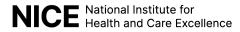
Algorithm 1: selecting people 16 and over for a CT head scan

Person 16 or over presenting to the emergency department with a head injury Are any of these risk factors present: • a GCS score of 12 or less on initial assessment in the emergency department • a GCS score of less than 15 at 2 hours after the injury on assessment in the emergency department suspected open or depressed skull fracture • any sign of basal skull fracture (haemotympanum, 'panda' eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign) • post-traumatic seizure focal neurological deficit more than 1 episode of vomiting Is there loss of consciousness or amnesia since the head injury? Yes Are any of these risk factors present: age 65 years or over · any bleeding or clotting disorders (liver failure, haemophilia, taking anticoagulants or antiplatelets) dangerous mechanism of injury (a pedestrian or cyclist struck by a motor vehicle, an occupant ejected from a motor vehicle, or fall from a height of more than 1 m or 5 stairs) more than 30 minutes' retrograde amnesia of events immediately before the head injury Yes **Are they taking anticoagulants** (including vitamin K antagonists, direct-acting oral anticoagulants, heparin and low molecular weight heparins) or antiplatelets (excluding aspirin monotherapy)? Do a CT head scan within 1 Do a CT head scan within 8 CT head scan Consider a CT head scan hours of the injury, or within within 8 hours of injury, or hour of any of the risk not needed 1 hour if they present more within 1 hour if they present factors being identified more than 8 hours after than 8 hours after injury injury Make a provisional written Make a provisional written radiology report available radiology report available Make a provisional written within 1 hour of the scan within 1 hour of the scan radiology report available within 1 hour of the scan

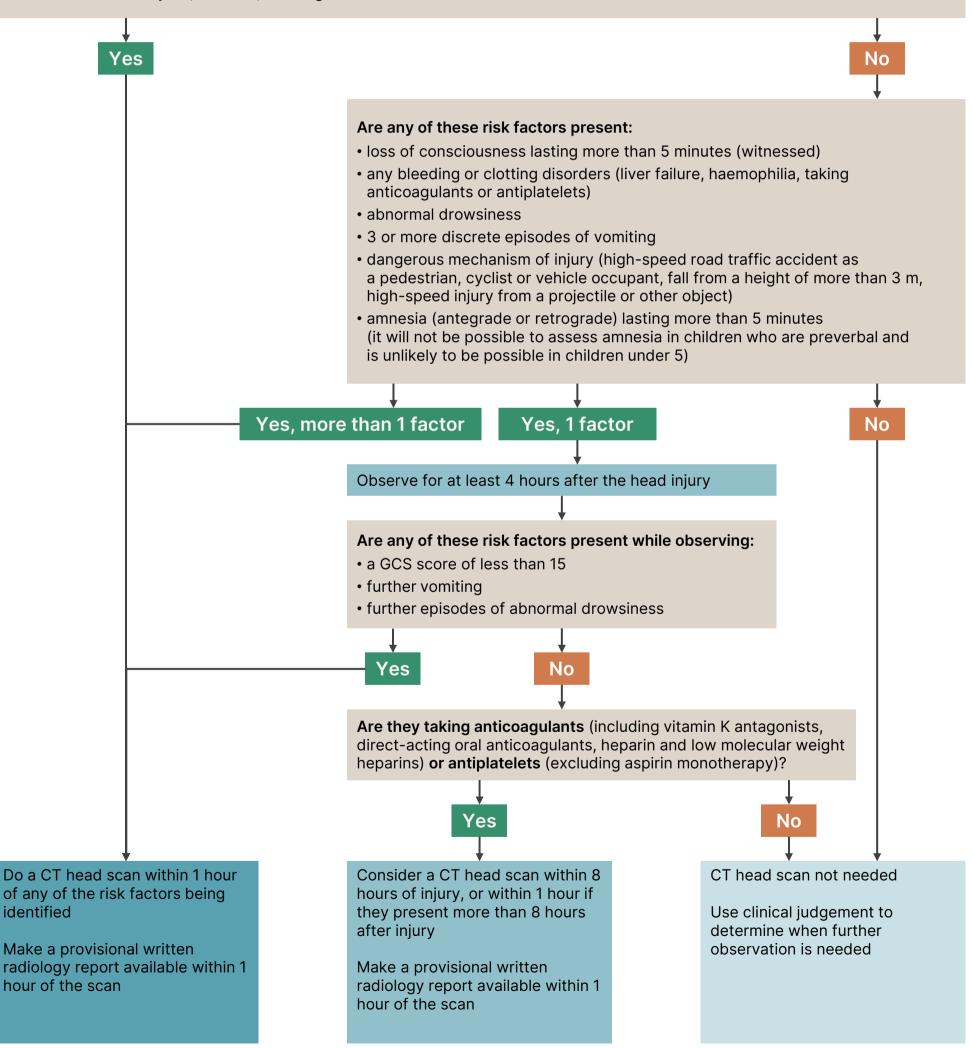


Algorithm 2: selecting people under 16 for a CT head scan

Person under 16 presenting to the emergency department with a head injury

Are any of these risk factors present:

- suspicion of non-accidental injury
- post-traumatic seizure but no history of epilepsy
- a GCS score of less than 14 or, for children under 1, a GCS (paediatric) score of less than 15, on initial assessment in the emergency department
- a GCS score of less than 15 at 2 hours after the injury
- suspected open or depressed skull fracture, or tense fontanelle
- any sign of basal skull fracture (haemotympanum, 'panda' eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign)
- focal neurological deficit
- for children under 1 year, a bruise, swelling or laceration of more than 5 cm on the head

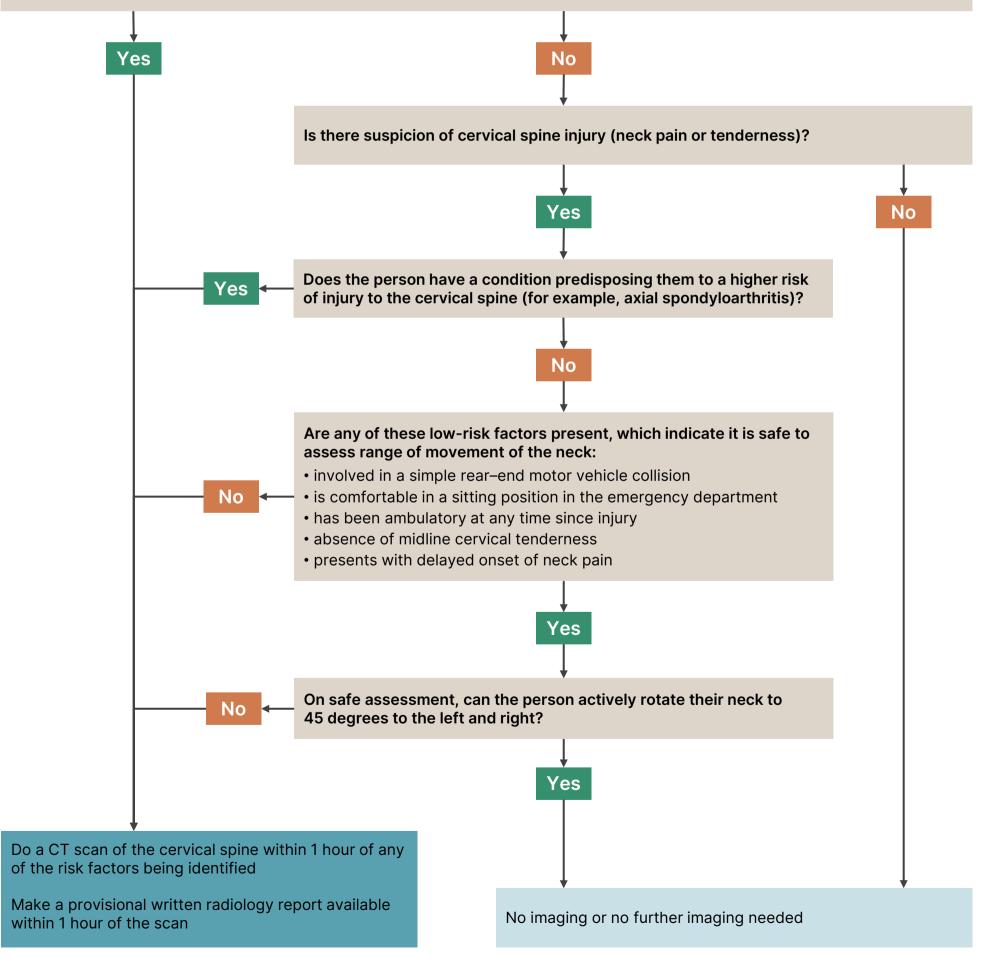


Algorithm 3: selecting people 16 and over for imaging of the cervical spine

Person 16 or over presenting to the emergency department with a head injury

Are any of these high-risk factors present:

- a GCS score of 12 or less on initial assessment
- intubation
- a definitive diagnosis of cervical spine injury is needed urgently (for example, if cervical spine manipulation is needed during surgery or anaesthesia)
- clinical suspicion of cervical spine injury and other body areas are being scanned for a head injury or multiregion trauma
- they are alert and stable, there is suspicion of cervical spine injury and any of these factors:
 - age 65 years or over
 - dangerous mechanism of injury (fall from a height of more than 1 m or 5 stairs, axial load to the head such as from diving, high-speed motor vehicle collision, rollover motor accident, ejection from a motor vehicle, accident involving motorised recreational vehicles, bicycle collision)
 - focal peripheral neurological deficit
 - paraesthesia in the upper or lower limbs



Algorithm 4: selecting people under 16 for imaging of the cervical spine

Person under 16 presenting to the emergency department with a head injury

Are any of these high-risk factors present:

- a GCS score of 12 or less on initial assessment
- intubation
- a definitive diagnosis of cervical spine injury is needed urgently (for example, if cervical spine manipulation is needed during surgery or anaesthesia)
- clinical suspicion of cervical spine injury and other body areas are being scanned for a head injury or multiregion trauma
- focal peripheral neurological signs
- paraesthesia in the upper or lower limbs

