



ELSEVIER

Contents lists available at ScienceDirect

Journal of Transport & Health

journal homepage: www.elsevier.com/locate/jth

“I didn’t know nothing” - yarning up on access to compensation from road traffic injury with Aboriginal people

Courtney Ryder^{a,b,c,d,*}, Patrick Sharpe^e, Shanti Omodei-James^{a,b}, Georga Sallows^{a,b}, Brett Shannon^{a,d,f}, Holger Möller^d, Marnie Campbell^g, Rebecca Kimlin^g, Bobby Porykali^c, Sadia Hossain^{a,h}, Nicole Kelly^{a,i}, Dan Ellis^{a,i,j,k}, Tachelle Ting^a, Jody Gray^{a,b}, Hossain Afzali^{a,b}, Rebecca Q. Ivers^{a,c,d}

^a College of Medicine and Public Health, Flinders University, Adelaide, South Australia, Australia

^b Flinders Health and Medical Research Institute, Flinders University, Adelaide, South Australia, Australia

^c The George Institute for Global Health, Newtown, New South Wales, Australia

^d School of Population Health, University of New South Wales, Sydney, New South Wales, Australia

^e Far West Community Partnerships, Ceduna, South Australia, Australia

^f School of Public Health, University of Illinois Chicago, Chicago, IL, USA

^g Women’s and Children’s Health Network, North Adelaide, South Australia, Australia

^h Translational Health Research Institute, Western Sydney University, Campbelltown, New South Wales, Australia

ⁱ Royal Adelaide Hospital, Central Adelaide Local Health Network, Adelaide, South Australia, Australia

^j Faculty of Health and Medical Sciences, University of Adelaide, Adelaide, South Australia, Australia

^k School of Public Health and Tropical Medicine, James Cook University, Cairns, Queensland, Australia

ARTICLE INFO

Keywords:

Aboriginal health
Road traffic
Injuries
Compensation
Inequity

ABSTRACT

Background: Road safety is a major public health concern in Australia. In the last decade over 12 thousand Australians have died from a road crash, and even more live with lifelong injuries and disabilities from these events. Individuals injured in a road traffic crash can access support through compensation schemes, which differ across jurisdictions. Here we show a lack of knowledge among high burden populations in accessing compensation schemes for road traffic injuries.

Methods: An Aboriginal and Torres Strait Islander Traffic Governance Group oversaw this study to centralise Indigenous knowledge. Yarning an Indigenous research method for data collection was used with participants. Aboriginal participants who lived near major highways in metropolitan, rural and remote regions, were recruited through social media and community networks. Qualitative analysis software was used to thematically code transcripts.

Results: A total of eight yarning sessions were conducted with Aboriginal participants. We identified Aboriginal people had limited knowledge, access or support for accessing compensation schemes. This impacted on their labour force engagement, leisure and community activities creating a loss of autonomy for individuals, of which family support and connection to Country assisted in healing for individuals.

Conclusion: Our outcomes identify an urgent need for compensation scheme review and co-design with community, to decrease burden on Aboriginal people, and ensure strength-based, culturally specific, whole of life compensation is provided.

* Corresponding author. Discipline of Trauma and Injury, College of Medicine and Public Health, Flinders University, Sturt Rd, Bedford Park, South Australia, Australia.

E-mail address: courtney.ryder@flinders.edu.au (C. Ryder).

<https://doi.org/10.1016/j.jth.2025.102055>

Received 20 December 2024; Received in revised form 8 April 2025; Accepted 11 April 2025

Available online 24 April 2025

2214-1405/Crown Copyright © 2025 Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Road safety is a major public health concern and policy priority nationally in Australia, with all governments committing to ‘Vision Zero by 2050’ for deaths and injuries on Australian roads (Sadia et al., 2023; National Road Safety Strategy, 2023; Infrastructure and Transport Ministers, 2021; Statement on the catastrophic number, 2024). This is in response to a significant burden of injury, where over the last decade more than 12 thousand Australians have lost their lives to a road crash, and a further 300 thousand have been hospitalised (Bureau of Infrastructure and Transport Research Economics (BITRE), 2023; BITRE, 2024; Australian Road Safety Foundation, 2022). It is estimated annually that road traffic crashes cost more than \$27 billion, with each fatal crash costing \$3.2 million, and each hospitalisation costing \$261 thousand (Australian Road Safety Foundation, 2022; Steinhäuser and Lancsar, 2022). Like other countries, in Australia a significant inequity gradient exists, with higher rates of injury in rural and remote areas, and for Aboriginal and Torres Strait Islander peoples. With the highest rate of fatalities occurring on rural and remote roads (Australian Institute of Health Welfare, 2023), where additional complexities exist, including accessing timely and effective trauma care. For Aboriginal and Torres Strait Islander communities, road traffic mortality is 2.8 times greater and hospitalisation rates double that of non-Indigenous Australians (BITRE BITRE, 2021; National Aboriginal Community Controlled Health Organisation (NACCHO), 2021; Committee on Road Safety, 2022). For those individuals who survive their injuries, many face profound life-long impacts, which extend to their family and community including negative health, environmental and economic effects (Committee on Road Safety, 2022; Abedi et al., 2024).

In Australia compensation is available for treatment and recovery expenses for individuals with injuries from a road traffic crash (Vallmuur et al., 2023). This compensation differs across jurisdictions, as legislation for civil liabilities or personal damages varies across states and territories, both for administration and regulation. In South Australia (SA) there are three avenues for support or compensation: 1. Compulsory Third Party (CTP); 2. Lifetime Support Authority (LSA); and 3. Workers Compensation. The CTP insurance regulator administers road traffic injury compensation in line with the SA Civil Liabilities Act of 1936 (Government of South Australia, 1936). It is an ‘at fault’ approach, where individuals who were partly responsible for the incident, whose injuries occurred less than three years ago and were caused by a SA motor vehicle are eligible for CTP claim (CTP, 2024). These individuals will have treatment for their road traffic injuries covered until a point where their injuries are deemed stable for a compensation settlement (CTP, 2024). The LSA administers treatment, care and support through the SA Motor Vehicle Accidents Act 2013, it is a ‘no-fault’ scheme where individuals can make a claim regardless of their fault, but must meet serious injury requirements (i.e. brain and spinal cord injuries) (Government of South Australia, 2019). Workers compensation is administered through Return to Work SA which administers support and compensation claims under the SA Return to Work Act 1994 and is also a ‘no-fault’ scheme (Government of South Australia, 2015).

Intriguingly, although a significant road traffic inequity gradient exists, access to compensation schemes does not differ across priority populations (i.e. culturally and linguistically diverse, Aboriginal and Torres Strait Islander, rural and remote). This is despite recommendations from the National Aboriginal Community Controlled Health Organisation (NACCHO) and the Driving Change parliamentary inquiry, highlighting the need for culturally specific and tailored approaches and programs for Aboriginal and Torres Strait Islander communities (National Aboriginal Community Controlled Health Organisation (NACCHO), 2021; Committee on Road Safety, 2022). Currently in Australia, only a small body of work exists surrounding road traffic injuries in Aboriginal and Torres Strait Islander communities (Sadia et al., 2023). With the majority focussing on upstream indicators (driving behaviour, attitude, risk), along with proximal causation and geography (Sadia et al., 2023). No studies have explored Aboriginal and Torres Strait Islander patients access to compensation services post injury. This study sought to develop new knowledge, with an aim to understand enablers and barriers to compensation access for Aboriginal and Torres Strait Islander patients with a road traffic injury, but importantly through centring Indigenous knowledges (knowing, being and doing) and research methods, to ensure relationality of outcomes (Sadia et al., 2023).

2. Methods

2.1. Design & Governance

Indigenous Governance of Data in this study was overseen by the Aboriginal and Torres Strait Islander Traffic Governance Group, which consisted of Aboriginal or Torres Strait Islander researchers, community and healthcare workers with experience in injury. This group had an essential role in assisting with decolonising research processes and ensuring focus on Indigenous knowledges, and experiences of road traffic injuries, throughout all aspects of the research journey. This qualitative study was underpinned by Knowledge Interface Methodology, which is described in the research protocol for this study (Sadia et al., 2023). The Indigenous research method of yarning was used to explore the patient journey for Aboriginal and Torres Strait Islander patients who were involved in a road traffic crash that resulted in an injury, with a particular focus on identifying enablers and barriers to compensation and support for their injuries. Yarning is an Indigenous research method, following a conversational technique for rich data collection (Sadia et al., 2023).

2.2. Participants & recruitment

Participants were recruited from metropolitan South Australia (SA, Adelaide - Kurna Country), and rural and remote regions near major highways: the Far West of SA (Kokatha, Mirning and Wirangu Country) which accounts for 8 % of all serious SA road traffic

injuries; the Murray Mallee (Ngarrindjeri Country) which accounts for 16 % of all serious road traffic injuries; and Yorke Mid North (Narungga, Nukunu and Ngadjuri Country) which accounts for 16 % of all serious road traffic injuries over 2019–2021 (South Australian Police (SAPOL) SAPOL, 2024). Recruitment occurred through social media and community networks. It was a requirement that participants identified as an Aboriginal and/or Torres Strait Islander person, were aged 18 years or over, and had been involved in a road traffic crash regardless of being or not being at fault. Participants received a \$30AUD honorarium for participation in the yarning sessions.

2.3. Analysis

We aimed to recruit a yarning sample size of 14, or until theme saturation was reached. Where possible all yarns were conducted on Country¹ with participants. Participants could select if their yarn was recorded or if free hand notes were taken, this was undertaken by XX. Recorded sessions were transcribed, and all yarns de-identified. Thematic coding of yarns started with deep listening of audio files (if available), to identify and document important contextualisation factors from the yarn which would not be identifiable in transcripts i.e. tone, Kriol/language, pauses, laughter. This was followed by coding of themes using NVivo (Version 12, QSR International), with reflection and consideration of contextual factors from deep listening. This was undertaken by XX, XX, with support from XX. Initial themes were presented and discussed with the Aboriginal and Torres Strait Islander Traffic Governance Group for final approval of knowledge dissemination and outcomes contextualisation for the discussion. Theme saturation was identified when no new themes were identified through the transcripts.

2.4. Ethics

Ethics for this study was approved through the Aboriginal Health Research Ethics Committee in SA (reference no. 04-22-1016) and Flinders University Human Research Ethics Committee (reference no. 6258).

3. Results

A total of eight yarning sessions were conducted (6 audio recorded, 2 free hand) as theme saturation was reached. All but one yarn was conducted on Country, with five participants from the Far West, one from the Murray Mallee, one from Yorke Mid North and one metropolitan. All participants were above 18 years of age with an even spread of males and females. Data were arranged into injury themes and sub themes depicting the compensation journey for participants, as summarised in Fig. 1.

3.1. Traffic injury

Primary occurrence of road traffic injuries was on regional and country roads. Causes of road traffic injuries, as identified by participants included: poor road conditions, driver error, alcohol consumption or speeding. Only one participant reported being at fault, with the remaining sustaining their injuries as passengers or cyclists. Many participants (n = 6) discussed severe and life-long injuries from their road traffic incident. Only two of the eight participants received compensation for their road traffic incident.

3.2. Impacts

A major theme identified from participant yarns was the overall impact of their road traffic incident across life domains, and in immediate, short- and long-term timeframes. This theme included four subthemes which encompassed physical and psychological impacts of their injury, ongoing financial and lifestyle impacts of their injury. These subthemes are explored further below.

Physical Impacts: Participants reported experiencing immediate physical impacts from their injuries as a results of their road traffic incident, which for some included internal bleeding, fractures, concussion, or being in a coma. However, participants also reported managing the long-term effects from their road traffic injuries, including muscle loss, amputations, ongoing pain, traumatic brain injury, vertigo and nerve damage.

"I lost all muscles in my left arm, and now I get a lot of pain in there. The older I'm getting. I'm feeling it a lot."

Participants reported the ongoing impacts their road traffic injury had on completing employment tasks or leisure activities. This included difficulty in no longer being able to sit or stand for long periods of time. Participants also reported having to make individual changes and adaptations themselves to adapt to the work environment.

"I've just got to work in vertical positions most of the time. I can't bend over for long periods of time."

While the majority reported ongoing rehabilitation for their injuries with allied health providers, this was described as a long and painful process. Some participants required multiple surgeries and extensive ongoing physiotherapy.

¹ On Country – is a term used commonly in Aboriginal and Torres Strait Islander communities and refers to an individuals' homelands. A capital has been used throughout for Country to further signify this.

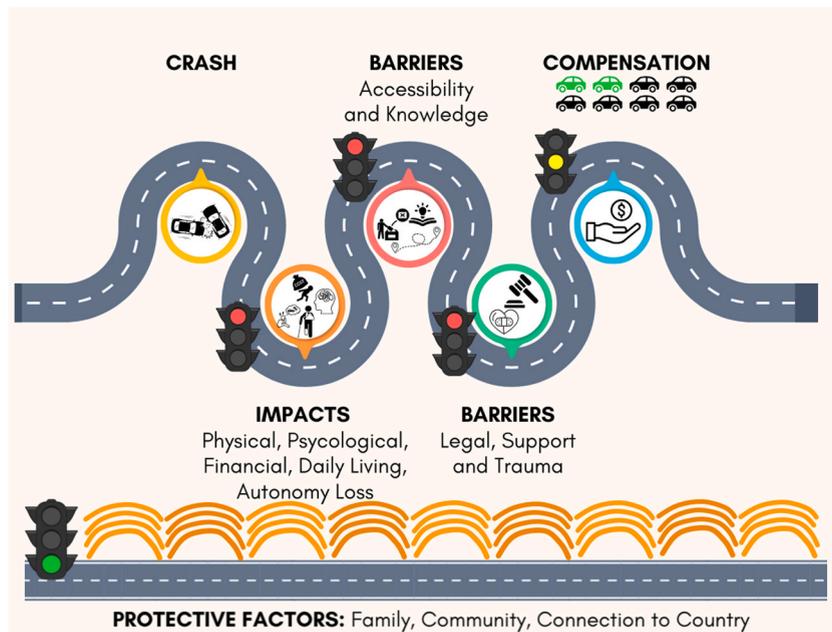


Fig. 1. – Compensation journey for Aboriginal individuals who have had a road traffic injury. Legend: Each turn in the image represents a step along the participant compensation journey. The green traffic light, for the road located behind the yellow sandhills dictates how protective factors operate at all stages of the journey, at time of crash, impacts and barriers. The red stop lights represent the barriers participants face to accessing compensation for their road traffic injury, with the yellow stop light indicating compensation challenges.

"I had almost a full year of going to the disc specialist ... to get my back fixed up again."

Trauma and Mental Health: In addition to physical injuries, participants experienced considerable mental health impacts, which were described as stress, anxiety or depression, from the ongoing pain and management of their road traffic injuries.

"I'm still dealing with back and neck injuries and [the money] doesn't really compensate for the rest of your life ... [especially] with the mental side of health."

Ongoing fear surrounding the initial crash continued to be prominent throughout participants' everyday life, with one participant describing their ongoing fear during subsequent car rides.

"We were going too fast, but the guy was just driving normal ... It's just fear."

This same individual reported turning to substance use (alcohol) as a coping mechanism for their situation.

"I used to ... drink a lot ... I don't know why but everything was hard."

Other participants reported avoiding the location where their road traffic incident occurred, as it induced trauma and flash backs to their incident.

Financial Impacts: Participants who were not aware, unable to apply or did not receive compensation for their road traffic incident reported significant financial challenges as they grappled to cover the cost of their vehicle damage and out-of-pocket healthcare expenses (OOPHE). OOPHE costs were both immediate from spending time in hospital for their road traffic injury, but also long-term and included ongoing treatment through both healthcare services and rehabilitation for their injury. One participant struggled with the ongoing cost of regular physiotherapy sessions prior to receiving compensation access for their road traffic incident, another who had their leg amputated because of their road traffic incident reflected on the sheer frustration and untenable costs of a suitable sport prosthesis.

"I wanted to try and run, but the main [prosthetic] leg to run is ... thousands and thousands of dollars."

Impact on Daily Life: Participants spoke about the significant effect their road traffic crash and subsequent injury had and continues to have on their daily lives, employment opportunities and labour force participation. One participant discussed the impact it had on their ability to drive, another lamented on how their incident impacted their future employment.

"It was a lot. You know, that took my sporting career."

Participants described the shame they felt from the physical aspects of their road traffic injuries, which included scarring or amputation, which caused these participants to want to hide or cover up their injury.

"I always cover my scar up. And I think ... a lot of people [that have] scars, there is that shame of exposing it."

Loss of autonomy from their road traffic injuries was often described by participants, who were no longer able to engage in the sporting or leisure activities they undertook pre-road traffic injury. One participant who was an avid runner prior to their injury described the sadness and depression they felt from no longer being able to undertake running at the same pre-injury level.

"You never [going to] run like you did before."

3.3. Barriers to compensation

Knowledge translation and legal barriers, historical/mistrust and accessibility of services were the three subthemes identified as barriers, which was a major subtheme identified in participant yarns.

Knowledge translation and legal barriers: Participants consistently advised that they were not informed of avenues for compensation for their road traffic incident, or they did not have any knowledge of these processes at the time.

"I had nobody come up to me and [speak] to me about any compensation."

This lack of knowledge or understanding by participants did not however indicate a lack of interest in accessing compensation for their road traffic injuries. One participant strongly indicated they would have sought compensation if they had been aware of it at the time, and later approached lawyers about the possibility. The length of time since the crash increased the difficulty of obtaining compensation and the participant was turned away after being told it was *"too late."* Of the eight yarning participants, only two were aware of being able to access compensation for their road traffic injuries, and engaged lawyers, attaining successful claims. One of the participants who was able to access compensation, was made aware by their employer.

"I didn't know nothing about it before [the army told me]."

Both successful claimants were male, claimed through the CTP 'at-fault,' and waited over three years to receive the compensation, with one participant commenting on the lengthy process.

"Five years until I agreed to a settlement [that] could have been more, but I'd had enough."

This same participant discussed the financial impacts of using *"No Win, No Fee"* lawyers with 52 % of their compensation going towards legal fees.

Historical/mistrust: Participants discussed how past interactions with hospitals and government agencies influenced their likelihood to participate in accessing compensation for their road traffic injuries. One participant recalled their profound fear of hospitals and distrust of government services, which would impact them accessing and providing documentation for compensation access.

"I remember overhearing an old family member being told 'don't go to hospital you will die' and that old fella [old man/Elder] passed away"

Participants touched on feelings of powerlessness and injustice, as related to not knowing or understanding the compensation process for their injuries. Some indicating that their experience and feelings may have been linked to their Aboriginal identity. One participant reported there were no culturally tailored or appropriate recovery services for road traffic injuries.

"If it was somebody else [non-Aboriginal], I think that person would have – he would have gotten huge compensation for that."

Accessibility of services: Regional accessibility to appropriate rehabilitation services for a participants road traffic injury was discussed. A few participants reported having difficulty accessing services where they lived, one participant needed to travel a long way for rehabilitation services *"it's a big drive."* One participant shared how they were required to travel 1 h to access their rehabilitation provider. Another commented on how they received minimal medical follow-up after their traffic injury.

3.4. Enablers

Across all yarning sessions, there was minimal discussion on enablers or support for access to compensation schemes for road traffic injuries. However, one participant commented on their workplace support, attaining support from the Department of Veterans Affairs (DVA) during their time in the army.

"Well, it was – the army organised to bring that [compensation]. The lawyers were army lawyers and everything so everything was taken care of that way"

Protective factors: Despite the resounding lack of enablers for participants to access compensation for their road traffic injuries, protective factors, such as family, community, and connection to Country, supported individuals throughout their road traffic injury journey. At the time of the initial road traffic incident participants expressed gratitude for the supports they received from fellow road users.

"I still know ... the bloke who saved my life because he was the one that just threw me in the car and said ... We'll get him in the car and get him going [to the hospital]."

During periods of hospitalisation and rehabilitation, the presence of family supported participants as they navigated this process with their road traffic injuries. With one participant reflecting:

“There’s one thing that’s true and that is family. When you’ve got a family around you, they love you, there’s nothing better than that really.”

Following discharge from the hospital, participants often commented on healing and recovery from their road traffic injuries through connection to Country.

“I just came out here in the bush and the country and everything and fixed myself up. I didn’t need any medication, and I reckon I’m in good health now because of that.”

4. Discussion

To our best knowledge this is the first study in Australia to examine the experiences Aboriginal people have when accessing road traffic injury compensation. We found a range of barriers and enablers for Aboriginal people relating to both the road traffic injury, and in accessing compensation/support schemes. It showed significant change is needed in compensation schemes to improve uptake and access for eligible Aboriginal and Torres Strait Islander individuals impacted by their road traffic injuries.

Our study participants described the significant impact of their road traffic event on their mental health and wellbeing, and ability to participate in the labour force. Similar to our Aboriginal participants, immediate fear and worry of re-injury has been previously reported for non-Indigenous Australians returning to work following workplace injury (Bunzli et al., 2017). Workplace practice adaptations were reported by Aboriginal participants, due to their physical injuries, however, the onus for these changes and management was placed on the individual and is not something their workplace was involved in. Reasons for this may include lack of knowledge or understanding of injury rights and compensation schemes in the workplace for both the employee and employer, through to redundancy fears from employees for requesting workplace changes to support pain management. This is an area which warrants further investigation, with novel co-design of return-to-work practices and programs available under all State and Territory compensation schemes, to better support Aboriginal and Torres Strait Islander participants with a road traffic injury transition back to the workforce. These programs must engage best practice approaches which centralise Indigenous knowledges and focus on culturally appropriate models for transition, to enhance engagement and retention of Aboriginal and Torres Strait Islander employees. They should also act to mitigate the associations between injury severity, financial hardship, labour force performance and engagement, which was reported by Aboriginal participants and is presently observed in the dominant Australian population, especially for physically demanding jobs (Abedi et al., 2024).

Loss of autonomy impacted Aboriginal participants significantly, particularly in their ability to engage in daily, sporting and leisure activities. This along with visible evidence of their injury, resulted in shame and embarrassment for Aboriginal participants, with individuals discussing how they would cover up or try to hide their injuries. Loss of identity, autonomy and independence, through functional and health related quality of life outcomes in injured non-Indigenous peoples is well established in the literature (Cunha-Diniz et al., 2023; Ryder et al., 2019, 2020; Rodriguez et al., 2015; Renne et al., 2023). However, what is less clear and warrants further exploration, is autonomy loss not only for Aboriginal patients, but also for their family and community in the context of the cultural determinants of health (i.e. self-determination, sovereignty and connectedness). Road traffic injuries have a ripple effect beyond the injured individual, the loss of autonomy described by our Aboriginal participants is likely to be wide ranging. Possibly encompassing not only individual resilience, which is the ‘strength’ or ‘survival’ of Aboriginal peoples in the face of colonisation, but that of both an injured individual’s family and community (Brown et al., 2020; Fogarty et al., 2018). Resilience is developed through identity and connection, it is significant and important for counteracting negative risk factors for health, and is one of many cultural determinants of health which need to be considered in road traffic injury recovery and compensation schemes (Brown et al., 2020; Fogarty et al., 2018). Approaches are needed that are strength-based and target positive cultural determinants of health, support key recommendations in the upcoming National Injury Prevention Strategy (Dudgeon et al., 2014), and act to strengthen approaches in the National Road Safety Strategy and Plan (National Road Safety Strategy, 2023; Infrastructure and Transport Ministers, 2021).

Key barriers reported by our participants include knowledge surrounding the existence of compensation schemes, navigating the ‘scheme system’ and legal requirements, which similarly has been reported by non-Indigenous Australians (Sim et al.). This additional burden would have created ongoing pain and suffering of individuals, without any compensation support, and is likely to have triggered chronic and complex condition manifestations in impacted Aboriginal individuals, similar to those in non-Indigenous individuals with a road traffic injury (Cunha-Diniz et al., 2023). However, for Aboriginal individuals this burden will be further exacerbated by the marginalisation enforced by colonisation, which acts to establish and enhance inequity divides (Ryder et al., 2019). Early intervention and timely multidisciplinary, culturally appropriate care for injured Aboriginal and Torres Strait Islander peoples are required including psychological support and physical rehabilitation. When not addressed in a timely manner, the impacts on daily living result in progressive course of injury and secondary disease, mental health comorbidities, adverse socioeconomic conditions, family disruption, and numerous other health conditions. All these issues are more concerning for Aboriginal and Torres Strait Islander communities and different models of care may be required based on region and provider access. For this multifaceted community co-designed initiatives are needed to create sustainable change. These initiatives need to: include stronger community centric education and campaigning for Aboriginal patients with a road traffic injury; address identification issues and support for Aboriginal people seeking treatment for their injuries, either in trauma facilities or general practice; and include initiatives which engage Aboriginal Community Controlled Health Organisations and Aboriginal Health Workers.

Those who were able to access compensation for their road traffic injuries, reported a less-than-ideal experience throughout the process. Confusion, a lack of support in scheme processes, ongoing medical assessment and delays in compensation settlement were reported by Aboriginal participants, and have commonly been reported by non-Indigenous patients in at-fault compensation schemes, which is a reason why many seek legal support (Abedi et al., 2024; Ioannou et al., 2016; Giummarra et al., 2020a). Similar to return-to-work research in non-Indigenous people, our findings suggest increased transparency is needed, through re-design of at-fault compensation programs (Ioannou et al., 2016; Papic et al., 2022; Giummarra et al., 2020b). For this process best practice approaches are recommend through co-design with Aboriginal and Torres Strait Islander communities, along with other priority populations (i.e. rural and remote, culturally and linguistically diverse), to ensure that schemes are designed in a way that supports claimants throughout the process, ensuring their health, wellbeing and recovery requirements are a priority. This may include initiatives such as claim navigators/support officers who are health system based (i.e. hospital or ACCHO) and able to connect and support Aboriginal patients, once stable, to initiate access to compensation schemes.

Aboriginal participants who had a compensation settlement, found it did not include the ongoing mental health aspects of their injury, as related to their ongoing pain, autonomy restrictions and the compensation process. Chronic pain, disability, poorer health outcomes and psychological impacts have been associated with injured non-Indigenous patients claiming compensation (Papic et al., 2022). In Australia a lack of appreciation and understanding surrounding injury burden and trauma from at-fault compensation schemes has been reported (Vallmuur et al., 2023), along with insufficient settlement amounts to cover ‘whole of life’ expenses (Abedi et al., 2024). These experiences create feelings of injustice and differential treatment, which was reported by Aboriginal participants in our study. Discrimination and injustice are commonly reported by non-Indigenous patients with at-fault schemes, and have a large psychological health impact on claimants which is often not considered in settlements (Ioannou et al., 2016; Giummarra et al., 2020a; Papic et al., 2022). This however, does not reflect the ongoing impact of colonisation, such as racism (i.e. systemic, structural) and whiteness which Aboriginal and Torres Strait Islander individuals face on a daily basis, and is missing in the literature (National Aboriginal Community Controlled Health Organisation (NACCHO), 2021; Ryder et al., 2019; Fogarty et al., 2018; Dudgeon et al., 2014).

Family connections and community were significant protective factors for Aboriginal participants in their injury journey. The important role family and friends play in no-fault compensation schemes for non-Indigenous patients has been well articulated, importantly it has been linked to better health and wellbeing outcomes for road traffic injured individuals (Kosny et al., 2018; Trippolini et al., 2021). Similarly, family as a protective factor for Aboriginal patients has been identified in burn injuries and risk for out-of-pocket health care expenditure (Ryder et al., 2021, 2024). Aboriginal participants highlighted the importance in connection to Country as part of the healing process for road traffic injuries, which has not been reported previously. Connection to Country is an important cultural determinant of health and wellbeing for Aboriginal and Torres Strait Islander communities, and is used extensively in a range of community health and wellbeing initiatives (such as suicide prevention, women’s health, men’s health) (Dudgeon et al., 2020). Compensation schemes need to facilitate road traffic injury initiatives which address connection to Country as a cultural determinant, additionally in terms of compensation settlement, ability to connect to Country should also be considered.

4.1. Strengths & Limitations

The use of Indigenous research methodologies and methods was a significant strength of this study, providing essential relational insights into understanding compensation access for Aboriginal individuals. South Australia was the location of this study, SA has different road traffic compensation schemes to other Australian states and territories, additionally our participants had greater representation from rural and remote regions. Our smaller sample size of eight meant we were unable to examine compensation accessed through LSA or Return to Work SA ‘no-fault’ schemes. It is likely that our outcomes would have differed with this representation as positive health and wellbeing outcomes in the dominant population have been associated with no-fault schemes in Australia (Ioannou et al., 2016; Giummarra et al., 2020b). However, it is likely that some of our outcomes will be applicable to other Aboriginal and Torres Strait Islander communities in Australia and First Nations communities internationally, particularly those which have at-fault compensation schemes.

5. Conclusion

This study reports on the enablers and barriers to compensation scheme access for Aboriginal patients with a road traffic injury. Our outcomes suggest there are barriers in accessibility to compensation schemes for Aboriginal people with a road traffic injury in SA. Radical change is warranted, to decrease road traffic injury burden on Aboriginal peoples, families and communities, and to ensure appropriate whole of life compensation. We identified a need for review and co-design of current road traffic injury compensation schemes, particularly ‘at-fault’ schemes, to ensure schemes are strength-based and target protective factors for the cultural determinants of health for Aboriginal communities.

CRediT authorship contribution statement

Courtney Ryder: Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Patrick Sharpe:** Writing – review & editing, Methodology, Investigation, Data curation, Conceptualization. **Shanti Omodei-James:** Writing – original draft, Visualization, Project administration, Investigation, Formal analysis. **Georga Sallows:** Writing – original draft, Visualization, Project administration,

Formal analysis. **Brett Shannon:** Writing – review & editing, Methodology, Conceptualization. **Holger Möller:** Writing – review & editing, Methodology, Investigation, Funding acquisition, Conceptualization. **Marnie Campbell:** Methodology, Investigation. **Rebecca Kimlin:** Methodology, Investigation. **Bobby Porykali:** Methodology, Investigation. **Sadia Hossain:** Writing – review & editing, Project administration, Investigation, Conceptualization. **Nicole Kelly:** Writing – review & editing, Formal analysis. **Dan Ellis:** Writing – review & editing, Formal analysis. **Tachelle Ting:** Writing – review & editing, Writing – original draft. **Jody Gray:** Writing – review & editing, Funding acquisition. **Hossain Afzali:** Writing – review & editing, Funding acquisition. **Rebecca Q. Ivers:** Writing – review & editing, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization.

Funding source

This work was supported by the Lifetime Support Authority (Grant Number R2214). CR is supported by an NHMRC Investigator Grant (EL1 – 2017719).

Financial disclosure

No financial relationships relevant to this article need to be disclosed by authors.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Courtney Ryder reports financial support was provided by Lifetime Support Authority. Courtney Ryder reports financial support was provided by National Health and Medical Research Council. Courtney Ryder reports a relationship with Lifetime Support Authority that includes: funding grants. Courtney Ryder reports a relationship with National Health and Medical Research Council that includes: funding grants. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We acknowledge the traditional lands in which this research was conducted and where outcomes were created: Kurna Yerta, Kokatha, Mirning, Wirangu, Peramangk, Ngadjuri, Eora (Bedegal and Gadigal) Nations, Darkinjung, Dharawal, Dharug, Tharawal, Gundungurra, Wonnarua, Wiradjuri, and Miami Three Fire Peoples (Bodewadmi, Ojibwe and Odawa), and pay respect to their Elders, past, present and emerging.

References

- Abedi, M., Aplin, T., Gane, E., Johnston, V., 2024. "No Man's Land": the experiences of persons injured in a road traffic crash wanting to return to work in Queensland, Australia. *Disabil. Rehabil.* 46 (1), 48–57.
- Australian Institute of Health Welfare, 2023. *Transport Accidents*. AIHW, Canberra.
- Australian Road Safety Foundation, 2022. *Federal Pre-budget Submission 2022-2023 Expansion of the Road Set Program*. Yatala, QLD.: Australian Road Safety Foundation.
- BITRE, 2024. *Australian road deaths - monthly dashboards*. In: BITRE) BoIaTRE. BITRESeptember.
- BITRE, 2021. In: BITRE (Ed.), *First Nations Peoples Road Deaths in Australia 2012-2021*. BITRE, Canberra, ACT.
- Brown, K., Cameron, L.D., Keay, L., Nguyen, H., Dillon, L., Jagnoor, J., et al., 2020. 'I've got to be independent': views of older people on recovery following road traffic injury in New South Wales, Australia. *BMC Public Health* 20 (1), 1294.
- Bunzli, S., Singh, N., Mazza, D., Collie, A., Kosny, A., Ruseckaite, R., et al., 2017. Fear of (re)injury and return to work following compensable injury: qualitative insights from key stakeholders in Victoria, Australia. *BMC Public Health* 17 (1), 313.
- Bureau of Infrastructure and Transport Research Economics (BITRE), 2023. *Hospitalised injuries*. In: Bureau of Infrastructure and Transport Research Economics. BITRESeptember.
- Committee on Road Safety, 2022. *Driving Reform: Final Report for the Inquiry into Road Safety*. Parliament of the Commonwealth of Australia, Canberra, Act.
- Compulsory Third Party Insurance Regulator, 2024. *Compulsory Third Party Insurance Regulator: CTP* [Available from: <https://www.ctp.sa.gov.au/about/ctp-scheme>]. (Accessed 1 November 2024).
- Cunha-Diniz, F., Taveira-Gomes, T., Santos, A., Teixeira, J.M., Magalhães, T., 2023. Are there any differences in road traffic injury outcomes between older and younger adults? Setting the grounds for posttraumatic senior personal injury assessment guidelines. *J. Clin. Med.* 12 (6).
- Department of Health, 2020. *National Injury Prevention Strategy: 2020-2030 – Draft for Consultation*. Commonwealth of Australia, Canberra.
- Dudgeon, P., Milroy, H., Walker, R., 2014. *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice*: Telethon Kids Institute. Kulunga Aboriginal Research Development Uni.
- Dudgeon, P., Bray, A., Smallwood, G., Walker, R., Dalton, T., 2020. *Wellbeing and Healing through Connection and Culture*. Lifeline.
- Fogarty, W., Lovell, M., Langenberg, J., Heron, M.-J., 2018. *Deficit Discourse and Strengths-Based Approaches: Changing the Narrative of Aboriginal and Torres Strait Islander Health and Wellbeing*. Lowitja Institute.
- Giummarra, M.J., Lau, G., Grant, G., Gabbe, B.J., 2020a. A systematic review of the association between fault or blame-related attributions and procedures after transport injury and health and work-related outcomes. *Accid. Anal. Prev.* 135, 105333.
- Giummarra, M.J., Murgatroyd, D., Tran, Y., Adie, S., Mittal, R., Ponsford, J., et al., 2020b. Health and return to work in the first two years following road traffic injury: a comparison of outcomes between compensation claimants in Victoria and New South Wales, Australia. *Injury* 51 (10), 2199–2208.
- Government of South Australia, 1936. *South Australian civil liability act*. In: *South Australian Legislation*. Government of South Australia. Government of South Australia, ; SA.
- Government of South Australia, 2015. *Return to work corporation of South Australia act 1994*. In: *South Australian Legislation*. Government of South Australia. Government of South Australia, 2019. *SA motor vehicle Accidents (Lifetime support scheme) act 2013*. In: *South Australian Legislation*. Government of South Australia.

- Infrastructure and Transport Ministers, 2021. National Road Safety Strategy 2021-30. Canberra ACT. Department of Infrastructure, Transport, Regional Development and Communications.
- Ioannou, L., Braaf, S., Cameron, P., Gibson, S.J., Ponsford, J., Jennings, P.A., et al., 2016. Compensation system experience at 12 Months after road or workplace injury in Victoria, Australia. *Psychol. Int. Law* 9 (4), 376–389.
- Kosny, A., Newnam, S., Collie, A., 2018. Family matters: compensable injury and the effect on family. *Disabil. Rehabil.* 40 (8), 935–944.
- National Aboriginal Community Controlled Health Organisation (NACCHO), 2021. Inquiry into road safety - submission to the joint select committee on road safety. Canberra, ACT.: NACCHO. Sept.
- National Road Safety Strategy, 2023. National Road Safety Action Plan 2023-2025. Canberra ACT. Infrastructure and Transport Ministers.
- Papic, C., Kifley, A., Craig, A., Grant, G., Collie, A., Pozzato, I., et al., 2022. Factors associated with long term work incapacity following a non-catastrophic road traffic injury: analysis of a two-year prospective cohort study. *BMC Public Health* 22 (1).
- Renne, A., Proaño-Zamudio, J.A., Pinkes, N., Sanchez, S.E., Velmahos, G.C., Salim, A., et al., 2023. Loss of independence after traumatic injury: a patient-centered study. *Surgery* 174 (4), 1021–1025.
- Rodriguez, J.C., Dzierzewski, J.M., Fung, C.H., Jouldjian, S., Josephson, K.R., Mitchell, M.N., et al., 2015. Association between pain and functional independence in older adults during and after admission to rehabilitation after an acute illness or injury. *J. Am. Geriatr. Soc.* 63 (11), 2275–2281.
- Ryder, C., Mackean, T., Coombs, J., Williams, H., Hunter, K., Holland, A.J.A., Ivers, R.Q., 2019. Indigenous research methodology – weaving a research interface. *Int. J. Soc. Res. Methodol.* 23 (3), 255–267.
- Ryder, C., Mackean, T., Hunter, K., Williams, H., Clapham, K., Holland, A.J.A., et al., 2020. Equity in functional and health related quality of life outcomes following injury in children - a systematic review. *Crit. Public Health* 30 (3), 352–366.
- Ryder, C., Mackean, T., Hunter, K., Coombs, J., Holland, A.J.A., Ivers, R., 2021. Yarning up about out-of-pocket healthcare expenditure in burns with Aboriginal families. *Aust. N. Z. J. Publ. Health* 45 (2), 138–142.
- Ryder, C., D'Angelo, S., Sharpe, P., Mackean, T., Cominos, N., Coombes, J., et al., 2024. Experiences and impacts of out-of-pocket healthcare expenditure on remote aboriginal families in Australia. *J. Rural Remote Health* 8328.
- Sadia, H., Holger, M., Patrick, S., Marnie, C., Rebecca, K., Bobby, P., et al., 2023. Characterising the Aboriginal and Torres Strait Islander patient journey after a serious road traffic injury and barriers to access to compensation: a protocol. *Inj. Prev.* ip-2023-044997.
- Sim A, McNeillage AG, Rebbeck T, Ashton-James CE. Claimant and clinician perspectives on sources of claimant distress in interactions with Australian compensation schemes: a qualitative study. *Disabil. Rehabil.* 1-11.].
- South Australian Police (SAPOL), 2024. In: SAPOL (Ed.), *Crash Statistics - Collision Serious Injuries*. Online: SAPOL, pp. 2015–2023.
- Statement on the Catastrophic Number of Road Fatalities in 2023 [press Release]. Minister for Infrastructure, Transport, Regional Development, Communications and the Arts, 2024.
- Steinhauser, R., Lancsar, E., 2022. Social Cost of Road Crashes Report for the Bureau of Infrastructure and Transport Research Economics. BITRE, Canberra, ACT.
- Trippolini, M.A., Young, A.E., Pransky, G., Elbers, N.A., Lockwood, K., Cameron, I.D., 2021. Beyond symptom resolution: insurance case manager's perspective on predicting recovery after motor vehicle crash. *Disabil. Rehabil.* 43 (4), 498–506.
- Vallmuur, K., McCreanor, V., Watson, A., Cameron, C., Cramb, S., Dias, S., et al., 2023. Understanding compensable and non-compensable patient profiles, pathways and physical outcomes for transport and work-related injuries in Queensland, Australia through data linkage. *BMJ Open* 13 (1), e065608.