Te Hononga Whētuki ā-Motu
National Trauma Network

Health Quality & Safety Commission New Zealand
Kupu Taurangi Hauora o Aotearoa

Meeting Minutes

Meeting:	**Critical haemorrhage project expert reference group meeting**
Location:	Via Zoom.
Date:	Tuesday 25 August 2020
Time:	9.00 - 11.00
Attendees:	Kerry Gunn (Chair), Dominic Fleischer, James Moore, Susan Mercer, David Drower, Tony Smith, Andy Swain, Gabrielle Nicholson, Paul McBride, David Lang, Caroline Gunn, Renate Donovan, Orla Fowden, Richard Aickin, Sandy Ngov (Minutes)
Apologies:	Ian Civil, David O'Byrne, Jack Hill, Richard Charlewood, Christopher Jephcott

Discussion	Actions/ Follow up
Introduction Minutes and actions from last meeting approved.	
Approved deliverables to date Infographic and project plan - The infographic is on the website now. The project plan (with the updated theory of change diagram) will be published on the site in the next week. Narrative/short review paper - Following feedback from this group, this has been shared with the wider ERG for additional input. A final version will be published on the website in the next two weeks. The group noted that approved minutes from this group's meetings are also up on the website in order to ensure transparency.	
Quality improvement indicators/metrics Update on data matching: There are delays on all data request streams. - NZBS: Progressing a data request with Richard C. Follow up needed once he returns from leave. - ANZMTR: Pending at their end due to lockdown in Victoria. At this stage no clear indication of when we will receive this. - St John/WFA: Approvals are in place however we expect a three-week delay in receiving data. Discussion on adding new points to the NZTR (trauma registry): - Additional points will not help us to form the baseline understanding/denominator (this is where we need to link existing datasets).	1. Paul, Kerry and David to work together to develop proposal re potential new critical haemorrhage specific data points on the NZTR to discuss at the next meeting (the updated version of which will then be taken to the NZTR Data Governance Group).

Discussion	Actions/ Follow up
- Consideration needs to be given to the additional workload required to collect new data points.	
Guidance and bundle *Presentation shared with the group.* A list of bundle recommendations was sent to this group for review/endorsement. Further discussion on how the following should be included in the bundle recommendations: 1. Define specific patient group: - Confirmed that this bundle is being developed for an adult pathway. Any deliverables will explicitly state this. There will be differences for paediatric patients; will consult and refine for this patient group offline. - Permissive hypotension should be excluded for children. 2. Control of bleeding: - The group agree to keep immediate bleeding control procedures generic as this process is too complicated to create a set rule. This allows for what is available in the hospital, leaving it to the team looking after the patient to make the decision. 3. Laboratory markers: - A high haemoglobin is not a useful marker in severe bleeding if you are resuscitating patients with blood. - The group agrees the clinical utility of laboratory screening for suspected anticoagulant agents may not be useful; as some patients come in and cannot give an accurate treatment history. Similarly, for the use of point of care platelet function devices in patients with suspected platelet dysfunction. 4. Vital signs: - There is variation for permissive hypotension across people's lifespans (difficult to have a target when you don't know what the patients usual BP is). This may lead to certain adverse outcomes (e.g., neurological). - The group suggests avoiding prolonged permissive hypotension but instead ensure a short timeframe to definitive intervention (and normalisation of perfusion). - Severe TBI should be defined by the motor score component of Glasgow Coma scale (GCS) rather than the total GCS score. - **Note:** The ambulance sector has moved away from targeted numbers for blood pressure and towards recognising signs of shock. Further discussion can be had with the ambulance sector should this group/project choose to recommend having targeted numbers for best practice guidance. 5. Fluid resuscitation: - The group agrees all fluids and patients should be actively warmed whenever feasible. This is in line with feedback from the NetworkZ simulation trainings. - The group agrees synthetic colloids should not be used during resuscitation. 6. Damage control resus/surgery:	2. Tony Smith to have offline discussion with ambulance medical directors re pre-hospital management. 3. Kerry to discuss nuances of paediatric pathway offline with Richard. 4. Kerry to have offline discussion with Chris J re TXA volume.

Discussion	Actions/ Follow up
- Noted that room temperature cannot be controlled in many environments. - The group agrees the guideline should specify the use of warming devices/equipment so it can be mandated at an organisational governance level; e.g., fluid warmers or warming device underneath the patient that stays with the patient from point of injury to in-hospital care. - The group agrees to keep details on damage control surgery generic. 7. TXA (Tranexamic acid): - Include advice that an infusion should commence as soon as possible, as this is the step that typically fails. - Discussion on utility of the 3-hour post injury timeframe: Current guidelines advise staff to administer TXA within 3 hours of injury. Recent studies have shown there is no difference in outcomes for patients who have received TXA after the 3-hour period. The group agrees the bundle should promote the early administration of TXA but needs to give consideration to advice if the first dose cannot be given within 3-hours post injury. 8. Blood and Blood products: - Discussion on whole blood: Working group continued an offline discussion and confirm that it is currently unfeasible to provide non-leuco-depleted/whole blood to hospitals given the limitations to implement. - The group agrees progress on this issue requires a shift from role defined (Dr only) delivery or system defined delivery (helicopter ambulances only) of whole blood. - The groups agree in lieu of above the bundle should promote pre-thawed fresh frozen plasma availability. - Include a statement to discourage unnecessary volumes of crystalloid. If volume is required, then blood should be used instead. - NZBS formally endorses the use of the normal saline to be used with blood. Plasmalyte may also be used. - **Note:** Notwithstanding above, we recognise that unless an alternative fluid is readily/rapidly available clinicians will continue to use whatever tool they have available (including crystalloid). 9. Notification of receiving hospital: - The group agrees the importance to activate the bundle system before arrival to hospital. - **The group endorses Code Crimson as the activation term for the critical bleeding bundle.** - Discussion on destination policies: The group agrees we cannot have a black and white rule for these patients. We can only require patients with significant signs of bleeding to be moved to a tertiary hospital when safe and feasible to do so. - In the upcoming review of the destination policies this should be raised. Tony will progress this as member on the working group. Feedback on draft NZ National Trauma Code Crimson MTP flowchart:	

Discussion	Actions/ Follow up
Discussion on ABC score: - There are instances where administration of blood outside of hospital to patients who do not have an ABC score can also be appropriate. Just using ABC score to activate, there will be a group of patients who will not get blood. - By changing the components of the score, we cannot refer to this approach as ABC score, and therefore cannot benchmark again other activation systems using the ABC score. - ABC scoring can be variable with age (e.g., younger patients often have systolic blood pressure over 90 even when seriously injured). - **Note:** Pre-hospital care is likely to introduce ultrasound in the next three years, however we should expect a slow uptake. **Further discussion needed.**	
Process improvement of time and delivery targets Discussion on time benchmarks & activation/communication process in Bundle: - Quality improvement measures will focus on delivery of products and time to sentinel events. Discussion regarding the forthcoming update to the destination protocols (being managed by the National Trauma Network). Kerry will progress discussions offline and bring a proposal back to the next meeting.	5. Kerry to work with key ERG members offline to develop destination protocol update recommendations for submission to the National Trauma Network.
Comms Sector engagement, e.g. regional trauma networks: - Project team are set to meet with regional trauma networks in early September to start socialising the direction of this work, and next steps to support implementing the bundle/integrating into their existing systems. Process for project rollout/implementation: - Aim for the guidance and bundle completion by the end of October, to be then followed by an implementation phase.	
Other business	
Close – Next meeting scheduled for 17 September 2020.	