

# Research summary: The ripple effects of road transport injury: From 'discharged alive' to life-changing injury in our communities

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## Introduction

Road transport injury is an important part of community life:

- Road transport crashes are the main reason that you will be seriously injured (63%) in New Zealand (1).
- 1 in 6 New Zealanders will experience a moderate or severe transport injury in their lifetime (2).
- Families, friends, and communities are affected too: Over the next twenty years, 1 in 5 Aucklanders will have a close friend or family member who is killed or seriously injured in a transport crash (2).

In this exploratory key informant research we interviewed seven community health workers, occupational therapists (five) and physiotherapists (two), about what life is like 'beyond the hospital' for road transport injury (RTI) survivors and their families and communities in Tāmaki Makaurau Auckland. Together these professionals have cared for hundreds of injury survivors and their families.

## Study research methods

We asked the community health workers about how transport injury affects three groups: RTI survivors, their families, and communities. Because RTI affects a comparatively younger population, we also asked about how transport injury affects the 'life trajectory' of survivors.

## Research results

### Impacts on survivors

The high impact nature of transport crashes means polytrauma, multiple as well as severe injury, is a common experience. This level of injury is a significant shock for most people, who have only experienced minor, everyday injuries before:

*"...[I]f we get athletes or something coming into our clinic, they've often been injured before, so they kind of know what to expect; whereas someone like that who's never been injured in their life, and all of a sudden they've got 10 out of 10 pain in their shoulder, and 9 out of 10 pain in their hip and stuff. It's just very new for them. And I think that takes a bit of a toll."*  
[Physiotherapist]

The participants talked about the incredible resilience of those who survive serious transport crashes. However, the losses involved are often significant, making recovery slow, difficult, and incomplete. Family and friends may also be involved in crashes, generating multiple sources of grief and loss

*"[T]here is sometimes a long grieving process of loss of function...[A]nd sometimes when there is more than one person in the car ...the person is not only grieving their loss of function, their loss of roles, their, perhaps, loss of job, they have lost a loved one as well." (Occupational therapist)*

Survivors can experience challenges maintaining jobs and relationships, and difficulties parenting their children. These challenges were seen as particularly tough for young adults, who are just beginning the life work of building emotional and financial independence:

*"[T]he first year, pretty much people just go into massive depression ...particularly when they are younger, because they think they are going to go and do their OEs ...and they are going to have a good sex life, you know, all the things that 18 or 20 year olds are excited about doing: driving a car. ... It's like ... you are looking out at the world and thinking 'the world is my oyster' and then 'boom', shut down, you become really dependent again." (Occupational therapist)*

Access to rehabilitation support was seen as important but uneven – especially beyond the early recovery stage. Ageing and access to long-term rehabilitation was an important theme. Long-term support is seen as critical, because early transport injuries leave people more vulnerable to additional disability as they age: including injury-related arthritis; brain injury-related neurodegenerative decline; and challenges sustaining the strength to remain independent at home:

*"[I]f you think of ... a person who has lost their leg in an accident, ok, he's independent [now], you get to seventy, eighty, how strong do you have to be to be able to maintain independent transfers? ...[A]s you get older, you naturally decline in terms of strength ... that then has a huge impact of the level of assistance that they need." (Occupational therapist)*

Psychological trauma was another important theme. International research suggests that psychological illnesses (post-traumatic disorder, and/or depressive or anxiety disorders, including driving anxiety and phobia) are common after transport crashes – even minor crashes that involve no or only minor physical injury; and that this psychological injury tends to be underdiagnosed (3):

*"[PTSD] was a huge piece of her presentation: ... she would continue to hear car crashes and just... being in traffic would trigger symptoms. She was hit by a drunk driver, so I think just the nature of that injury.... Being on the motorway and then all of a sudden, bam, she was hit. No control." (Physiotherapist).*

Finally, a sense of lack of justice for the significant consequences of their injury was seen as an ongoing barrier to recovery:

*"[S]omeone who was a pedestrian who was hit ....horrendous, horrendous injuries ...but she did very, very well, she has ongoing forever pain and so forth, and then went to court, probably a year or two afterwards..[and] it wasn't fair... So we are also having to navigate the injustice of what happened ... And all their pain and symptoms come back again, because it's kind of hit them again. [I]t puts people back again ...when they are victims of something, and then there's no justice: absolutely none, most of the time...." (Occupational therapist).*

## Impacts on families

All the participants felt that transport injury has a substantial impact on family life: on household finances, relationship stability, and the care of children. Families were seen as a neglected group in the conversation about the impacts of RTI.

*"[T]he impact on family is often overlooked, because they are not the actual victim.. [But] when you have got a mother that has a car accident, it affects the children. And the more severe the*

*accident, the more traumatized the child is about not having their mum there anymore.”  
(Occupational therapist).*

In the early days, families often have significant worries about the future. Parenting and romantic relationships are often disrupted: especially for those who have a brain injury (a common transport injury), with disorientation, headaches, fatigue, and sensory sensitivities making it tough to connect with or care for others. Brain injury is also an ‘invisible disability’, which can make it difficult for partners and kids to understand. The negative impacts of parental injury on the mental health of kids, teenagers and young adults was an important theme. As was family financial difficulties. Many of the participants felt that the partial income compensation received by survivors is often not enough in an expensive city like Auckland, where families are struggling with high housing costs.

### Impacts on Communities

Employers and their businesses are seen as important impacted parties, who are often ‘overlooked’ and undersupported, when they lose an employee to injury. In smaller rural centres, critical community services were also seen as affected by the loss of valued volunteers. Pressure on an already overstretched health care system was another important theme. This is consistent with other New Zealand research highlighting the considerable health care resources that are directed towards treating transport injury. We currently spend around \$1 billion dollars annually on the direct health costs of transport injury (health care, ACC, ambulances etc.) (4). This equates to the salaries of around 13,000 nurses (one quarter of the nursing workforce). Emergency care is also growing faster than population growth, and this growth has been identified as playing a role in reducing access to planned and elective care (5). Reducing transport injury could play an important role in easing pressure on health resources.

Finally, common observations of injured people withdrawing socially, exercising less, having difficulties cooking for themselves, and becoming overreliant on painkillers, alcohol and drugs to cope with pain were positioned as population level health issues: potentially contributing to higher rates of inactivity; poor metabolic health; and loneliness in our communities:

*“[The health care system] tends to be quite physically focused, obviously. They don’t tend to talk about how they are coping at home. ....So that’s where I think there is a real gap in the system.... [A]lot of my clients that have been discharged ...some of them are really struggling. They are not looking after themselves: they are living in a very unhygienic environment, because they can’t clean; their diet is poor, because they can’t cook properly; so then they tend to put on a lot of weight; and that’s a real public health issue. And then there is also ... the medication and the over-prescribing [or] reliance on pain killers that I have seen, as well. So drugs and alcohol could come into that picture too.” (Occupational therapist).*

### Conclusion

This research highlights some of the important ripple effects of transport injury: beyond the injured individual, the ability to care for children, and the employment prospects and mental and physical health of family members are all affected by transport injury. Attention to the impact of transport injury on the life course identified effects at three key stages: disruptions, sometimes severe, to the career and family building work of early adulthood; challenges to financial, housing and family stability in mid-life; and the convergence of ageing and injury-related disability in the later years. This is a small exploratory study; however, it highlights a number of themes that are also found in other New Zealand studies on injury experience: including unmet need for support with

psychological trauma; inconsistent knowledge of and access to essential community supports post-discharge; financial stress; worry about carer burden; social isolation; trauma amongst children and grandchildren; and housing inadequacy (6-8).

## Recommendations:

1) In this research, we interviewed community health professionals because their work provides them with insights across the three key domains of injury impacts: survivors, families and communities. However, we also need more research on the lived experiences of transport injury survivors themselves. An overreliance on injury statistics alone can reinforce the idea that transport injury is a discrete 'event'; whereas for many people it is a life-long process, involving not just injury, but long-term disability. Transport injury survivors have important insights into the long-term impacts of transport crashes on wellbeing in Aotearoa New Zealand.

2) This study highlighted a number of gaps in access to care that can affect recovery and long-term quality of life: including gaps in initial rehabilitation care; a lack of access to psychological care; inadequate support as people age; and a lack of support, including psychological support, for family members of survivors. A sense of injustice when navigating legal systems was another important theme. These gaps require further investigation.

3) The participants in this study talked a lot about the shock, disbelief, pain, and even 'shame' that are common presentations after transport injury. It is worth investigating whether New Zealanders understand how likely they actually are to experience a transport injury in their lifetime. As this research highlights, life-changing transport injury is relatively common, and the most likely reason for severe injury in New Zealand. Transport sector and public health campaigns to ensure public understanding of how common and severe transport injury can be may help to reduce some of the 'shock' and psychological morbidity experienced by injury survivors. These campaigns should also emphasise the types of support that are available to injured people to help them navigate the profound challenges of recovery, across their entire lifespan - helping injury survivors and their families to feel less alone with the task of rehabilitation.

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