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Intensive Care Services for The Pediatric Trauma Patient



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Intensive Care Services for the Pediatric Trauma Patient

The main characteristic required of any trauma center that cares for seriously injured children is the dedication of resources necessary to provide for the specialized needs of the pediatric trauma population. As California has limited pediatric resources, every effort should be made to assure that critically injured pediatric patients are managed in a facility offering the highest level of pediatric critical care services available. Local EMS Agencies should work collaboratively with local and regional trauma centers as well as community hospitals to establish working relationships with each other to ensure that quality pediatric trauma care appropriate to the needs of the injured children is available. This may include the development of appropriate guidelines for prehospital triage and interfacility transfer of pediatric trauma patients based on available local and regional resources.

Local EMS agencies and facilities caring for the pediatric patient may define “pediatric” as anywhere between birth and 21 years of age. However, for the purposes of this document, a pediatric trauma patient is an injured child of less than 15 years of age. Not all injured children transported to a trauma center will require intensive care. However, when indicated, pediatric intensive care (as defined below) should optimally take place in a Level I or II pediatric trauma center (PTC) or in a Level I or II trauma center with a California Children’s Services (CCS) approved pediatric intensive care unit (PICU). Given the limited number and geographic distribution of children’s hospitals, not all severely injured pediatric patients will have access to a PTC; however, there are additional resources for the care of these pediatric patients at trauma centers with a CCS approved PICU.

This document is meant to provide guidelines for those instances when pediatric trauma patients do not have access to the necessary resources and initial trauma care and stabilization occurs in non-trauma hospitals or designated trauma centers without specialized pediatric intensive care services and resources (as defined by California’s Children’s Services).

For the purposes of this document, a pediatric trauma patient is defined as requiring intensive care if any three of the following conditions exist secondary to a traumatic event:

- A Glasgow Coma Score (GCS) of less than or equal to 12 (with no sedation or analgesia medications)
- Invasive monitoring is required
- Vasoactive support is required
- Ventilatory support is required

A pediatric trauma patients requiring intensive care who is less than or equal to 5 years of age are a vulnerable group who often require pediatric subspecialists for their management. Thus these children optimally should be managed in or transferred to:

Choice 1: Level I or II PTC

Choice 2: Level I or II Trauma Center with CCS approved PICU

However, if safety and risk of transfer outweighs the patient care benefit, choice 3 or 4 may be appropriate:

- Choice 3: Level I or II Trauma Center
- Choice 4: Non-Trauma Center with CCS approved PICU

If the pediatric trauma patient greater than 5 years of age requires intensive care, then the child should be managed in or transferred to one of the following facilities based on available resources:

- Choice 1: Level I or II PTC, Level I or II Trauma Center with CCS approved PICU
- Choice 2: Level I or II Trauma Center
- Choice 3: Non-Trauma Center with CCS approved PICU

A quality improvement/performance improvement process for all pediatric trauma patients requiring intensive care should be integrated into the hospital, trauma, and pediatric Quality Improvement programs including the submission of appropriate data to local/regional and state trauma registries.

Definitions:

1. A Level I or II PTC is defined as a licensed hospital which has been designated as a Level I or II pediatric trauma center by the local EMS Agency as specified in California Title 22 Regulations 100261 and 100262
2. A Level I or II trauma center is defined as licensed hospital which has been designated as a Level I or II trauma center by the local EMS agency as specified in California Title 22 Regulations 100259 and 100260 and meeting the following additional criteria. Level I and II trauma centers shall typically be a trauma center capable of treating injured children and have appropriate pediatric equipment and supplies and be capable of initial evaluation and treatment of pediatric trauma patients. Trauma centers without a PICU, shall establish and utilize written criteria for consultation and transfer of pediatric patients needing intensive care.
3. A CCS approved PICU is defined as a PICU approved by CCS.

References

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- Macneil, J. S. (October 2006). Injured Children Fare Better at Specialized Centers: Investigator calls for greater effort to triage most severely injured children to pediatric trauma centers. *Family Practice News*, 35(20), 71.
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