Supplemental Digital Content 1. PICOS for each clinical practice

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| # | Clinical practice |
| 1 | *Population*: adults with acute mild traumatic brain injury  *Intervention*: CT in patients at low-risk on a validated clinical decision rule (e.g. CCHR, CHIP, NEXUS II, NOC)  *Comparator*: none  *Primary Outcome*: intracranial injury  *Secondary Outcomes*: neurosurgical intervention  *Study design*: systematic review |
| 2 | *Population*: adults with acute mild complicated traumatic brain injury (abnormal initial head CT)  *Intervention*: routine repeat head CT in absence of neurological deterioration  *Comparator*: none or no repeat head CT in absence of neurological deterioration  *Primary Outcome*: progression of intracranial injury  *Secondary Outcomes:* neurosurgical intervention, mortality, change in management, hospital length of stay  *Study design*: systematic review |
| 3 | *Population*: adults with acute mild traumatic brain injury and on anticoagulant and/or antiplatelet therapy (normal initial head CT)  *Intervention*: : routine repeat head CT in absence of neurological deterioration  *Comparator*: none or no repeat head CT in absence of neurological deterioration  *Primary Outcome*: progression of intracranial injury  *Secondary Outcomes:* neurosurgical intervention, mortality, change in management, hospital length of stay  *Study design*: systematic review |
| 4 | *Population*: adults with acute mild traumatic brain injury with normal head CT  *Intervention*: neurosurgical consultation  *Comparator*: none or no neurosurgical consultation  *Primary Outcome*: hospital admission  *Secondary Outcomes:* neurosurgical intervention, mortality, ICU admission, repeat head CT, hospital length of stay  *Study design*: systematic review |
| 5 | *Population*: adults with acute mild complicated traumatic brain injury who are not on irreversible anticoagulation (GCS 13-15 with abnormal head CT)  *Intervention*: intensive care unit admission  *Comparator*: admission to regular ward or step-down unit  *Primary Outcome*: neurological/medical decline, neurosurgical intervention  *Secondary Outcomes:* medical interventions, mortality, adverse events, hospital length of stay, discharge destination  *Study design*: systematic review |
| 6 | *Population*: adults with acute severe traumatic brain injury  *Intervention*: albumin  *Comparator*: any other colloid-containing fluids (dextrans, modified gelatins, hydroxyethyl starches) or isotonic crystalloid fluids (saline 0.9% and balanced salt solutions such as compound sodium lactate, Plasma-Lyte)  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 7 | *Population*: adults with acute traumatic brain injury  *Intervention*: plasma transfusion  *Comparator*: no plasma transfusion  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 8 | *Population*: adults with acute traumatic brain injury on antiplatelet therapy  *Intervention*: platelet transfusion  *Comparator*: no platelet transfusion  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 9 | *Population*: adults with basal skull fractures with or without evidence of cerebrospinal fluid leakage  *Intervention*: antibiotic prophylaxis  *Comparator*: no antibiotic prophylaxis  *Primary Outcome*: meningitis  *Secondary Outcomes:* GOS or GOS-E, mortality, surgical correction in patients with CSF leakage, non-CNS infection, hospital and ICU length of stay  *Study design*: systematic review |
| 10 | *Population*: adults with acute traumatic brain injury  *Intervention*: antibiotic prophylaxis for external ventricular drain placement  *Comparator*: no antibiotic prophylaxis  *Primary Outcome*: ventriculostomy-related infection  *Secondary Outcomes:* GOS,mortality, hospital and ICU length of stay  *Study design*: systematic review |
| 11 | *Population*: adults with acute severe traumatic brain injury  *Intervention*: antiseizure prophylaxis (levetiracetam or phenytoin) >1 week  *Comparator*: antiseizure prophylaxis <1 week or no antiseizure prophylaxis  *Primary Outcome*: late post-traumatic seizure  *Secondary Outcomes:* GOS or GOS-E, mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 12 | *Population*: adults with acute traumatic brain injury and no refractory intracranial hypertension  *Intervention*: neuromuscular blocking agents  *Comparator*: no neuromuscular blocking agents  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* intracranial pressure, mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 13 | *Population*: adults with acute traumatic brain injury and no refractory intracranial hypertension  *Intervention*: therapeutic hypothermia  *Comparator*: no therapeutic hypothermia  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* intracranial pressure, mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |
| 14 | *Population*: adults with acute severe traumatic brain injury with refractory intracranial hypertension  *Intervention*: decompressive craniectomy  *Comparator*: any other intervention  *Primary Outcome*: GOS or GOS-E  *Secondary Outcomes:* intracranial pressure, cerebral perfusion pressure, mortality, adverse events, hospital and ICU length of stay  *Study design*: systematic review |

CCHR, Canadian Computed Tomography Head Rule; CHIP, Computed Tomography in Head Injury Patients; CNS, central nervous system; CSF, cerebrospinal fluid; CT, computed tomography; GOS, Glasgow Outcome Scale; ICU, intensive care unit; NEXUS, National Emergency X-Radiography Utilisation Study; NOC, New Orleans Criteria