male, 25-44 years of age

Two questions asked during the interviews were*: "Do you know any work being done to stop road injury where you live?"* and *"Has any work been done in the past?"* There were limited responses by community members to both of these questions. The above quote is in response to the former question, with the participant continuing to reiterate that nothing is currently being done in Balgo for the roads, a view repeated by other participants in subsequent interviews. Participants in two interviews noted that there has been grading of the roads in the past. The AJP Open Days were highlighted in another interview as helping people to obtain a driver's license and get driver training. Previously, the Shire (of Halls Creek) visited and spoke with the community about bitumen, including doing the Tanami Rd from Balgo to the NT border; however, the participants said that there was no follow-up action and no feedback was given to the community. In response to the question, *"Has any work been done in the past?"* a participant said, "*Nothing has happened here yet, from Balgo to Billiluna to the Northern Territory*". There was no response to this question in 11 of the 12 participant interviews.

Similarly, there were limited responses by key informants regarding past and present road safety initiatives to reduce road injury in Balgo. In agreement with the participants, the AJP Open Days were highlighted as being helpful by a key informant who went on to say that it has been easier for people in Balgo Community to apply for L plates and obtain a licence since the ID criteria have been adapted. Grading of the roads was also mentioned by a key informant as work done in the past. However, the informant noted that maintenance has been 'hit or miss' and that there has been no improvement in road safety – at best, they are only maintaining the current situation. Talk of sealing the Tanami Road to Alice Springs was also mentioned during this interview, but they pointed out the NT border is only 30 to 40km and the road crosses the border.

4.1.4 Identified strategies to reduce road trauma in their community in the future

The final question that participants were asked was, *"What do you think should be done to stop road injury where you live?"* A summary of the potential solutions raised during the interviews is presented in Table 4.3. The most frequently suggested solutions related to improvements in the condition of the road and the road infrastructure as well as modifying or improving certain aspects of driver training and licensing.

Participants in six interviews stated they would like the condition of the roads to be improved. Participants strongly emphasised the importance of grading the roads and/or making the roads bitumen (i.e., sealing the road). More specifically, community members called for the Tanami Track to be sealed along its entire length on both the Western Australian and Northern Territory sides of the border (only around 20% of the road is currently bitumen). Aside from the potential direct road safety benefits, this would also encourage tourists to visit the community, see Aboriginal art and learn about the outback way of life. Participants wanted the roads from Balgo to Halls Creek to be bitumen, and they noted that this is also a concern in Mulan and Billiluna.

In addition to improving the quality of the roads, participants in four interviews emphasised the need for more and better signs. For instance, participants want speed limit signs, signs indicating upcoming turns, signs warning of flooding or flood-prone areas ahead, and/or warning signs with road safety messages (e.g., 'Stop speeding'). Community members spoke of a local Aboriginal artist at the Warlayirti Art Centre who paints old car bonnets and will be adding road safety messages to them. The artists are planning to place these along roads and

hang them from trees between Balgo and Alice Springs to spread road safety messages to passing travellers. Supporting such an initiative would be a good way for government bodies, other road safety organisations and local communities to work together towards improving Aboriginal road safety, while at the same time supporting community-based ideas and actions as well as local artists.

Figure 4.4: An example of the innovative use of an old car bonnet

Another potential solution related to road infrastructure is the addition of roadside rest spots, so that when people are tired, or their car breaks down then they have somewhere to go. It was noted by participants that there are no safe places to stop if you break down. Non-Aboriginal people often have access to satellite phones so they can call for help, but Aboriginal people have to wait until they get into an area with mobile phone reception. A participant suggested that water tanks be provided every 50km. An example of using an old car bonnet to raise awareness of the importance of carrying water when travelling can be seen in Figure 4.5 below. This was photographed in Utopia, Northern Territory, approximately 250km from the start of the Tanami Road in Alice Springs.

Figure 4.5: An example of the use of an old car bonnet to issue a safety warning about water, Utopia, Northern Territory in 2016

Source:https://johansonfamilytravel.wordpress.com/2016/05/13/utopia-art-car-bonnet-gallery/

It was suggested that there should be poles (i.e., guard rails or safety barriers) installed around road corners to protect people from leaving the road.

Throughout the interviews, participants emphasised the important role that the family has in supporting the driver. It was highlighted that family members need to talk to each other about *"taking responsibility"* and teaching drivers that they need to look after their passengers. Older participants in one interview suggested the age limit for obtaining a driver's license should be increased (e.g., to 20 years of age); they believed 18-19 is too young and they are too immature and irresponsible at that age to drive safely and take care of their passengers.

It was noted that Aboriginal people are inhibited from getting a driver's license because the application process is difficult. The participants stated that Aboriginal people know the roads and how to drive, but not the licensing process. A potential solution is to modify the methods

of testing so that it is more understandable for second language English speakers. A key informant cited a previous initiative in some remote communities in Queensland where they did their Learner's Permit testing via visual tests using Matchbox cars. They went on to say that this community (and others) need more interactive and simple English tests.

Another potential solution is to increase the availability of navigation systems and to improve internet connections, such as Wi-Fi, in order to help tourists find their way. Community members feel they 'know the land' given their history with the area and from family members being drovers in past generations.

Key Informants' Responses

Further ideas and potential strategies put forward by the key informants included:

- High visibility campaigns, such as high visibility wristbands for pedestrians at night-time;

- An education campaign regarding overloaded vehicles and passengers riding in the back of utes, which has been conducted in Queensland in the past; and

- The creation and inclusion of an Aboriginal driver trainer who can both train learner drivers and issue licensing tests - a 'one-stop shop'.

Furthermore, there were calls for encouraging slower driving speeds and providing education around lower speeds, especially if they are not using child restraints. A key informant also spoke of the importance of addressing child restraint use through greater enforcement of child restraint use. They proposed that the fines should be used to purchase a child restraint, as opposed to the fine being paid to the police. The informant remarked that there is a need for more compact, more affordable child restraints and the possibility of a loan or rental system should be explored.

Table 4.3: Summary of potential solutions to stop road injury suggested by Aboriginal people in Balgo, WA

Issue	Potential Solution
Road condition	- Grading the roads - Sealing the roads with bitumen (road to Halls Creek and the Tanami Track in particular)
Road infrastructure	- Signs – addition of speed limit signs, signs indicating upcoming turns and flooding ahead, warning signs with messages (e.g., "Stop speeding") - Rest spots for when people are tired and when their car breaks down - Safe places to stop with a system to call for help, which doesn't rely on mobile phone reception - Poles (i.e., guard rails/safety barriers) around road corners to protect people from leaving the road
Alcohol and drugs	Family support of drivers and sending the right message (e.g., "only grog in the community, not while driving")
Licensing and driver training	- Increase age limit to obtain driver's license (e.g., 20 years of age, as 18-19 is "too young") - Change the methods of applying for a license and testing so it is less difficult (i.e., more understandable)
Livestock/animals	Fencing to stop horses and cattle from entering the road
Speed	- Adjust speed limits, i.e., make the roads slower - More speed limit signs - Put up warning signs about speed (e.g., "Stop speeding")
Restraint use	Seatbelts – awareness and education
Other	- Family support of drivers – it is important that family members (mothers, fathers, aunties and uncles) talk to each other about the responsibility of driving. Two main messages included "taking responsibility" and "drivers need to look after their passengers" - An Aboriginal artist who paints bonnets will be painting them with road safety messages and placing them along roads between Balgo and Alice Springs to raise awareness - Need better navigation systems to help tourists find their way (including access to Wi-Fi) - Raise awareness of the need to check tyres

4.2   Yandeyarra and South Hedland

4.2.1   Sample characteristics

A total of 17 interviews involving 24 people, including 20 study participants, were conducted in Yandeyarra and South Hedland between the 28th and 30th of May 2019. The basic demographics of the 20 participants interviewed are presented in Table 4.4. There were 10 male and 10 female participants. Nine (45%) participants were in the 25-44 year age group, seven (35%) were in the 45 years or older age group, and four (20%) were in the 18-24 year age group. The other four people interviewed, including two in Yandeyarra and two in South Hedland, were key informants who closely with the respective communities.

Five of the interviews were conducted at the Yandeyarra Open Day on the 28 May 2019, which included three interviews with five study participants, an interview with both a participant and key informant, and another interview with a key informant. Of the six study participants in Yandeyarra, three were male, four were in the 25-44 year old age group, one in the 18-24 year old age group and one in the 45 years or older age group.

Eleven of the interviews involved 14 study participants who were interviewed at the South Hedland Open Days on the 29 and 30 May 2019. Of these 14 participants, seven were male and seven were female, six were 45 years of age or older, five were in the 25-44 year age group, and three were in the 18-24 year age group. The final interview was conducted with two key informants who are involved in driver training and licensing with the Bloodwood Tree Association in South Hedland. Bloodwood Tree Association is a non-for-profit organisation that provides services and support to at-risk Aboriginal and Torres Strait Islander clients who are impacted by a range of social issues, such as alcohol and drug use, homelessness and unemployment (http://www.bloodwoodtree.org.au/). They provide employment and training opportunities, including driver training, for the Pilbara region. Therefore, they can provide valuable insight into the challenges surrounding road safety in the Pilbara region.

Table 4.4: Demographics of participants interviewed in Yandeyarra and South Hedland

Factor	Number (n)	Percent (%)
Gender		
Male	10	50%
Female	10	50%
Age Group		
18-24 years	4	20%
25-44 years	9	45%
45+ years	7	35%
Community		
Yandeyarra	6	30%
Hedland	11	55%
Broome*	2	10%
East Kimberley*	1	5%
Total	20	100%

*Interviewed in South Hedland

4.2.2 Identified risk factors for road injuries

The key themes and specific issues identified during the interviews in Yandeyarra and South Hedland are summarised in Table 4.5. The main findings of the interviews are discussed below, organised by the community where the interviews were conducted.

Yandeyarra

The 'Big three' themes that were consistently quoted during interviews with Yandeyarra community members as being the main risk factors for road injury are: 1) alcohol and drink driving, 2) poor road conditions, and 3) cattle on the roads.

Alcohol and drink driving

Drink driving was identified as one of the main causes of road injury by all people interviewed in Yandeyarra and it was cited as being the number one issue in three of the five interviews. A female Aboriginal participant in the 25-44 year old age group elaborated on the issue saying that there is no police presence in Yandeyarra, so when people are drunk, they get behind the wheel and drive and are never breath-tested. Therefore, the participant believed that setting up a police presence in the area would be a "*big thing*".

Poor road condition

The road condition was also cited by all interviewees as being a significant factor impacting road injury in Yandeyarra. In particular, the condition of the road from the highway (i.e., Yandeyarra Road, which extends approximately 38 kilometres from the Great Northern Highway turnoff to the Yandeyarra Community) was described as being in "*poor condition*", of "*poor quality*", "*rough as guts*", and with sharp bends and corrugations. The participants commented that the road condition is especially impacted by the rain, and that the ditches and washouts after rain and flooding can lead to vehicle rollovers due to the drops. Furthermore, a key informant emphasised that floods and cyclones, such as Cyclone Veronica in March 2019, leads to trouble with the culverts; soft, boggy sand; drifts, and sections of the road where the shoulders are not defined. (See Figures 4.6, 4.7 and 4.8 for photographs of Yandeyarra Road.)

Figure 4.6: Turnoff from Great Northern Highway onto Yandeyarra Road

Figure 4.8: Entrance to Yandeyarra Road

Figure 4.7: An example of a floodway on Yandeyarra Road

Animal-related crashes

Animals on the road was noted as a main risk factor for road injury in four of the five interviews. Cattle, horses and kangaroos were cited as causing animal-related crashes in and around Yandeyarra, with animals on the road at night being a particular concern. A male Aboriginal participant in the 45-70 year age group indicated this was the second major risk factor for road injury, only behind drunk driving. He stated there is "*too much cattle on the road*". The issue is worsened by the lack of fencing; the open paddock means cattle can wander out onto the road and sleep on the road (see Figure 4.9 for an example of a bull about to wander onto Yandeyarra Road, taken by a researcher on the way back to Hedland).

Figure 4.9: A bull on the side of Yandeyarra Road

Other issues

Overcrowding and not using restraints were other factors highlighted as significantly impacting road safety in Yandeyarra. The comment was made that overcrowding (sometimes up to 12 people in a vehicle) and unrestrained passengers are such frequent occurrences that community members do not think that it is an issue. One study participant stated that overcrowding was

previously an issue, particularly when licensing services did not visit Yandeyarra, and believed that *"it is much better now"*. Nevertheless, it was acknowledged that these behaviours lead to fines and loss of licences among community members. Interviewees also remarked that when *"everyone"* gets to the turnoff (Great Northern Hwy & Yandeyarra Rd), they immediately unbuckle their seatbelts.

Other issues raised by participants related to road infrastructure, including dark roads ("*hardly any streetlights*"), limited road signs, and no speed signs at the turnoff to Yandeyarra. Speeding, underage driving and unlicensed driving were also mentioned as being important factors. Moreover, an interviewee observed that if people are unlicensed, then they are more likely to drive at night in order to avoid police, which also makes driving more unsafe due to the low lighting (i.e., reduced visibility), animals on the road and poor road conditions.

A key informant touched on issues surrounding driver attitudes and behaviour impacting road safety in and around the community. They believe that drivers do not consider the potential consequences of their actions and irresponsible behaviour. They indicated that drivers often make their own tracks driving through the countryside to avoid bitumen roads and police so that the drivers avoid being sanctioned for being unlicensed, driving under the influence or driving an unregistered vehicle. These are also the same reasons why people frequently drive at night, and increases their crash risk. Finally, the informant thought that poor vehicle condition and maintenance was a contributing factor towards road crashes in Yandeyarra.

South Hedland

The main risk factors for road injury identified by the 14 study participants interviewed in South Hedland related to the following: 1) fatigue, 2) alcohol and drink driving, 3) speeding, 4) licensing and driver training, and 5) distracted driving and mobile phone use.

Fatigue

Fatigue and driving tired was highlighted as a significant risk factor for road injury in nine of the 11 interviews. In four of the interviews, fatigue was identified as the number one factor contributing to road crashes in and around Hedland. Participants noted that it is particularly problematic when driving out of town. A male Aboriginal participant in the 25-44 year old age group spoke of how it impacts attention, speed, concentration, and can result in drivers missing turns and sharp bends.

Alcohol and drink driving

Alcohol and drink driving was mentioned in nine of the 11 interviews and was often ranked as the first or second most important contributor to road crashes in Hedland alongside fatigue.

Speeding

Speeding was identified as an important risk factor for road crashes during six interviews and was ranked by most participants as the third leading cause of crashes. It was noted that "*lots of people speed"*, with a participant (Aboriginal male, 25-44 years) saying that people often drive too fast for the conditions, and that "*if it is slippery, then the driver should slow down; the destination isn't going anywhere*".

Licensing and driver training

Issues pertaining to licensing and driver training were raised in five of the interviews with study participants in South Hedland. The issues raised by participants related to unlicensed and underage drivers: a lack of driver experience, especially among young drivers and tourists (i.e., those unfamiliar with driving conditions in regional and remote areas); and the limited driver training services available in Hedland aside from those provided by Bloodwood Tree Association. With respect to driver inexperience and a lack of driver training, a participant (Aboriginal male, 25-44 year age group) indicated that people are often fine on the 'back roads', but when they drive on the main roads, that is when "*trouble happens*". Moreover, young drivers and tourists "*panic brake*" due to a lack of training. Another participant (Aboriginal male, 18-25 years) stated that underage drivers are pressured by their peers into doing *"silly"* things.

Distracted driving and mobile phone use

Another issue raised in four interviews was that of driver distraction and mobile phone use. These participants spoke of the dangers of people driving while on the phone, in and around Hedland as well as drivers not watching or paying attention to the roads, which can lead to crashes. A male Aboriginal participant in the 25-44 year old age group emphasised that drivers need to know that "*Lives are in your hands*".

Other

Not wearing seatbelts and road conditions, such as corrugations on gravel roads, were each mentioned as risk factors for road injury in two interviews. In contrast to Yandeyarra, road

infrastructure and vehicle condition were not identified as risk factors in any interviews in South Hedland. Similarly, cattle and wildlife were only mentioned in one interview in South Hedland compared to being a major risk factor raised by participants in Yandeyarra.

Discussion with key informants

To supplement the interviews with study participants, discussions were held with two key informants who are involved in driver training and licensing in South Hedland. This includes a driver training program, driving lessons, and the 'Keys4life' program. The informants spoke at length about a range of issues regarding the licensing and training process and the complicating factors encountered in regional and remote areas. These included concerns surrounding the Hazard Perception Test (HPT), identification requirements, licensing, logbooks, the Keys4Life program, and the road infrastructure.

Regarding the HPT, the informants observed that English literacy and computer skills are lacking in some segments of the community, although they possess knowledge of the theory and have driving skills. For instance, there have been cases of older Aboriginal adults (sometimes up to 70 years of age) who can drive and would pass the practical driving assessment but they cannot pass the HPT due to a lack of computer skills. There should be alternate pathways that do not involve computer tests for people who have limited or no skills on a computer. A further concern is that no feedback is provided after the HPT, which means that people who fail do not know how they went wrong and therefore they cannot make changes in subsequent attempts. Informants suggested the provision of more practice scenarios online (an increase from the four available) and for feedback to be provided after the HPT.

The informants highlighted how difficult it is for those out in the communities (i.e., 100 or more kilometres out of town) to obtain a driver's licence. In particular, the challenges for remote people under 25 years of age who must obtain a learner's permit, wait six months, complete the HPT, and then do the logbook and 50 hours of supervised driving. During this process, the learner driver is often back in the community and driving unlicensed, so would undo progress towards obtaining their licence if they are picked up by the police. This is a significant challenge to driver training and licensing programs throughout regional and remote WA.

Furthermore, the informants believed the identification requirements for learner's permits are restrictive; for example, two letters from the government with a residential address, birth

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certificates and/or WA Photo Card. However, these requirements are *"almost impossible"* to obtain for Aboriginal people living in regional and remote locations.

In addition, concerns were raised about certain aspects of the School Drug Education and Road Awareness (SDERA) resources, including the Keys for Life (Keys4Life) program[1]. The informants spoke of how the SDERA resources are primarily targeted at high school students and younger people. Consequently, the resources are not appropriate for adults and older adults (up to 70 years of age) undertaking the Keys for Life program in South Hedland. Moreover, it is their experience that the content is *"unrealistic"* and *"unrelated"* to the problems and conditions faced by drivers in regional and remote areas. There are also language barriers and problems with the comprehension of certain questions in the program. For instance, some questions in the Learner's Permit Theory Test (Test 4) booklet "*are almost designed to catch you out*"; some questions test of English comprehension, not the participant's understanding of driving theory (for examples, see questions 14 for an ideal question and 15 for a "trickier" question in Test 4, Learner's Permit Theory Test). Another difficult question relates to the use of high beams, *"When should you dip your headlights?"* (Question 27, Test 4). Drivers are recommended to lower headlights 200 metres away, but this is "*very difficult to gauge out on the road*".

Furthermore, SDERA resources and the 'Keys4Life' programs are meant to be free, which is easy to do in high school and metropolitan settings, but Bloodwood Tree Association needs to pay their trainers to deliver the Keys for Life program. Lastly, trainers will need a Certificate IV in Training and Assessment qualification from next year (2020) or they will not be permitted to teach (see www.sdera.wa.edu.au/professional-learning/secondary/keys4life/ for eligibility to enrol in the one-day Keys4Life professional learning workshop). This is a significant barrier to providing driver education in regional and remote areas of WA.

Other issues raised related to the different infrastructure between towns. For example, there are no traffic lights and only roundabouts in Port Hedland whereas there are only traffic lights and no roundabouts in Karratha. This makes it difficult to train and test drivers using different types of intersections. Sometimes the driver trainers take learner drivers who have attended five

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[1] Note that these comments are specific to the use of this program in regional and remote Aboriginal programs, and not a reflection of the overall merit of this program used across WA. The program was awarded the best Community Program in Australia in the 2017 Australian Road Safety Award.

driving lessons in a row (without missing or skipping any sessions) to Karratha for a meal and to experience driving overtaking road trains and at 100 km/h.) Key informants also raised the problem of cattle on the road and animal-related crashes. Finally, the informants highlighted the conflicting information online from the different Australian jurisdictions regarding crash avoidance tips and techniques.

Table 4.5: Road safety issues identified by Aboriginal people and key informants in Yandeyarra and South Hedland, WA

Theme #Indicates no of community members who raised this issue	Specific issues and notes	
	Yandeyarra	**Hedland**
Road condition (Y=5, H=2)#	• Road condition – coming in from the highway (Great Northern Hwy onto Yandeyarra Rd) • Floods and cyclones lead to trouble with the culverts, soft boggy sand, drifts, and sections of road where the shoulders are not defined* the Town of Port Hedland fix it about once a year.	• Corrugations out on dirt/gravel roads
Road infrastructure (Y=3), H=0)	• Dark roads, hardly any streetlights. • Speed signs – none on the turnoff to Yandeyarra • Limited road signs*	
Car maintenance/ condition (Y=1, H=0)	• Car condition/maintenance – poor vehicle condition*	
Alcohol and drugs (Y=5, H=11)	• Drink driving – no police presence in Yandeyarra, so when people are drunk they get behind the wheel and drive as there are no police to stop and/or test them etc. A big thing is to set up police presence (they have only seen one booze bus in a year in Karratha)	• Alcohol and drug driving

Theme	Specific issues and notes	
	Yandeyarra	Hedland
Overcrowding and restraint use (Y=3, H=2)	• Overcrowding was previously an issue, particularly when licensing/Department of Transport didn't visit Yandeyarra. It is much better now. • Overcrowding and unrestrained passengers – fines and loss of licenses. It is such a frequent occurrence that people (community members) don't think that it is an issue. No restraints – kids squat on the floor or in the dogbox, and at the turnoff (Great Northern Hwy –Yandeyarra Rd) people's immediate reaction is to take off their seatbelt*	• Injuries are caused by not wearing seatbelts.
Licensing and driver training (Y=1, H=5)	• Underage and unlicensed driving – HOWEVER, in certain cases, if it is an underage driver who is safer, it is better that they drive rather than the drunk adult. [Community members learn to drive as young as 5-7 years of age] • Unlicensed driving – if unlicensed, drive at night to avoid police, but it is less safe (low light, animals on the road etc.)	• Licensing – difficulty with Hazard Perception Test because of the computer element, which can be a massive barrier for those who do not have or use a computer. No feedback about right or wrong responses following the HPT, which limits the ability of the learner to correct their actions in subsequent tests. Need alternative pathways. • Driver experience (lack of) • Young drivers and tourists – experience – "panic brake" and not good training • Underage drivers – they also get pressured into doing "silly" things • Limited driver training outside of Bloodwood Tree Association • Unlicensed drivers • The inexperience of certain drivers – people are fine on the back roads but when they get on the main roads, that's when trouble happens. This relates to a lack of driver training.

Theme	Specific issues and notes)	
	Yandeyarra	**Hedland**
Livestock/animals (Y=6, H=2)	• Too much cattle on the road – no fence put up, open paddock, wander onto the road and sleep on the road • Animals on the road – cows and horses on the road at night • Animal-related crashes – cattle, horses, kangaroos • Cattle, horses and wildlife on the road*	• Wildlife – cattle on the road kills people
Fatigue (Y=0, H=11)		• Fatigue – in particular, out of town/when driving in the regional and remote areas • Tiredness (friend crashed on his way from Wyndham to Kununurra) • Driving tired • Fatigue • Tired drivers (fatigue) • Inattention, driver distraction and driving tired) • Fatigue is a big one. Impacts attention, speed, concentration, driver can miss turns and sharp bends
Speed (Y=1, H=7)	• Speeding	• Speeding – particularly for the conditions. If it is slippery, then the driver should slow down. People should take their time - "the destination isn't going anywhere"

Theme	Specific issues and notes	
	Yandeyarra	**Hedland**
Driver attitudes and behaviour (Y=1, H=0)	• Lack of thought regarding potential consequences of action, e.g., burnouts • Irresponsible behaviour (and not necessarily alcohol) • Night-time driving – lots of driving at night to avoid the cops as they are an unlicensed driver and the car in not registered.	• Not giving way (driver behaviour)
Distracted driving and mobile phone use (Y=0, H=4)		• Distracted driving – mobile phone use while driving • Driver distraction – on the phone, which leads to crashes • Inattention, driver distraction and driving tired • Driver distraction – people not watching the road, using mobile phone, looking behind when they are meant to be watching the road. They should be watching the road at all times. *"Lives are in your hands"*.
Other (Y=2, H=1)	• Riding on the back of utes (remote issue) • People make their own track to drive through the countryside, which is done to avoid bitumen roads and police so that the drivers don't get picked up for being unlicensed, under the influence etc.	• Blind spots • Crossing over to the other side of the road • Trucks and overloaded vehicles • Not looking, keep indicator on even after turning

4.2.3 Previous and current road safety initiatives identified

There were limited and often negative responses by community members in both Yandeyarra and Hedland to the two questions, *"Do you know any work being done to stop road injury where you live?"* and *"Has any work been done in the past?"*

In Yandeyarra, the predominant responses by community members were, "*nothing has happened*", "*not really*", or "*nothing in the past*". A female Aboriginal participant, 25-44 years, summed it up by saying, "*Nothing has happened, they* [local government, police, authorities] *don't come to see if anything is wrong; they don't check to see if anything needs to be done*". However, the same participant went on to highlight that the visits to Yandeyarra by the Department of Transport remote licensing teams and the AJP Open Days are "*very helpful*". The participant went on to say that part of the reason is that "*it is not as intimidating as driving in town* [Hedland] *when doing the practical driving assessment – it's not as stressful as there is less traffic and people.*" Another participant, an Aboriginal male in the 45-70 year age group, noted that "*some work*" on the Yandeyarra Road has been done in previous years.

In the interview with the participant and informant, it was noted that the Keys for Life program is conducted nearly every year at the school. The informant has also run the program for adults after school in the past, which helps adults who have been unlicensed for a long period – sometimes as long as the past 15-20 years. Notably, the informant and participant spoke of the
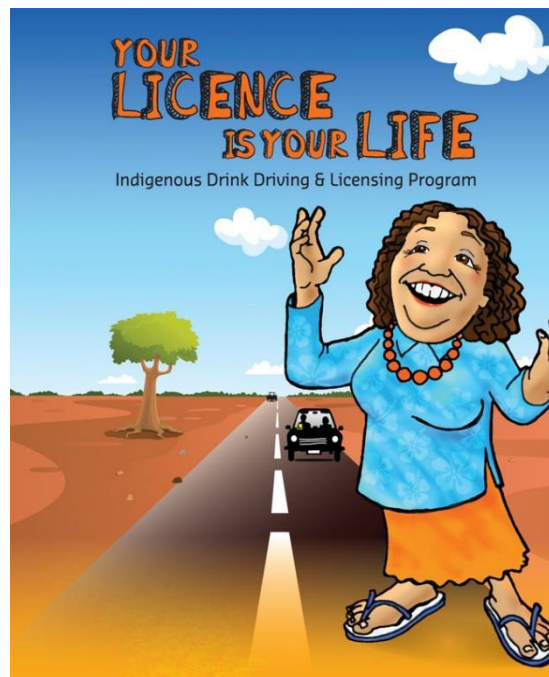

Figure 4.10: "Your Licence is Your Life" poster.

(Source: Department of Transport, 2011; retrieved from the Australian Indigenous Health*Info*Net)

'Your Licence is Your Life' program. Your Licence is Your Life was created by the then WA Office of Road Safety to target Indigenous drink driving and licensing. It came with a resource kit that included a range of interactive materials, such as a board game, streetscape mat with model cars, and discussion cards and was specifically designed for people working with Aboriginal communities in regional areas of WA (Office of Road Safety 2011). In particular, the interviewees spoke highly of the board game with 'Mary G', a popular character who is a Kitja woman from Margaret River Station in the Kimberley and was developed by the actor and comedian, Mark Bin Baker (see http://www.maryg.com.au/). They strongly emphasised that this is "*the only culturally appropriate resource available*" and that it is the best resource despite it being a number of years old (i.e., published in 2011; see Figure 4.10 for poster with Mary G).

Another resource the informant uses in the classroom is the video, "Corrugations to Highways", from the late-90s and early-2000s. The video was made by Aboriginal people for Aboriginal people so that the road safety messages were more effective, realistic, culturally appropriate and culturally owned; all segments of the video were shot in remote communities across Western Australia, South Australia and the Northern Territory and only involved Aboriginal people. The video includes ten separate three to five minute segments covering various road safety issues including pedestrians, alcohol and other drugs, travelling in open load space (for example, of utes), restraint use, and driving to the conditions (i.e., speed and road conditions) (Carter, Foreman et al. 2002). However, the informant pointed out the video is old, outdated and does not engage the students as well as other, more recent resources.

When asked the two questions about past and present initiatives, the other key informant responded with "*Nothing!*" There are no government-run road safety campaigns out in Yandeyarra, and it is "*only*" the mining companies who visit and run road safety awareness-related activities that benefit the community. However, the informant remarked that the licensing work by the Aboriginal Justice Program and the Department of Transport's remote licensing days are useful. The informant stated that a teacher at the school does valuable work in the classroom revolving around SDERA resources, such as Keys for Life, and other road safety materials.

In Hedland, the main past and present road safety initiatives discussed by participants revolved around advertising campaigns (four mentions), including television and radio ads targeting seatbelts; double demerits; speeding; and phone use, and driver education and training services,

specifically, those provided by Bloodwood Tree Association (four mentions). Other work that has been done in the past or is currently being done included road infrastructure upgrades, such as new traffic lights and roundabouts to help at intersections; some roadworks to improve the road conditions; and reducing the speed limit, which the participant believed "*has really helped, but they need to do more*" (one mention each).

The participants in three interviews spoke highly of the work done by Bloodwood Tree Association in the area of driver education and training. An Aboriginal female participant over 45 years of age responded with, "*Only thing is Bloodwood Tree Association. Before Bloodwood Tree there wasn't anything in town; therefore, unlicensed driving and a lack of driver training was a problem*". The participant went on to say Bloodwood Tree is "*really good*" and that they do a lot of work around driver training and helping people to get their licence – even after driving unlicensed for more than 35 years. The participant also highlighted that they run the Keys for Life program, practical driving assessments and theory tests. Other participants including an Aboriginal female over 45 years of age remarked, "*Bloodwood Tree Association is the main thing*" and an Aboriginal male in the 18-25 year old age group said, "*Bloodwood Tree Association really helps and is a great resource centre*".

Another participant, an Aboriginal male in the 25-44 year old age group, highlighted programs run through Youth Justice in South Hedland. In particular, the participant spoke of a program originating in Perth but run in Hedland where trauma survivors share their stories and experiences as well as show pictures of crash scenes so the attendees can be exposed to the consequences. The program also has people spend the day 'living with a disability', such as being in a wheelchair, or not using their arms for the day. Through the program, young people are exposed to the injuries sustained because of car crashes and the consequences of irresponsible or dangerous driving. When asked, *"Has any work been done in the past?"* the participant responded, "*Not too much else outside of the Youth Justice program*".

Likewise, after naming only one road safety program/initiative, many of the participants followed their response by saying "*Not too much besides that*", "*Not too much else*" or "*Nothing else really*". Furthermore, an Aboriginal female participant, 45 years of age or older, responded that they thought there has not really been any work to tackle fatigue or alcohol/drink driving that they are aware of.

4.2.4 Identified strategies to reduce road trauma in their community in the future

"*More modern resources targeted at remote locations and that are culturally appropriate.*"

Study participant, Aboriginal female, 18-25 years and key informant, 25-44 years

Yandeyarra

A summary of interviewees' responses to the question, *"What do you think should be done to stop road injury where you live?"* is presented in Table 4.6.

Table 4.6: Summary of potential solutions to improve road safety in Yandeyarra, WA

Issue	Potential Solution
Driver education and training	• "*More modern resources targeted at remote locations and that are culturally appropriate.*" • For example, targeting riding in the back of utes, unlicensed driving etc. • Videos and cartoons with good humour – do "Mary G" style videos for each region across northern WA • Combine the "Drive Safe" booklet with the visuals and images of the "Your Licence is Your Life" booklet (Department of Transport, 2011) • Classroom resources designed using a similar style to "Be Deadly Online" (eSafety Commissioner, n.d.) • New road safety posters with better visuals (like "Mary G" and "Be Deadly Online") for the classroom/school
Road condition	• More frequent road maintenance of the road into Yandeyarra • Improve the road condition • Graded and/or bitumen roads
Road infrastructure	• Install more culverts at certain level areas along Yandeyarra Road • Install speed signs and more signage along Yandeyarra road and at the Great Northern Highway turnoff
Animals	• Fencing (although cattle can break through)
Alcohol and drink driving	• Increase police presence and alcohol testing – particularly from Hedland down to Yandeyarra turnoff
Other	• Change in attitudes - as a community, need to be more responsible and enforce responsible behavior, particularly in relation to vehicle use and underage driving (as young as 5 years of age) • Improve relations with and trust of the police force

Road condition and infrastructure

Suggestions by participants include improvement and better maintenance of the road into Yandeyarra. Roads should be graded or upgraded to bitumen. In late 2018, Town of Port Hedland announced road upgrades to Yandeyarra Road to improve usability; see the Town of Port Hedland announced upgrades to the Yandeyarra Road.

Participants suggested that more culverts should be installed in some level areas along Yandeyarra Road. Better and an increased number of signs are required. This includes speed signs, and signs showing the distance to Yandeyarra (at the Great Northern Hwy turnoff). Signs indicating that no alcohol is allowed and that there is no fuel in town are needed to prepare visitors for the conditions.

Driver education and training

Resources that are more modern should be designed, targeting people living in remote locations, which are culturally appropriate. More variety is needs as schoolchildren have seen *"the same six adverts"* multiple times.

 Among other things, resources should tackle illegal riding in the back of utes and unlicensed driving etc. Videos and cartoons with humour would engage locals. For example, a "Mary G" style videos and posters could be created for each town, e.g., one for Kununurra, one for Halls Creek, one for Broome, or alternatively by region, e.g., a Kimberley, Southern, East Pilbara, West Pilbara etc as each area has different ways of talking. One suggesting is combining the "Drive Safe" booklet with the visuals and images from the "Your Licence is Your Life" (2011) booklet. "Be Deadly Online" (Figure 4.11 - https://www.esafety.gov.au/education-resources/classroom-resources/be-deadly-online) is a good example of a modern approach, addressing the important issue of online safety and including humour in order to be engaging. Resources using similar techniques would be useful. Goolarri Media Broome WA do good work.

Figure 4.11: "Be Deadly Online" poster.

Source: eSafety Commmissioner (n.d.). Retrieved from **https://www.esafety.gov.au/education-resources/classroom-resources/be-deadly-online/community-resources**

Other

Issues with cattle wandering onto the road could be solved with fencing around roads, but cattle may break through.

There is a need to increase police presence, particularly from Hedland down to the Yandeyarra turn off. An increase in breath testing for the presence of alcohol in drivers

It was stated that the community as a whole need to be more responsible. Children learn to drive, sometimes those as young as 4 or 5 years old. No one in the community is concerned about this until there is a crash. The community should not endorse underage driving. However as there is no community council, management structure or CEO in Yandeyarra, this difficult to accomplish. One participant stated that there is a disconnect between community life and mainstream culture; it runs deep into institutionalisation, social problems etc. and there is an *"absolute distrust"* of the police force –Y5

Notably, interviewees did not suggest any potential solutions to reduce alcohol and drug-related road crashes, speeding, or to increase restraint use in the community.

South Hedland

The responses given by study participants interviewed in South Hedland to the question, "*What do you think should be done to stop road injury where you live?*" are summarised in Figure 4.7. The leading responses by community members were related to advertising campaigns targeting driver fatigue/tiredness (four interviews), campaigns targeting awareness of alcohol and drug-driving (three interviews), further driver education and training services (three interviews), improved road conditions (three interviews), and road infrastructure-related solutions (three interviews).

Table 4.7: Summary of potential solutions to improve road safety in South Hedland, WA

Issue	Potential Solution
Driver education and training	• Further education and driver training is the main thing ("*what is being done at Bloodwood Tree Association, for example*") • Talking to underage drivers about road safety and peer pressure • More training services
Road condition	• Roadworks – improving the road conditions, including fixing holes and sealing roads (3 mentions)
Road infrastructure	• Need to increase traffic calming infrastructure around schools and select zones (i.e., parks, shops and key spots in the suburbs), including such things as speed bumps, footpaths, and 40 km/h speed limits • More traffic lights • Improved street lighting
Tiredness/Fatigue	• Multiple calls for ad campaigns targeting fatigue and driving tired (4 mentions)
Alcohol and drink driving Other	• Focused media campaigns on drink driving and alcohol and drug awareness (3 mentions) – "*it can ruin lives*" • Increasing police patrols/enforcement, including speed cameras • Campaigns targeting responsibility and driving at a safe speed limit (speeding) • Ad campaigns targeting mobile phone use

Driver's licences

Key informants at South Hedland made several suggestions regarding driver's licences. It was suggested that the minimum age to obtain a driver's licence be raised to 18 years. Instructors should take P plate drivers for supervised driving, and not parents and friends. The number of hours of supervision with a trained instructor should be given a higher weighting (one hours of supervision by the instructor equal to two of the required hours of supervision) than supervision by family and friends, encouraging P plate drivers to improved their skills and habits by using qualified instructors.

Regarding testing, feedback should be provided on what went wrong when someone failed an HPT. A mobile app could be created to help learner drivers prepare for the HPT and further online practice scenarios (more than the current four) should be provided.

It was raised that in Adelaide, Aboriginal people can ask for exemptions and 'fast track' the licensing process through recognition of prior learning. This was felt to be very relevant in helping people in regional and remote areas, who have high levels of experience on local roads and may have been driving since they were children, to get their licences.

4.3   Summary

The key differences between the locations included the following:

- Fatigue was a major issue raised by community members in Hedland but it was not mentioned by any participants in Yandeyarra;

- Speeding was a major issue in Hedland but was only noted as an issue in one interview in Yandeyarra;

- Conversely, animal-related crashes were a major concern in Yandeyarra but only cited once in Hedland; and

- Road infrastructure and car maintenance/condition were not mentioned as risk factors for road injury in Hedland.

These differences probably relate to the differences in population size, infrastructure and way of life between an urban settlement and a small Indigenous location.

5.   DISCUSSION

Aboriginal road safety in regional and remote WA is understandably a priority. The three communities interviewed as part of this report raised similar issues impacting on road safety. Of concern was the number of participants who thought that *"nothing"* or very little has or is being done to help with road safety in their community.

However, both trips by the C-MARC researchers highlighted that road safety issues are closely related to social determinants, including poverty, crime, employment status and employment opportunities in small remote communities such as Balgo and Yandeyarra. The physical and mental health of community members, individually and collectively, also impacted significantly on road safety. The use of alcohol and drugs frequently co-existed with social and mental health issues, and anecdotes about young children driving while adults were under the influence of alcohol or other drugs were reported to the researchers. To address these issues, interagency co-operation (such as with the Departments of Health and Justice) is required.

Changes to roads and other public facilities require large budgets upfront, with limited budgets available for maintenance of the infrastructure. A public pool that cost several million dollars opened in Balgo the week before the researchers visited the area. This pool appeared to bring great joy to the children of the community, but other costs will be incurred, such as ongoing costs of teaching children to swim to prevent drownings. Similarly, improvements to the roads need to be more than 'once-off' investments and require a consistent maintenance schedule.

According to a male Aboriginal participant, a leader in the Balgo community, roads need to be improved to encourage tourists to visit, see art and show them the Outback 'way of life'. In his opinion, the community needs to *"straddle two worlds"*: their cultural heritage and the outside world. Improvements of the roads need to involve collaboration between the Shire (of Halls Creek) and the State Government. Bringing more tourists to the area has the potential to improve the economy and improve employment prospects; at present Balgo is largely a *"Centrelink economy"* with very few community members in paid employment. Low employment rates are a common issue in remote Aboriginal communities such as Balgo and Yandeyarra, a situation exacerbated by barriers to obtaining a driver's licence which are frequently required for work. A survey in four Aboriginal communities in NSW and SA in 2012 to 2013 found that having a driver's licence was significantly associated with higher odds of full-time employment (and educational attainment) (Ivers, Hunter et al. 2016). Furthermore, the rate of imprisonment of Aboriginal people for licensing offences in WA is significantly higher

for Aboriginal people than non-Aboriginal people, particularly within regional and remote areas (McGaughey, Pasca et al. 2018). The work of the Remote Licensing Units of the Department of Transport and the Sheriff to assist with plans for payment of fines at the AJP Open Days is therefore vital to reduce imprisonment, improve chances of employment and reduce fragmentation of Aboriginal communities.

Improving the condition of roads could have unintended consequences, such as increasing the movement of drugs across the state boundary, according to the male Aboriginal community leader quoted above. This could lead to further road safety (and social) issues. Another possible consequence is that people might drive faster and have more serious crashes; at present, many community members in Balgo reported that they drive relatively slowly because of the poor road surfaces. This contrasts with the findings of a survey of 625 Aboriginal and Torres Strait Islander people in four urban, regional and remote communities in NSW and SA that 11% of drivers reported always or mostly driving 10km/h above the speed limit. In SA, where all survey participants lived in regional or remote communities, 13.4% reported always or mostly travelling at 10km/h above the speed limit. This finding may relate to better quality of roads in and near the regional and remote communities surveyed in SA and NSW.

A further issue raised in all three of the communities visited was the underuse of seatbelts. The survey by Cullen and colleagues (2019) described above in NSW and SA reported high seat belt use (93% and 77% respectively). It is notable that the data was not separated out by urban vs regional and remote communities. Nearly half of the participants came from an urban area so the results could have masked lower seat belt use in regional and remote areas. Since all participants in SA were in regional and remote areas, it is likely that the SA figures are closer to the situation in WA regional and remote. Interestingly, Cullen and colleagues found seat belt use increased as age increased – this could not be compared to the results in the current study because of the relatively small number of participants in each age group.

The lack of use of child restraints was mentioned by community members and key informants in both Balgo and Yandeyarra. A study of American Indian child mortality found that driver restraint (seat belt) use was the strongest predictor of passenger restraint use (including child restraints and seat belts alone) in those aged under 20 years (Oh, Liu et al. 2017). The effect was strongest in those aged 13 to 19 years old. Another significant predictor of restraint use among children and adolescents was the driver having a valid driver's licence (Oh, Liu et al. 2017).

A survey of 97 parents of 3-5 year old children at three early learning in a regional NSW community with a high proportion of Aboriginal families found at 83% of participants reported using age-appropriate child restraints (Hunter, Keay et al. 2017). Participants highlighted the importance of their child's safety to them, the influence of grandparents of the use of child restraints and mixed feelings about authorised child restraint fitters. These findings could guide culturally appropriate initiatives to improve child restraint uptake in regional and remote WA.

It was clear from the interviews conducted as part of this project that there is a need for more up-to-date education materials and more driver education and training, that is provided in easily understandable language, is contemporary and culturally appropriate.

5.1 Limitations

This study only considered three Aboriginal communities in the Pilbara and Kimberley and a small number of people (relative to the size of the Aboriginal population in remote communities in northern WA) were interviewed. However, a range of community members, community leaders and key informants were interviewed. Further, the themes which emerged were similar across all three communities, and aligned with the findings of the interviews with the communities in Fitzroy Valley in Phase One of this project (Brameld and Meuleners 2018).

It was difficult to quantify the benefits and potential outcomes of the initiatives suggested (objective 4), given the diverse communities across northern WA, few evaluations of similar programs in Australia and difficulty transferring any evaluation findings to remote WA communities. It is suggested that baseline data be collected so that new initiatives can be monitored and evaluated to create an evidence base for future initiatives.

6. RECOMMENDATIONS AND CHALLENGES TO IMPLEMENTION OF PROPOSED INITIATIVES

The results of the study indicate that Western Australia should look at developing an Aboriginal Road Safety Action Plan to address the issues highlighted in this report. As many of the issues affecting road safety result from the socio-economic and cultural issues specific to the Aboriginal population, the action plan will require collaboration with a range of stakeholders who are working towards improving their health and wellbeing.

The following recommendations are made, with potential challenges that may be experienced when implementing them:

1. *Improve road surfaces and ensure regular maintenance of these surfaces, including the repairing of corrugations and potholes.* Serious consideration should be given to converting sections of the Tanami Track to bitumen near the Balgo and adjacent communities.

   This recommendation has considerable support from community members.

2. *Improve signage (speed sign, distance, warnings) and encouraging slower speeds.*

   Improving signage was a consistent recommendation from participants across communities. No challenges to this were identified, beyond cost. Community-led innovative ideas on signage, such as the use of old car bonnets, should be encouraged. A potential issue discussed above when improving road surfaces is that driving speeds might increase. The encouragement of slower speeds through signage, enforcement (where possible) and road geometry is therefore important.

3. *Install cattle-proof fencing in areas with high numbers of animals.*

   Given the cost of fencing, areas with the high numbers of animals need to be identified. It is recommended that this be done in consultation with the relevant community. Further, fences that are appropriate to the animals most likely to enter the road (e.g., cattle vs kangaroos) should be used to maximise effectively at specific locations.

4. *Ensure safety in the event of a breakdown* – safe rest stop areas, better communications systems to call for help and water stations every 50km.

   Cost is the biggest barrier to this intervention, particularly to improving communication systems. The initiatives would require co-operation between the relevant shire, telecommunications companies (particularly Telstra) and Main Roads Western Australia.

5. *Fund an up-to-date, culturally sensitive road safety and driver education program for older community members.* Liaise with SDERA to assist in creating a variation on their current program suitable for use for second language English speakers living in regional and remote WA.

    This recommendation requires providing sufficient funding to SDERA to create a variation on their current driver education program. Developing the program will involve SDERA, the RSC, community leaders and researchers with experience developing and evaluating road safety programs.

6. *Update media campaign materials on risky driving, using culturally appropriate language and humour.* There should be focus on the problem areas of speeding, fatigue, drink- and drug-driving. Innovative initiatives (including enforcement in remote, geographically spread areas) should be developed to reduce these risk behaviours.

    These initiatives need to be developed by the RSC and a media organisation, such as Goolari Media which develops Indigenous communications in the Kimberley. The Western Australian Police who work in and near the communities should be consulted on their experiences and input on reduction of risky driving behaviours[2].

7. *Review current initiatives to increase use of seat belts and child restraints.* This may include increased enforcement, channelling fines or other public funds into the provision of affordable child restraints, the long-term loans of child restraints and designing compact (narrower) child restraints so that the presence of child restraints does not reduce the capacity of vehicles to carry other passengers.

    A major challenge to this is that many community members do not see the use of seat belts and child restraints as a priority in road safety. This needs to be tackled through educating senior members of communities including leaders and grandparents about their value, and providing practical child restraints that suit the needs of remote communities and the cars they drive, rather than the child restraints used in metropolitan areas which are designed for larger cars where only one or two passengers travel in the back seat.

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[2] The researchers attempted to talk with the WAPOL in the Balgo community. Unfortunately, the police station was closed on the afternoon that they visited. However, community leaders stated that the police in the area were knowledgeable about 'what worked' in the community and adopted appropriate sanctions. This local knowledge and flexibility is vital to improving road safety in remote communities.

8. *Supporting community-based road safety initiatives*, such as using old car bonnets to create road safety messages in Balgo.

   This may involve providing funding to provide materials such as paints or provision of a stipend to those community members involved in road safety initiatives. This would have the added benefit of provided some employment to members of remote communities with very low employment rates.

9. *Continue to liaise with the AJP and the remote licensing unit of the Department of Transport* so that interagency co-operation can improve road safety and optimise solutions to issues facing these communities. This may include modifying the application and testing procedures to make them more appropriate and viable for Aboriginal people living in remote areas.

   This may involve regular participation in the AJP Open Days to provide road safety-specific services such as vehicle checks, the leasing of child restraints or the provision of education to groups of community members.

10. *Liaise with other government agencies*, including health services, Centrelink and others, to implement a public health approach towards health and safety among community members.

    This should be specific to the health and welfare (including road safety) of remote Aboriginal communities and may involve the institution of a working group.

7. REFERENCES

ABS (2016). Causes of Death, Australia, 2015. 12. Deaths of Aboriginal and Torres Strait Islander Australians. Canberra, Australian Bureau of Statistics.

ABS (2017). 2016 Census QuickStats. Canberra, Australian Bureau of Statistics.

ABS (2017). 3218.0 - Regional Population Growth, Australia, 2015-16. Canberra.

Australian Institute of Health and Welfare (2015). Aboriginal and Torres Strait Islander Health Performance Framework 2014. Online data tables. . AIHW. Canberra.

Billie, H., C. E. Crump, R. J. Letourneau and B. A. West (2016). "Child safety and booster seat use in five tribal communities, 2010–2014." Journal of Safety Research **59**: 113-117.

Brameld, K. and L. Meuleners (2018). Aboriginal road safety - a review of issues initiatives and needs in Western Australia. Perth, Curtin University**:** 122.

Bureau of Infrastructure, T. a. R. E. (2013). Australian infrastructure statistics yearbook 2013. Canberra, Bureau of Infrastructure, Transport and Regional Economics,.

Carter, J., T. Foreman, J. Hart, J. Parsons and E. Sommsich (2002). National Aboriginal road safety video and resource pack - "Corrugations to Highways". Road Safety Research, Policing and Education Conference 2002. Adelaide, SA.

Chikritzhs, T., T. Stockwell and R. Pascal (2005). "The impact of the Northern Territory's Living With Alcohol program, 1992–2002: revisiting the evaluation." Addiction **100**(11): 1625-1636.

Clapham, K. (2003). Injury Prevention Activity among Aboriginal and Torres Strait Islander Peoples. Volume II. Programs, Projects and Actions. Canberra Australian Government, Department of Health and Ageing.

Cullen, P., A. Chevalier, K. Hunter, T. Gadsden and R. Ivers (2016). "'The program was the solution to the problem': Process evaluation of a multi-site driver licensing program in remote communities." Journal of Transport and Health.

Cullen, P., A. Chevalier, K. Hunter, T. Gadsden and R. Ivers (2017). "'The program was the solution to the problem': Process evaluation of a multi-site driver licensing program in remote communities." Journal of Transport & Health **4**: 81-89.

Cullen, P., K. Clapham, J. Byrne, K. Hunter, K. Rogers, T. Senserrick, L. Keay and R. Ivers (2016). "Implementation of a driver licensing support program in three Aboriginal communities: a brief report from a pilot program." Health Promot J Austr **27**(2): 167-169.

Cullen, P., K. Hunter, K. Clapham, T. Senserrick, K. Rogers, J. E. Harrison and R. Q. Ivers (2019). "Road user behaviour, attitudes and crashes: a survey of Aboriginal and Torres Strait Islander people in Australia." Injury Prevention.

Fitts, M. S. and G. R. Palk (2014). Development of a drink driving program for regional and remote Aboriginal and Torres Strait Islander communities. Final Report. , Funded by the National Drug Law Enforcement Research Fund, an initiative of the National Drug Strategy.

Fitts, M. S. and G. R. Palk (2016). "'Hero to Healing' drink-driving program for Indigenous communities in Far North Queensland." Health Promot J Austr **27**(1): 74-79.

Fitts, M. S., G. R. Palk and S. Jacups (2013). Alcohol restrictions and drink driving in remote Indigenous communities in Queensland, Australia. 23rd Canadian Multidisciplinary Road Safety Conference. Montreal, Canada.

Fuller, T. (2011). "Stop Territory Aboriginal Road Sadness - NT Police Indigenous Road Safety Project." Journal of the Australasian College of Road Safety **22**(1): 33-36.

Geoscience Australia. "Area of Australia - States and Territories." Retrieved 8 February 2018, 2018, from http://www.ga.gov.au/scientific-topics/national-location-information/dimensions/area-of-australia-states-and-territories.

Gray, D., S. Saggers, D. Atkinson, B. Sputore and D. Bourbon (2000). "Beating the grog: an evaluation of the Tennant Creek liquor licensing restrictions." Australian and New Zealand Journal of Public Health **24**(1): 39-44.

Hawkes, E. (2005). Open load space project. Australasian Road Safety Research Policing Education Conference. Wellington, New Zealand.

Henley, G. and J. Harrison (2013). Injury of Aboriginal and Torres Strait Islander people due to transport, 2005-06 to 2009-10. Injury research and statistics series no. 85. Cat. No. INJCAT 161. Canberra, Australian Institute of Health and Welfare.

Hunter, K., L. Keay, K. Clapham, J. Brown, L. E. Bilston, M. Lyford, C. Gilbert and R. Q. Ivers (2017). ""He's the number one thing in my world": Application of the precede-proceed model to explore child car seat use in a regional community in new South Wales." International Journal of Environmental Research and Public Health **14**(10).

Ivers, R. Q., K. Hunter, K. Clapham, Y. Helps, T. Senserrick, J. Byrne, A. Martiniuk, J. Daniels and J. E. Harrison (2016). "Driver licensing: descriptive epidemiology of a social determinant of Aboriginal and Torres Strait Islander health." Australian and New Zealand Journal of Public Health **40**(4): 377-382.

Kinnane, S., F. Farringdon, L. Henderson-Yates and H. Parker (2009). Fitzroy Valley Alcohol Restriction Report: An evaluation of the effects of a restriction on take-away alcohol relating to measurable health and social outcomes, community perceptions and behaviours after a 12 month period. Mt Lawley, Western Australia, The University of Notre Dame Australia, The Drug and Alcohol Office, Western Australia.

Macaulay, J., R. Thomas, N. Mabbot, T. Styles, C. Edmonston, M. Sheehan and C. Schonfeld (2003). Australian Indigenous Road Safety, Australian Road Research Board, Australian Transport Safety Bureau.

McGaughey, F., T. Pasca and S. Millman (2018). "The road ahead: Driver's licensing and the over-incarceration of Aboriginal peoples in Western Australia." Alternative Law Journal **43**(3): 184-191.

Northern Territory Motor Accidents Compensation Commission (2017). Buckle up Borroloola. Darwin, NT, Northern Territory Motor Accidents Compensation Commission.

Office of Road Safety (2011). Your licence is your life: Indigenous drink driving and licensing program. Perth, WA, Office of Road Safety.

Oh, S. A., C. Liu and J. C. Pressley (2017). "Fatal pediatric motor vehicle crashes on U.S. Native American Indian lands compared to adjacent non-Indian lands: Restraint use and injury by driver, vehicle, roadway and crash characteristics." International Journal of Environmental Research and Public Health **14**(11).

Parkes, R. (2018). "WA local government road funding to increase by $21M." from http://www.roadsonline.com.au/wa-local-government-road-funding-to-increase-by-21m/.

Porykali, B., K. Hunter, M. Ralph, L. Keay, K. Clapham, J. Brown, L. Bilston, J. Simpson and R. Ivers (2017). Delivery of a child car seat program in 12 Aboriginal communities in NSW: elements for a detailed process evaluation. Australasian Road Safety Conference, 2017, Perth, Western Australia, Australia.

Rajan, P., K. Dabner and A. Hohipa-Wilson (2019). Improving driver licensing programs for indigenous road users and transitioning learnings to other user groups. Sydney, Austroads**:** 58.

Russel-Weisz, L. (2004). Kimberley Aboriginal restraints & drink driving media campaign., Community Road Safety Grant Report.

Senior, K., R. Chenhall, B. Ivy and C. Stevenson (2009). Moving Beyond the Restrictions: The Evaluation of the Alice Springs Alcohol Management Plan. Darwin, NT, Menzies School of Health Research and Monash University.

Senserrick, T., P. Yip, R. Grzebieta, K. F. Clapham, M. Lyford and R. Ivers (2011). "Safe system demonstration project in a remote Aboriginal and Torres Strait Islander community."

Short, M. M., C. J. Mushquash and M. Bedard (2014). "Interventions for motor vehicle crashes among Indigenous communities: strategies to inform Canadian initiatives." Can J Public Health **105**(4): e296-305.

Stockwell, T., T. Chikritzhs, D. Hendrie, R. Fordham, F. Ying, M. Phillips, C. J. and B. O'Reilly (2001). "The public health and safety benefits of the Northern Territory's Living With Alcohol programme." Drug and Alcohol Review(20): 167-180.

Stockwell, T., J. Zhao, G. Martin, S. Macdonald, K. Vallance, A. Treno, W. Ponicki, A. Tu and J. Buxton (2013). "Minimum Alcohol Prices and Outlet Densities in British Columbia, Canada: Estimated Impacts on Alcohol-Attributable Hospital Admissions." American Journal of Public Health **103**(11): 2014-2020.

van Extel, C. (2013). Is the Tanami Road the worst highway in Australia. RN Breakfast, ABC Radio National**:** 41 seconds.

Wundersitz, L., P. Palamara, K. Brameld, J. Thompson, S. Raftery and M. H. Govorko (2019). Guide to road safety: part 5: road safety for rural and remote areas. Sydney, Austroads**:** 64.

Yandeyarra Remote Community School. (n.d.). "Yandeyarra Community." from http://www.yandeyarrarcs.wa.edu.au/?page_id=111.

Yandeyarra Remote Community School. (n.d.). "Yandeyarra Remote Community School." from http://www.yandeyarrarcs.wa.edu.au/.

8. APPENDICES

Appendix 1: Australian Aboriginal road safety interventions for the period 1995-2017 (Brameld and Meuleners 2018)

Category	Author	Title & Setting	Outcome
Alcohol restrictions/ Alcohol management program	(Stockwell, Chikritzhs et al. 2001)	Living with alcohol program NT, 1992-1996	Reductions in the estimated number of road deaths related to alcohol by 34.5% and in road crash injuries requiring hospital treatment by 28.3%
	(Chikritzhs, Stockwell et al. 2005)	Living with alcohol program NT, 1992-2002	Reduced acute alcohol-attributable deaths but specific effect on road trauma not measured
	(Gray, Saggers et al. 2000)	Tennant Creek Liquor Licensing restrictions 1996-98	Reduced acute-alcohol related hospital admissions
	(Senior, Chenhall et al. 2009)	Alice Springs Alcohol Management Plan 2006-2008	Reduced alcohol related hospital admissions
	(Kinnane, Farringdon et al. 2009)	Fitzroy Valley Alcohol restrictions 2007	Reduced hospital admissions for injury

	(Fitts and Palk 2014)	Alcohol restrictions and drink driving in remote indigenous communities in Queensland, 2002-2011 implemented by the Queensland government	Decline in drink driving offences but high range BAC readings remained
Media campaign and education targeting road safety	(Russel-Weisz 2004) (Short, Mushquash et al. 2014)	East Kimberley Aboriginal restraints and drink driving media campaign, early 2000's.	Increased consideration for using a seat-belt and not drink driving
	Unknown (Clapham 2003, Macaulay, Thomas et al. 2003)	The Crossing Aboriginal Pedestrian Road Safety Project. Fitzroy Crossing, 2002-2003	Spot interviews indicated a greater awareness of issues by interviewees. A comparative reduction of injuries during the first 6 months of the project was reported.
	(Fuller 2011)	*Stop Territory Aboriginal Road Sadness* (STARS) – NT Police Indigenous Road Safety Project conducted in the Northern Territory, 2008.	Evaluation report unable to be located
Open Load legislation	(Hawkes 2005)	Open load space project Western Australia, 2001-2005	Coincided with reduced Aboriginal road crash fatalities for people travelling in open load spaces

Drink-driving programs	(Fitts and Palk 2014)	Development of a drink driving program for regional and remote Aboriginal and TSI communities.	The study identified the importance of community ownership of drink driving programs.
	(Fitts and Palk 2016)	'Hero to Healing' drink driving program for Aboriginal communities in Far North Queensland, 2012	Participants supportive of program
Driver Licensing programs	(Cullen, Clapham et al. 2016)	Driving Change program to improve license participation by Aboriginal people in NSW. Pilot program in three Aboriginal communities	Increased rates of licensing in target group
	(Cullen, Chevalier et al. 2016)	DriveSafe NT Remote 2012-2014	Increased rates of driver licensing
Safe System Audit:		Safe System Demonstration Project Involving an Indigenous Community (Bidyadanga). 2011	Pedestrian crossing built. Fencing repaired. Improved signage and lighting. Education campaigns.

Appendix 2: Example of AJP Open Day Flyer

Government of **Western Australia**
Department of **Justice**

Aboriginal Justice Program

GET HELP WITH IDENTIFICATION, FINES & DRIVERS LICENCE BUSINESS

The Aboriginal Justice Program welcome people from the Balgo, Mulan and Billiluna communities to attend the Open Day *"one-stop shop"*

WIRRIMANU Aboriginal Corporation Boardroom

Tuesday, 9 April 2019   *9.00am – 3.30pm

Wednesday, 10 April 2019 *8.30am – 3.30pm

Thursday, 11 April 2019 *8.30am – 12 noon

Who will be at the Open Day

- **Registry of Births, Deaths and Marriages** – Need identification? Want to check if you and your children's births are registered? Register births!
  Birth Registrations Free
  *Apply for Birth, Death and Marriage Certificates $49.00*Change of Name $173.00

- **Sheriff** - For queries on fines and make arrangements for time-to-pay.

- **Department of Transport** – Apply for driver's licence, WA Photo (ID) Card, driving assessments, hand in number plates, find out if you have lost your licence or are under suspension and other information about licensing services.
  *Theory Test $19.25 *Learner's Permit $89.15
  *Log Book fee $7.35 *WA Photo (ID) Card $44.00

- **Department of Human Services - Centrelink** – help with identification requirements for licensing and apply for Medicare Cards & Tax File Numbers.

- **Community Services** – Wunan Driver Training & East Kimberley Job Pathways

If is IMPORTANT to bring along your bank card or cash to pay for Birth Certificates, Photo Cards, Learner Permits and Driver Licences and as much other ID as you can:

- Birth Certificate
- EFTPOS/Credit Card
- Medicare Card
- Centrelink Card
- Proof of Age Card/WA Photo Card
- WA Construction Card
- Working with Children Card
- Bank statement, any official letter or bill from a Government agency or current employer with your residential address and is no more than 6 months old.

*Payment ($$$) to pay for Birth Certificates, WA Photo Cards, Learner Permits and Driver Licences *BSB Number and Bank Account Number for payment arrangements for fines