



## Southeast Minnesota Regional Trauma Advisory Committee (SMRTAC)

### Practice Management Guideline

#### *Indications for Head CT in Injured Children*

<b>Pediatric Practice Management Guideline</b>	<b>Effective: 11/2011</b>
<b>Contact: SMRTAC Coordinator</b>	<b>Last Reviewed:</b>

#### Purpose

To delineate indications for obtaining head CT imaging in injured children.

#### Definitions

1. Pediatric trauma patient – any patient < 15 years of age who had sustained an injury.

#### Policy Statements

1. Traumatic brain injuries are the leading cause of death and disability in children.
2. There is growing recognition of potential untoward effects of ionizing radiation on the developing brain.
3. Clinical decision making regarding imaging in children must always include consideration of importance of injury identification in addition to radiation exposure risk.
4. Transfer should never be delayed for imaging.
5. If the decision to transfer has already been made, strong consideration should be given to not doing any radiographs prior to transport.
6. If images are not able to be shared with the receiving hospital in an expeditious manner, strong consideration should be given to not doing any radiographs prior to transport.

#### Procedure Statements

1. All pediatric trauma patients should have a primary and secondary survey examination following ATLS/CALS guidelines which includes global neurologic assessment, level of consciousness (AVPU) and determination of a Glasgow Coma Score or Pediatric Glasgow Coma Score.
2. In patients who meet any of the following criteria head CT may be considered only if it will not delay transfer, can be shared with the receiving pediatric trauma center in an expeditious way, and after consultation with the receiving physician:
  - a.  $GCS \leq 13$
  - b. Signs of open, depressed, or basilar skull fracture
  - c. Other signs of altered mental status (agitation, somnolence, vomiting, or slow response to verbal communication despite GCS of 14 or 15)
3. Patient must be monitored continuously while in CT.
4. If procedural sedation would be required to obtain images, consider transfer to a higher level of pediatric trauma care in lieu of sedation.

**Resources/Links**

Kupperan, N., Holmes, J., et al. Identification of children at very low risk of clinically-important brain injuries after head trauma: a prospective cohort study. *Lancet*. 2009;374: 1160-70

<b>Prepared by: SMRTAC leadership</b>
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Disclaimer: This is a general guideline and is not intended as a substitute for clinical judgment or as a protocol for the management of all patients with head injury.