**Pediatric Cervical Spine Clearance Working Group Algorithm**

**GCS 14 or 15**

- **History**
  - Child/parent reports persistent neck pain, abnormal head posture, or difficulty with neck movement
  - History of focal sensory abnormality or motor deficit

- **Physical Exam**
  - Torticollis/abnormal head position
  - Posterior midline neck tenderness
  - Limited cervical range of motion
  - Not able to focus due to other injuries
  - Visible known substantial injury to chest, abdomen, pelvis

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**Options:**
1. Clear c-spine if exam findings resolve
2. Obtain flexion/extension radiographs
3. Maintain collar, re-evaluate in 2 weeks
4. Spine consult

**GCS 9-13**

- Potential to improve mental status to a GCS 14-15?
  - Yes
  - **Normal radiograph**
    - (lateral view minimum)
  - **Abnormal radiograph**
    - Repeat clinical exam within 12h
  - **Normal**
  - **Abnormal**
  - Repeat clinical exam

**GCS ≤8**

- & reasonable suspicion for c-spine injury

**CT**

- Abnormal

**Plain radiograph**

- (lateral view minimum)
  - Abnormal
  - Repeat clinical exam within 12h
  - **Normal**
  - **Abnormal**

**Static MRI**

- Abnormal
  - **Normal**
  - **Abnormal**
  - Repeat clinical exam
  - **Normal**
  - **Abnormal**

**Patient has improved to GCS 14/15?**

- Yes
- No

**Clear c-spine**

- **No**
  - Spine consult
- **Yes**
  - Spine consult

**Normal**

- Yes
- No

**Abnormal**

- Yes
- No

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*Stronger consideration for imaging should be given towards patients with the following mechanisms of injury (MOI): diving, axial load, clothes-lining, and high risk MVC (HR-MVC); however, the literature findings are controversial. HR-MVC is defined as head-on collision, rollover, ejected from the vehicle, death in same crash, or speed >55mph

**Substantial injury is defined as an observable injury that is life-threatening, warrants surgical intervention, or inpatient observation.**

#All imaging should be read by an attending radiologist.

+Adequate flexion/extension is defined as ≥30 degrees of both flexion and extension.

++Patient has achieved GCS 14-15 and no longer presents with abnormal head posture, persistent neck pain, or difficulty in neck movement.