Is the patient alert and cooperative with a GCS ≥14?

Yes

No

Are any of the following high risk features present?

History:

- Persistent neck pain
- High risk MVA*
- Substantial torso injury
- Axial load to head (e.g. diving)
- Predisposing conditions**

Exam:

- Focal neurological deficit (See Appendix 1 American Spinal Injury Association (ASIA) classification)[7]
- Torticollis
- Abnormal head posture
- Posterior midline c-spine tenderness
- Limited range of movement
- Unexplained hypotension

No

C-spine can be cleared without imaging

Document this in patient notes

Is there potential to improve mental status to GCS 14 -15?

No

CT

Yes

X-ray

AP, lateral and odontoid view if cooperative
Review images with Senior Clinician

Yes

Is the X-ray abnormal?

Is it an inadequate study?

Is there ongoing suspicion of c-spine injury?

Consider further imaging with CT or MRI in discussion with Senior ED Clinician and Orthopaedics

Consider CT if:

- GCS <8 and reasonable suspicion for injury
- If another regional CT is indicated (especially head)
- *High risk mechanism of injury
  - Axial load
  - Forced neck hyperflexion
  - High-risk MVA – head-on collision, rollover, ejection, speed >88km/hr, substantial torso injury
- Persistent focal neurological deficit

****Conditions pre-disposing to cervical spine injury:**

- Trisomy 21
- Osteogenesis imperfecta
- Previous c-spine surgery
- Achondroplasia
- Other congenital, metabolic, rheumatological or genetic conditions