Rural GPs' management of vehicle related trauma

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BACKGROUND
There is twice the morbidity and mortality resulting from vehicle related trauma in rural and remote areas than in metropolitan areas. Little is known about Australian rural general practitioners' management of those affected.

METHODS
Seventeen rural GPs in North Queensland participated in semi-structured interviews for this exploratory study of the management of patients presenting with acute or chronic vehicle related trauma. Responses were analysed quantitatively and thematically.

RESULTS
General practitioners reported more presentations of chronic than acute vehicle related trauma. Common injuries were soft tissue injury, whiplash and chronic pain syndromes. Vehicles most often involved were motorbikes, passenger cars and bicycles. Surgeons and physiotherapists were the most difficult service providers to access. Better coordination of rehabilitation and community support services is required.

DISCUSSION
General practitioners in rural North Queensland manage patients with chronic vehicle related trauma without adequate access to specialised rehabilitation services. More training of GPs and practice staff and improved coordination of these services are required.

Mortality and morbidity associated with motor vehicles in rural and remote Australia is more than twice that in metropolitan areas.[1] Little is known about the workload of Australian general practitioners in managing acute and chronic vehicle related trauma. The Bettering the Evaluation and Care of Health (BEACH) survey of Australian GPs includes data on new injury presentations, but provides no detail of the mechanism of injury.[2]

Access to medical services in rural and remote communities is limited. There are fewer GP consultations per person compared with metropolitan areas, and specialist consultations are even less accessible. Only 26% of patients in remote centres can access a specialist locally.[1]

A British follow up study of patients who attended hospital for a motor vehicle injury found that after 1 year 45% of patients still had major physical problems. Adverse effects persisted for up to 3 years, with 26% of patients reporting a psychiatric disorder, and 21% moderate to severe pain.[3]

Effective rehabilitation of seriously injured patients requires interdisciplinary models of care, with access to allied health services such as psychologists, occupational therapists (OTs), physiotherapists and pharmacists. The GP's role is to monitor medical complications, deal with behavioural issues, support carers, and assist in return to work assessment.[4]

Methods

This study explored experiences of rural GPs in managing patients presenting with acute or chronic vehicle related trauma in North Queensland. General practitioners in areas identified as having high road crash numbers were invited to participate in semi-structured interviews that explored the frequency of presentations, chronicity and types of injury treated, and difficulties in accessing services. The target areas were identified from the Rural and Remote Road Safety Study (RRRSS) undertaken by the Rural Health Research Unit at James Cook University and the Centre for Accident Research and Road Safety (CARRS-Q) at the Queensland University of Technology. The RRRSS aims to reduce the incidence and associated costs of rural and remote vehicle crashes in North Queensland through better understanding of their causation.[5] *Figure 1* shows the populations and crash numbers for rural and remote shires in our study area.

Seventeen GPs were interviewed, with qualitative and quantitative data analysed using Atlas and SPSS software respectively. The median time since graduation for the GPs was 12 years (range 5–32 years).

Results

The data revealed that presentations for acute vehicle related injuries were less common than those for chronic conditions (*Table 1*). Soft tissue injury, whiplash injury and chronic pain syndromes were the three injury types most frequently identified. The frequency of other types of injuries seen is presented in *Table 2*.

Themes that emerged from the interviews included difficulty accessing services, factors impacting on rehabilitation, transport and retrieval issues, potential solutions, and the need for prevention.

Access to services

Most essential health services required by patients were available in the North Queensland region. However, significant difficulties in accessing a full range of local services were identified. Only four respondents stated that existing local services were satisfactory. The clinical services areas that caused most concern were orthopaedics, acute trauma surgery, allied health services for rehabilitation, and chronic pain and psychology services. Of less concern was access to home nursing and respite facilities in rural settings; one respondent felt that rural patients were advantaged because they can be more easily admitted to hospital locally if they need respite.

A general view emerged that publicly funded services are harder to access than private, exemplified by the following: 'If you get an orthopaedic injury, you get better service and fixed quicker if you have private insurance'. In relation to allied health services, physiotherapy was by far the most required but inaccessible service, and again the private versus public issue was raised: '... there is no community based rehabilitation... no OT, no social work, no physio unless you can pay'.

The lack of chronic pain and mental health services also created much discussion: 'We used to be able to get nerve ablations... and epidurals but that doesn't seem to be available now', and '... local mental health services restrict themselves more to acute mental illness'.

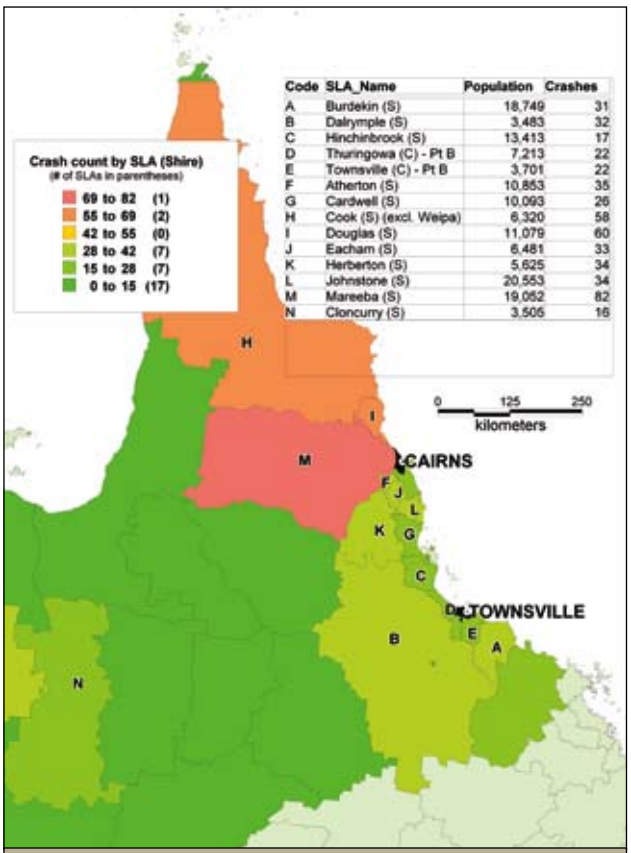

Figure 1. Populations and crash numbers for rural and remote shires in the study area

Factors impacting on rehabilitation

Legal and financial issues predominated factors impacting on rehabilitation: 'A lot of psychological and chronic pain conditions are fostered by litigation' and 'money... there are very few patients who are completely covered by insurance'. Of particular concern was the role of victim compensation funds in remote communities: '... cash handouts led to more drinking, more fighting and more injuries... there was a huge burden on the medical system preparing all the reports'. Drug and alcohol problems were seen as both a cause and consequence of road trauma: 'A lot of drug seeking patients have a history of horrific car accidents... months in hospital and lots of morphine'.

Issues of family support and isolation for patients who live alone with little social contact were raised. Patients with chronic injuries are sometimes unable to remain in their rural homes because of lack of access to services: '... he would prefer to live here with his family... he is separated from those people around him because there is no adequate facility for him to be cared for in the town'.

Mental health and chronic pain problems are perceived as serious issues affecting rehabilitation. Depression often accompanies chronic trauma and pain. These factors along with other psychosocial problems can impede recovery: '... prior mental health conditions such as depression, social circumstances... family relationships... unemployment... especially if it was a work place injury'.

Transport

Transport and retrieval was often raised by respondents, some positively: 'There is always a retrieval service to Townsville [the regional metropolis] publicly', while others expressed concerns: '... there are often delays and I think

Table 1. Frequency of GP treatment for vehicle related injury

How often treated	Acute frequency	Percent	Chronic frequency	Percent
Weekly	1	5.9	5	29.4
Monthly	7	41.2	8	47.1
Less than monthly	9	52.9	4	23.5
Total	17	100	17	100

Table 2. Vehicle related injury types seen by GPs

Injury type seen	Number of GPs
Soft tissue injury	15
Whiplash injury	15
Chronic pain syndrome	14
Laceration/penetration	12
Fractured limbs	10
Head injury	10
Fractured ribs	10
Chest trauma	8
Ligament/tendon injury	8
Spinal injury	8
Chronic brain injury	7
Chronic psychological condition	7
Abdominal trauma	4
Burns	3
Fractured pelvis	3
Eye injury	2
Other	1

they are transporting more people routinely... so they are not available so readily for emergencies'.

Need for prevention

Observations on causes underlying rural vehicle related trauma primarily addressed a perceived need for better preventive strategies: 'I saw a young girl of 10 going about 60 [km/hour] riding a quad bike beside a cane paddock with no helmet... total disregard to safety'.

Solutions

Several respondents identified solutions to the issues raised. Services seen as useful and available were home and community care, aged care assessment teams, information services such as Brain Injury Australia and metropolitan based pain clinics. Suggestions for future solutions related to perceived gaps including public sector physiotherapy and OT, coordinators to ensure case management, and more specialist positions in the hospital system. There were also some comments advocating legislative change and establishment of a national compensation scheme.

Conclusion

Rural GPs are managing patients with the chronic sequelae of vehicle related trauma without adequate access to specialised rehabilitation and pain management services. More training in these areas for GPs and other practice staff could improve outcomes for patients. More research into the coordination of services for rural patients with chronic injuries is required.

Conflict of interest: none declared.

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References

1. Strong K, Trickett P, Titulaer I, Bhatia K. Health in rural and remote Australia: Australian Institute of Health and Welfare, 1998.
2. Britt H, Miller G, Knox S. BEACH – general practice activity in Australia 2001–02: University of Sydney and Australian Institute of Health and Welfare, 2002.
3. Mayou R, Bryant B. Outcome three years after a traffic accident. Psychol Med 2002;32:671–5.
4. Kahn F, Baguley I, Cameron I. Rehabilitation after traumatic brain injury. Med J Aust 2003;178:290–5.
5. CARRS-Q. Rural and remote road safety research project: five year crash and area profile of North Queensland. CARRS-Q 2005;xix:174.

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