Calderdale and Huddersfield NHS Foundation Trust

STANDARD OPERATING PROCEDURE: Cervical Spine Injury

Title	**Sequence for managing suspected cervical spine injury in emergency department.**
Purpose	This procedure describes the current best practice with regard to assessment and management of suspected cervical spine injury in the emergency department
Scope	This applies to patients brought in by ambulance and self-presenting patients who have been involved in an accident and could have sustained a cervical spinal injury
Responsibilities	All Medical & Registered Nursing Staff who are involved in initial assessment of trauma patients

Suspected cervical spine injury

Assess the person with suspected cervical spine injury using the factors below

Check if the person:

1. Has any significant distracting injuries

2. Is under the influence of drugs or alcohol

3. Has reduced GCS- Is confused, uncooperative or unconscious

4. Has any spinal pain

5. Has any hand or foot weakness (motor assessment)

6. Has altered or absent sensation in the hands or feet (sensory assessment)

7. Has priapism (unconscious or exposed male)

8. Has a history of past spinal problems, including previous spinal surgery or conditions that predispose to instability of the spine.

Carry out full in-line spinal immobilisation if any of the factors are present or if this assessment cannot be done.

The Canadian C-spine rule

Assess whether the person has a high- or low-risk factor for cervical spine injury using the Canadian C-spine rule as follows:

High-risk factor	Low-risk factor
• Age 65 years or older • Dangerous mechanism of injury as below • Fall from a height of greater than 1 metre or 5 steps • Axial load to the head – for example diving • High-speed motor vehicle collision, rollover motor accident, ejection from a motor vehicle, accident involving motorised recreational vehicles, bicycle collision, horse riding accidents • Paraesthesia in the upper or lower limbs	• Involved in a minor rear-end motor vehicle collision • Comfortable in a sitting position • Ambulatory at any time since the injury • No midline cervical spine tenderness • Delayed onset of neck pain • Unable to actively rotate their neck 45 degrees to the left and right (the range of the neck can only be assessed safely if the person is at low risk and there are no high risk factors).

Be aware that applying the Canadian C-spine rule to children is difficult and the child's developmental stage should be taken into account

Carry out or maintain full in-line spinal immobilisation and request imaging if:

A high risk for cervical spine injury is indicated and identified by the Canadian C-spine rule, or a low risk for cervical spine injury is indicated and the person is unable to actively rotate their neck 45 degrees left and right.

Do not immobilise the cervical spine or request imaging for people who have low-risk factors for cervical spine injury, are pain free and are able to actively rotate their neck 45 degrees left and right.

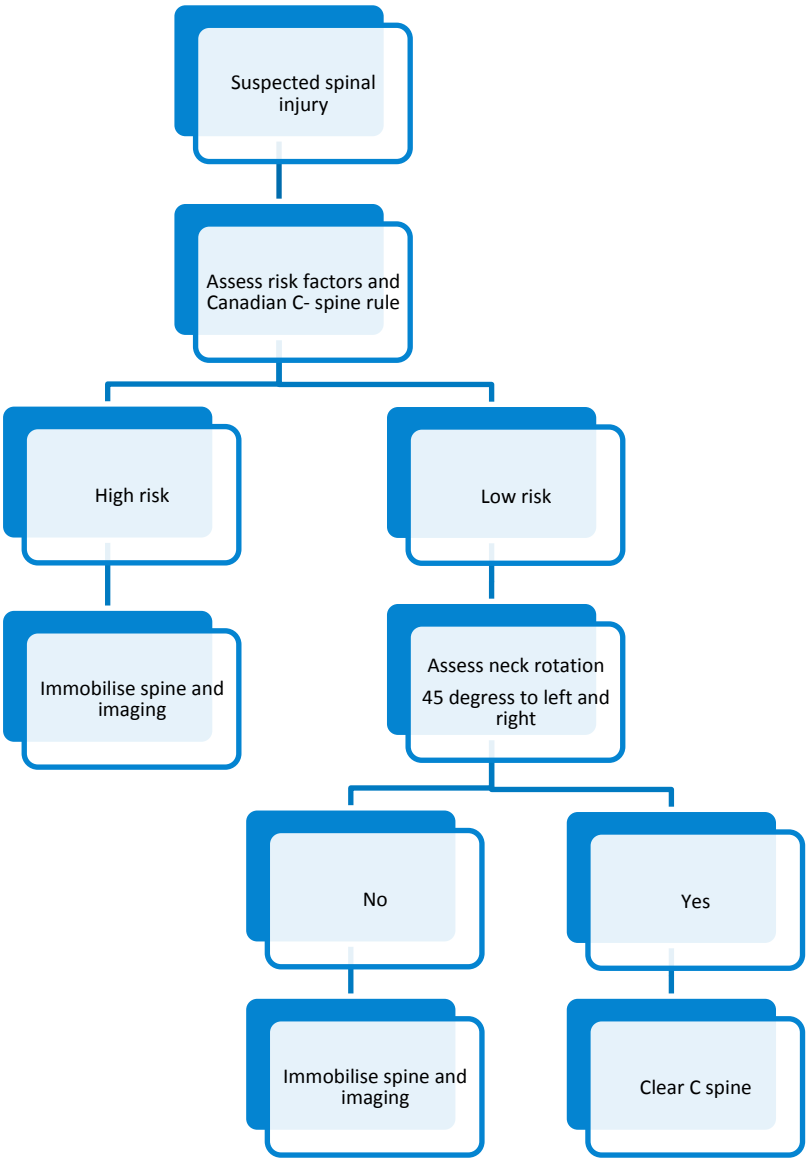

Figure 1: Sequence to assess and manage cervical spine injury

X-ray of the C spine is the first line radiological investigation. Consider CT of the neck if they require CT head or a full trauma CT.

Patient to remain immobilised if they have a reduced GCS even if the C spine X-ray or CT scan is normal. They can still have SCIWORA- spinal cord injury without radiological abnormality.

C spine can only be cleared if there is no radiological evidence of injury, normal GCS, no neurological deficit and can actively rotate their neck 45 degrees left and right.