

Message from the Network Co-Chairs

Welcome to the mid-year newsletter from the Queensland Trauma Clinical Network (QTCN). A great deal of work has gone into progressing QTCN initiatives in recent months, and we would like to thank the many active QTCN members for making this possible.

A significant area of focus has been supporting trauma care and systems in regional and rural areas. The QTCN conducted the first regional trauma site visit in May, with a multidisciplinary team visiting Toowoomba Hospital, on invitation of the Darling Downs Health Executive. The team met with many clinicians and staff involved in trauma care and provided recommendations for service development opportunities. The visit was very well received by clinicians and the Executive team, with further site visits planned to other areas of Queensland. For more information, please email QldTraumaNetwork@health.qld.gov.au.

This newsletter also contains an excellent case review that highlights the importance of excellence in trauma care and the incredible outcomes that can be achieved through appropriate training, systems and collaboration. A neurosurgical intervention for a critically ill patient with extradural haematoma was performed in a regional centre under guidance from the team at Royal Brisbane, with a promising outcome. Well done to everyone involved!

The Queensland Trauma Education (QTE) program is also assisting to progress trauma care across the state, with recent regional and rural site deliveries proving very popular. Congratulations to the dedicated QTE team on this impressive and evolving initiative. In closing, there are plenty of upcoming professional development opportunities with the Statewide Trauma Forum planned at the Sunshine Coast University Hospital on 11th July, themed 'Older Persons Trauma' and the upcoming Australian and New Zealand Trauma Society Conference in Brisbane in October. We hope to see you at some of these important networking events.

Dr Alistair Hamilton
Co-Chair, QTCN

Professor Martin Wullschleger
Co-Chair, QTCN

Network Updates

Clinical guidelines

The Statewide **Blunt Chest Trauma** Clinical Guideline has recently been reviewed and updated, accessible [here](#). The QTCN are currently working on developing both a splenic trauma and an older person's trauma guideline.

Review of trauma activation criteria

All current trauma activation criteria across Queensland have been collated and will be utilised to inform a set of recommended criteria for services wishing to update and/or develop a trauma activation process in local facilities.

Regional trauma site visits

A key priority of the QTCN is to support regional and rural sites with optimal trauma care delivery. The QTCN recently commenced the first regional trauma site visit. In May, a team of four senior clinicians travelled to Toowoomba Hospital to meet with senior leadership staff and frontline clinicians from all aspects of the trauma patient journey. With plans for a new hospital in 2027, a follow up report with recommendations to assist with trauma care, patient flow, infrastructure planning and service delivery were provided by the review team.

Case review

Supporting regional trauma care

An 18-year-old male had a collision into a car whilst riding an e-scooter at approximately 25km/hr, in a regional area, whilst **not** wearing a helmet. He presented to the local Emergency Department (ED) after having a brief period of syncope and an ongoing headache. His conscious level was depressed with Glasgow Coma Scale (GCS) of 14 on initial assessment by ED staff. Shortly after being in the ED, he had a sudden deterioration to GCS 9 and required intubation. He began to become bradycardic and hypotensive and both pupils were fixed and dilated. He was taken for an emergency Computed Tomography (CT) scan which showed a large right sided acute extradural hematoma measuring 3.5cm in depth, with 15mm of midline shift. His pupils remained fixed and dilated despite hypertonic saline and initiation of neuroprotective measures.

After consultation with the Neurosurgery team at the Royal Brisbane and Women's Hospital (RBWH), it was decided that the time to transfer the patient would likely result in death or severe neurological disability. A discussion occurred with the local general surgeon who had recently undergone an emergency craniotomy course with the Royal Australasian College of Surgeons and was willing to perform a craniotomy locally prior to transferring the patient for definitive care. Surgical methods and goals were discussed prior, during and after the operation. A trauma craniotomy was performed with the hematoma evacuated. The patients' pupils returned to being 2mm and reactive after the procedural intervention. He was transferred directly to the RBWH where he was taken immediately for CT scan on arrival, which demonstrated that the extradural hematoma had partially reaccumulated as well as migration of the bone flap.

The patient was then taken for a revision craniotomy and evacuation of the hematoma in an uncomplicated fashion. The post-operative CT confirmed complete evacuation and decompression. The patient was extubated and stepped down from the intensive care unit to the ward just three days post-operatively. He remained a GCS 15 and was subsequently referred for brain injury rehabilitation.

Had the initial craniotomy not been performed delays to evacuation of the extradural hematoma would have likely led to a significantly worse outcome.

This case demonstrates the importance of clinical specialists supporting regional sites in major trauma care and ensuring opportunities for further trauma training and upskilling in rural and regional areas.

Education

Queensland Trauma Education (QTE)

Over 40% of all major trauma occurs in regional, rural and remote areas. By delivering accessible, localised and practical trauma training to these areas, clinicians are empowered with the tools, skills and experiences needed to provide high quality trauma care and improved clinical outcomes.

With support from the Healthcare Improvement Unit, Clinical Excellence Queensland, the QTE workshops were taken to Toowoomba, Atherton, Cairns and Hervey Bay. Demand for the program was extremely high, with 45 Queensland Health hospitals expressing interest in hosting a QTE workshop, delivered by the Clinical Skills Development Service (CSDS).

Not only do these workshops improve clinical skills, they also challenge sites to re-think how trauma processes and procedures work in the individual facility and as part of the broader Queensland Trauma System. Examples of system improvements that have been implemented following these workshops include:

- Centralised and coordinated prehospital notification
- Review of local trauma alert system
- Implementation of point-of-care tools
- Use of the age, time, mechanism, injuries, signs, treatment (ATMIST) handover
- Hands-off handovers for trauma patients
- Interhospital transfer considerations
- Introduction of interdepartmental training, e.g., Intensive Care and Emergency

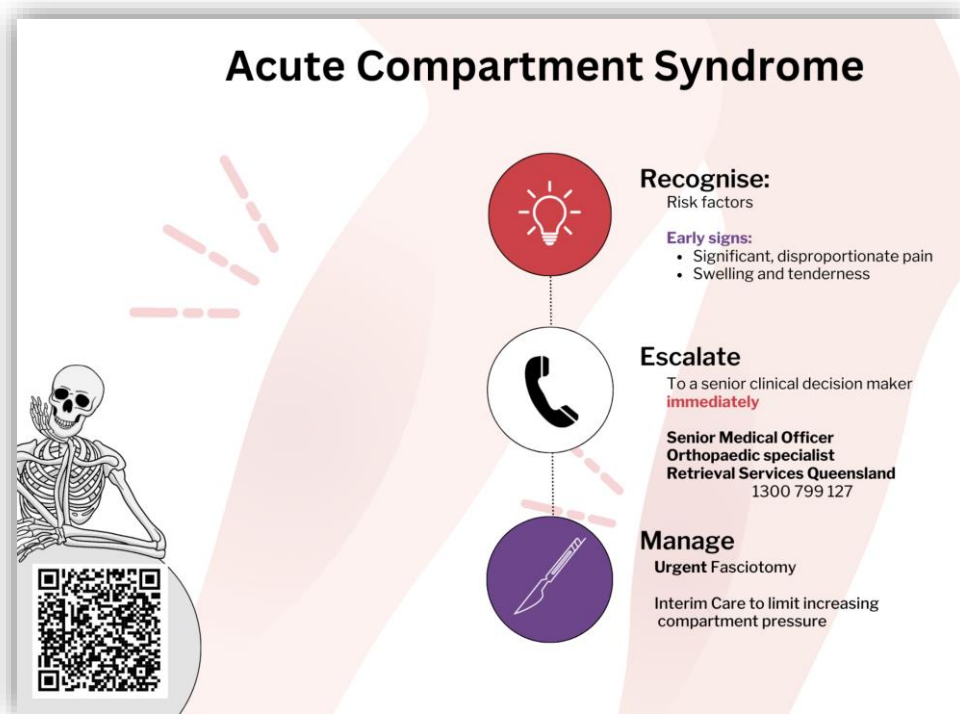
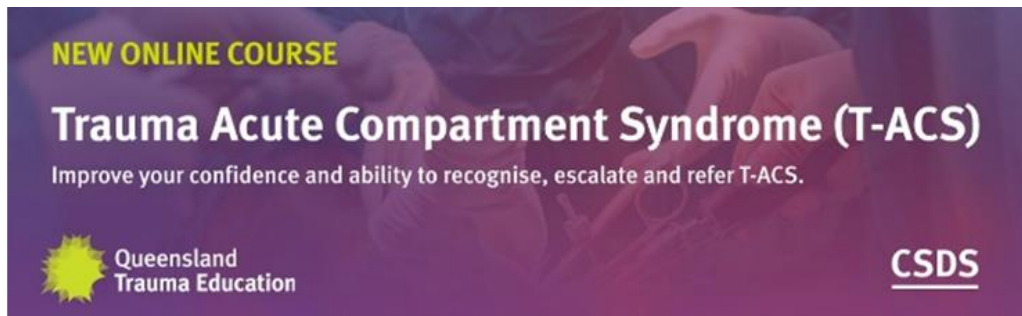
The following feedback was provided from the recent Toowoomba QTE workshop:

“It was a great success. Laura and Fran were amazing instructors and made the day informative and fun, providing skill stations and simulated learning sessions. Attendees included a mix of Registered Nurses, Consultants, Registrars and Residents that came from Toowoomba, Warwick and Kingaroy Emergency Departments. There was such a strong interest in the workshop from over the district but unfortunately many had to be waitlisted. The rural staff were grateful to be able to attend a workshop like this closer to home.”



Photo: participants from Toowoomba Hospital QTEC delivery

The QTE team have also developed the Trauma Acute Compartment Syndrome module, which is available to access [here](#), or via the QR code below:



New services

Opening of new Kidsafe Centre

Kidsafe Queensland Safety Centre has opened at 8/87 Webster Road, Stafford. The Brisbane City Council Lord Mayor Adrian Schinner, Major General John Pearn and President of the board of Kidsafe, Richard Franklin officially opened the centre last week. The opening was well attended by past and present members of the board, sponsors, guests and colleagues.

Susan Teerds is the dedicated and passionate Chief Executive Officer of Kidsafe Queensland. Susan is known for her organisation, enthusiasm and passion for preventing injuries in children. Susan is also the Kidsafe Australia representative on the National Water Safety Council, the button battery recycling initiative and the childcare restraint recycling initiative. Susan has a BA with majors in Psychology and Journalism, and a post graduate certificate in Philanthropy and non-profit studies.

Research

Specialised trauma centres have assisted reducing mortality rates by up to 25%. This reduction has led to an increase in survivors of traumatic injury, which in turn has placed increased demand for follow-up service when patients are discharged from hospital. Whilst the longitudinal outcomes of major trauma patients have been reported widely, little is known about optimal delivery of immediate follow-up services delivered by trauma centres for this group to achieve meaningful outcomes for patients and families.

Within evidence-based consensus guidelines, Level one Trauma centres (as verified by the Royal Australasian College of Surgeons) are recommended to have a multidisciplinary follow-up clinic. However, the when, how and to whom these services are or should be offered to is not stipulated. In short, there is currently an absence of research to inform quality delivery of post discharge follow-up to patients and families affected by major traumatic injury.

The following research set out to review literature behind follow up care of major trauma patients (article 1) and current practices across Australia and New Zealand (article 2):

Article 1 – A scoping review of the literature to ascertain how follow-up care is provided to major trauma patients post discharge from acute care.¹

The scoping review was undertaken to answer the following research question: How are follow-up services delivered to patients of any age with major trauma after hospital discharge? Twenty-six articles were included, with only one from Australia. Wide variations in how follow-up services for major trauma patients are provided were found. Although follow-up was provided by designated trauma centres and delivered by a mixture of health disciplines, no standardised criteria were established to determine recipients, the timing or the frequency of follow-up.

Due to the lack of available literature in Australia and New Zealand, a survey was then undertaken to describe the current follow-up care provided in these jurisdictions, to patients and families who have experienced major traumatic injury.

Article 2 - Follow-up after major traumatic injury: a survey of services in Australian and New Zealand public hospitals.²

An online survey link was sent to key personnel at 71 hospitals that were identified as delivering trauma care in Australia and New Zealand. There were 38 out of 71 respondents (54%). The majority of follow up services (61%) were provided by Level one trauma centres, with 16 having permanent funding. Inclusion criteria varied between services. Follow-up was provided within two weeks of acute care discharge in just over half of the services. Follow up activities focused largely on the physical health of patients; no follow up incorporated follow up for family members or caregivers. Evaluation of follow-up care was largely part of the wider health service evaluation. The limited evaluation specifically for trauma follow up care indicates a wider need for further development to ensure that the care delivered is safe, effective and beneficial to patients, families and healthcare organisations.

1. Wake E, Ranse J, Marshall AP. Scoping review of the literature to ascertain how follow-up care is provided to major trauma patients post discharge from acute care. *BMJ Open* 2022;12:e060902. doi:10.1136/bmjopen-2022-060902

2. Wake E, Ranse J, Campbell D, Gabbe B, Marshall AP. Follow-up after major traumatic injury: a survey of services in Australian and New Zealand public hospitals. *BMC Health Serv Res.* 2024 May 15;24(1):630. doi: 10.1186/s12913-024-11105-w. PMID: 38750458; PMCID: PMC11097478.

Upcoming Events

- 11 July 2024: Statewide Trauma Forum, Sunshine Coast University Hospital.
- 24-26 October 2024: Australia and New Zealand Trauma Society Conference, Brisbane Convention and Exhibition Centre.

Please ensure you have subscribed to the QTCN communications to receive all updates and links to online events. Any content, feedback or suggestions can be emailed to: QldTraumaNetwork@health.qld.gov.au.