COVID-19 Escalation Plan
Statewide Trauma Clinical Network

Scope

This document aims to provide guidance to Queensland Hospital and Health Services regarding the management of major trauma patients during the COVID-19 pandemic by outlining referral pathways, escalation trigger points and a communication strategy to assist with continuation of trauma services in the case of a community COVID-19 outbreak.

This guideline has been developed by the Statewide Trauma Clinical Network (STCN) and aims to support – not replace – clinical judgement and decision making.

Background

The Queensland trauma system supports patient retrievals and transfers for definitive care following major traumatic incidents of a highly complex and extremely urgent nature. Trauma patients are primarily managed within the public sector and require a coordinated response from pre-hospital services, as well as specialist clinicians from emergency departments, operating theatres, surgical sub-specialties, intensive care units, high dependency units and inpatient wards.

There are five major trauma centres in Queensland:

- Gold Coast University Hospital (GCUH)
- Princess Alexandra Hospital (PAH)
- Royal Brisbane and Women's Hospital (RBWH)
- Townsville University Hospital (TUH)
- Queensland Children's Hospital (QCH) - Paediatrics

It is anticipated that further COVID-19 outbreaks will place strain on staffing levels of specialist services through increased clinical activity, staff sickness or potential isolation requirements. With reduced clinician and inpatient bed availability, particularly ICU beds, local service capabilities may be limited.

As such a coordinated response to the management of major trauma patients during COVID-19 is required to ensure continuity of services for patients and to support staff throughout this period.

Operating theatre, intensive care and inpatient bed impacts

Mapping and planning the safest possible patient flow throughout the state, both between and within hospitals requires consideration of the entire patient journey as follows:

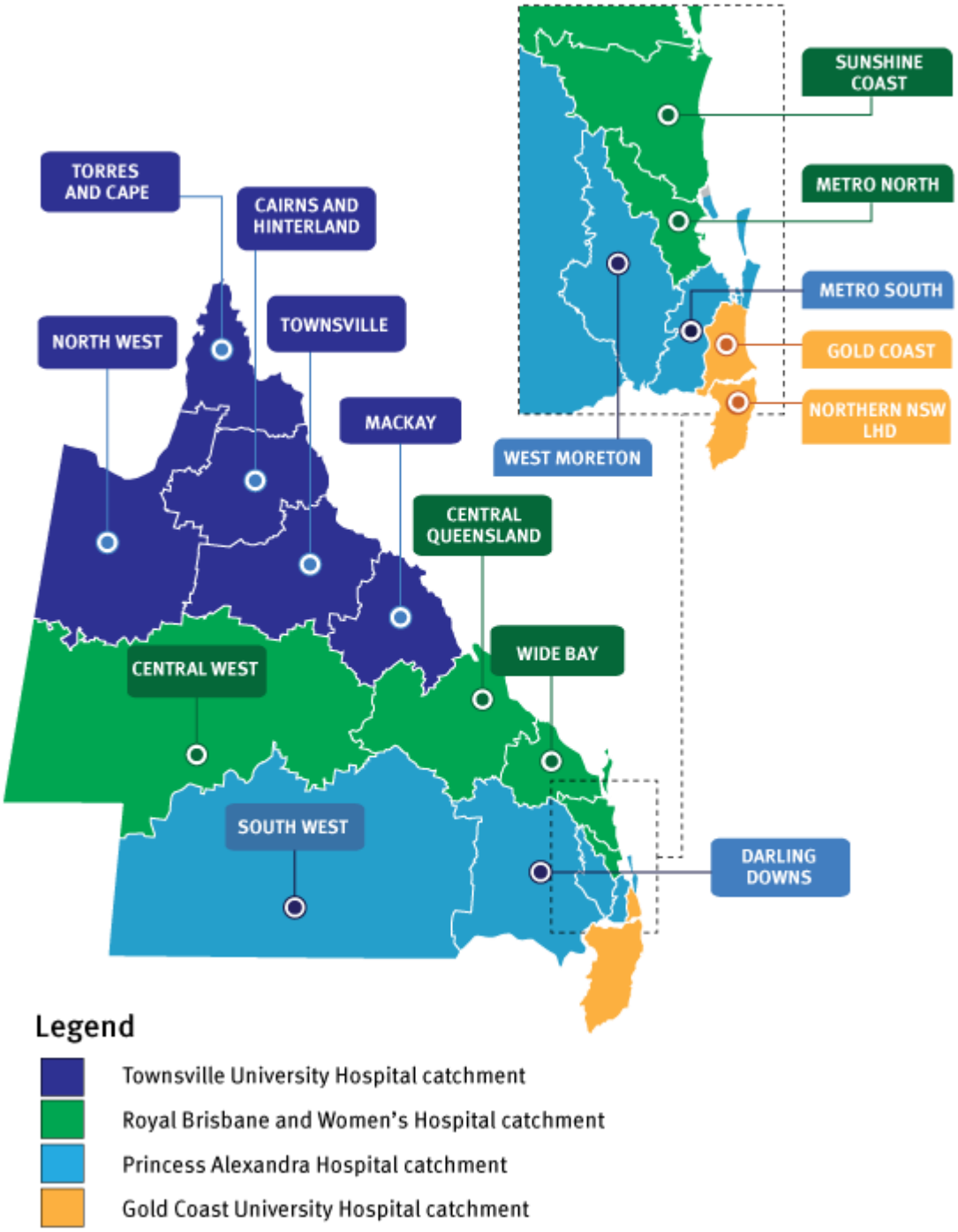
- **Operating theatres capacity, including the Post Anaesthetic Care Unit (PACU)** for major trauma patients requiring specialist surgical intervention.
- **Intensive Care Unit (ICU) capacity** for major trauma patients requiring high acuity/intensive care in the early post-traumatic resuscitation phase.
- **ICU Surge planning impacts**: areas identified to support increased demand for ICU, such as operating theatres and PAC.
- **Inpatient wards**: for stepped down patients. This may be a designated trauma ward such as those at the GCUH and RBWH, or an orthopaedic, neurosurgical, or general surgical wards.
- **Rehabilitation services**: Patients suffering major trauma often have prolonged hospital length of stays and involve a complex rehabilitation phase prior to discharge.

Referral Pathways for adult major trauma

The Statewide Trauma Clinical Network (STCN) utilise referral pathways for all **adult** major trauma. This ensures a major trauma centre is part of each 'cluster' for each of the adult services, with Paediatrics being managed in conjunction with QCH. The adult referral catchments are illustrated in Figure 1 below.

Having clearly defined and appropriate referral pathways familiar to clinicians throughout Queensland ensures appropriate care is accessed in a safe and timely manner as the COVID-19 pandemic adds additional strain on healthcare facilities throughout the state.

Figure 1 – Catchment areas for adult major trauma



Referral to Specialist Services

The following principles should be considered in the management of trauma patients requiring definitive surgical care:

- The four major adult trauma centres involved in definitive care should be the first point of contact and referral for any adult major trauma patient and Queensland Children's Hospital for paediatric major trauma patients – as per the above catchment areas.
- In consultation with the referring hospital, a Consultant-to-Consultant discussion and agreement should occur prior to any planned transfer.
- In addition to the major trauma centres, additional surge capacity may be utilised by patients requiring fewer surgical specialty interventions.
- Cairns Hospital and Sunshine Coast University Hospital have been identified as providing a high number of specialist services related to trauma and should be considered in the event of a COVID-19 outbreak where major trauma centres in Queensland are under immense bed pressures. **NB:** Referrals to these regional centres must always involve the referring Consultant, Director of the major trauma centre, and regional receiving facility to ensure the definitive care can be provided prior to transferring the patient.

Specialist services involved in definitive trauma care are listed in Table 1 below for each of the adult major trauma centres as well as Cairns and Sunshine Coast University Hospitals.

Table 1 – Adult surgical specialist services

	Major trauma centres			Regional centres		
Specialty Services	**Gold Coast University Hospital**	**Princess Alexandra Hospital**	**Royal Brisbane and Women's Hospital**	**Townsville University Hospital**	**Cairns Hospital**	**Sunshine Coast University Hospital**
Burns	×	×	✓	× (provide selected definitive care in liaison with RBWH)	×	×
Cardiothoracics	✓	✓	✓ (Elective thoracic surgery & cardio-thoracic trauma)	✓	×	× (Thoracic surgery only)
Ear nose & throat	✓	✓	✓	✓	✓	✓
Interventional Radiology	✓	✓	✓	✓	✓	✓
Maxillofacial	✓	✓	✓	✓	✓	×
Neurosurgery	✓	✓	✓	✓	×	✓
Obstetrics	✓	×	✓	✓	✓	✓
Ophthalmology	✓	✓	✓	✓	✓	✓
Orthopaedics	✓	✓	✓	✓ (Complex pelvic trauma → RBWH/Cairns)	✓	✓
Plastics	✓	✓	✓	✓	✓	✓
Spinal Fractures	✓ (Neurosurgical team)	✓ (Orthopaedic and Neurosurgical teams)	✓ (Orthopaedic and Neurosurgical teams)	✓ (Neurosurgical team)	✓ (Orthopaedic team)	✓ (Orthopaedic team)
Spinal Cord Injuries	×	✓	✓	✓	✓ (Provide selected definitive care in liaison with PAH)	✓ (Provide selected definitive care in liaison with PAH)
Urology	✓	✓	✓	✓	✓	✓
Vascular	✓	✓	✓	✓	✓	✓

Return transfers to referring hospital

When all initial definitive care interventions are completed and the patient is deemed clinically stable for transfer by the treating team (Consultant), it is expected the transfer back to the referring hospital or home be arranged.

This should occur without delay to allow for further bed capacity at the major trauma centre.

In addition, secondary and/or staged procedures may be referred to a regional hospital where possible, to assist in keeping the patient closer to home, and avoiding unnecessary long-distance aeromedical transfers.

Statewide escalation points

The following trigger points for escalation have been developed as a guide for when and what strategies should be implemented to support an increased COVID caseload across the system. At all times, decision making requires consideration of ICU bed capacity.

The escalation trigger points (as outlined in Table 2) consist of four levels with the case numbers aligned to Queensland ICU planning.

The decision to move between escalation points will be determined on advice from the Chief Health Officer or other nominated delegate.

Table 2 – Escalation Points

System State	Average new cases per day	COVID ICU admissions / beds	Total ICU admissions / beds	Trauma Requirements
WITHIN CAPACITY	Up to 500	Less than 75	Less than 225	• Utilise usual referral pathways.
MEETING CAPACITY	1,100	Up to 150	Up to 300	• Utilise regional services capability for primary transfers and step downs, as clinically appropriate.
STRETCHED CAPACITY	2,100	Up to 300	Up to 450	• Consider private capacity for inpatient management and rehabilitation beds.
BEYOND CAPACITY	More than 2,100	More than 300	More than 450	• Utilise any facility with the required services, even if not within usual referral pathway. • Major trauma centres to provide remote clinical support as required.

Within capacity –

- All current referrals to major trauma centres to follow usual pathways
- All major trauma to continue to be managed in the public sector.

Meeting capacity –

- COVID-19 trauma response group (CTRG) to be stood up.
- All public facilities to utilise 100% existing capacity, including critical care in non-ICU areas as per local surge plans.
- Consider referrals to larger regional facilities, where appropriate, for definitive care, secondary and staged procedures or stepdown, ward-based care.

Stretched capacity –

- The acute phase of trauma management to be maintained in the public sector, where possible.
- Load sharing of patients with other Queensland Health facilities.
- Load shedding to private facilities, where possible, for ward-based and rehabilitation care once public options are exhausted.

Beyond capacity –

- All major trauma patients to be provided definitive care at any available hospital (public or private) with capability, irrespective of the usual referral pathway.
- Additional support and consultation from the major trauma centres to be provided to regional and rural centres, including support for the ongoing care of step-down trauma patients.
- National load sharing where appropriate

Communication strategy

In the event of reaching the 'meeting capacity' escalation point, the COVID-19 Trauma Response Group (CTRG) will be stood up.

The CTRG will be responsible for monitoring the COVD-19 situation closely and providing ongoing advice regarding trauma pathways in Queensland in accordance with the above guidelines. The CTRG will act as the key mechanism for communicating information regarding the pandemic response for trauma services.

The CTRG will be comprised of:

- Chair, Statewide Trauma Clinical Network (Chair)
- Queensland Directors of Trauma for all major trauma centres
- A nominated contact person from each regional hospital
- Queensland Ambulance Services (QAS) representative
- Retrieval Services Queensland (RSQ) representative
- Clinical Excellence Queensland (CEQ) representative (Executive Director/Senior Director)

Meetings will be arranged and recorded via Teams on a regular basis, dependent on COVID-19 case numbers.

The chair of the CTRG will report via Clinical Excellence Queensland to the State Health Emergency Coordination Centre (SHECC).

Version	Date	Author	Changes	Date approved by CSRG	Proposed Review Date
0.1	01/11/2021	Statewide Trauma Clinical Network	Document initiated		
0.2	04/11/2021	Statewide Trauma Clinical Network	Incorporated feedback from STCN Steering committee		
0.3	10/12/2021	Statewide Trauma Clinical Network	Incorporated feedback from major trauma centres	23/12/2021	24/06/2022