



Special Considerations in Pediatric Trauma

3rd Edition

1

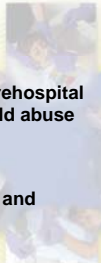
Special Considerations



• Objectives

- Identify the unique aspects of children with special health care needs
- Discuss resuscitation guidelines and interventions for newly born infants
- Discuss the role and responsibility of prehospital providers who encounter suspected child abuse
- Describe "red flags" that suggest non-accidental injury
- Discuss recommendations for notifying and assisting the family of a child who dies

2



Special Considerations



• Case Study Scenario

- Scene of a school where a 5-year-old child who has fallen and struck his head
- Child has a history of ventriculoperitoneal (VP) shunt placement as an infant
- Child has become progressively sleepy and has vomited several times



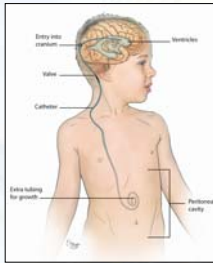
3

Special Considerations



• You arrive at the scene

- How should you approach this patient?
- What specific concerns does this child raise?
- What is a VP shunt and how does it affect the way you care for the patient?
- What is your best and quickest resource?



4

Special Considerations



• Children with Special Health Care Needs (CSHCN)

- Many children have significant medical histories
 - Infants - nonverbal
 - Children - poor historians
- Where do you get information?



5

Special Considerations



• CSHCN Patient Considerations

- Families can provide valuable information
- What do you ask?
 - SAMPLE history
 - Birth history
 - Special devices



6

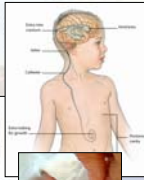
Special Considerations



• CSHCN Patient Considerations

– Specialized medical equipment:

- Tracheostomy tube
- Central venous access device
- Feeding catheter
 - Nasal/oral
 - Gastric
- VP shunt



7

Special Considerations



• CSHCN Patient Considerations

– Assessment should always include functional status of specialized equipment

– Evaluate for:

- DOPE and infection
- D – Displacement
- O – Obstruction
- P – Pneumothorax, pulmonary problems, peritonitis, perforation, etc.
- E – Equipment failure



8

Special Considerations



• Trauma in the Newborn

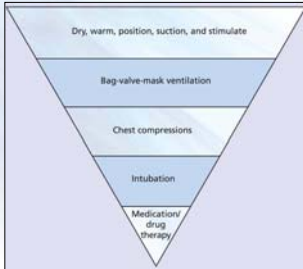
- Trauma is the primary cause of morbidity, mortality among pregnant women
- Always assume the fetus is alive in the prehospital setting
- Refer to the neonatal resuscitation inverted pyramid to determine interventions necessary for newly born infants
 - Most need only drying, warming, and suction before placing on mother's chest

9

Special Considerations



• Neonatal Resuscitation Inverted Pyramid



10

Special Considerations



• Initial Stabilization and Assessment

- Is the gestation at term (greater than 37 weeks)?
- Is the amniotic fluid clear?
- Is the baby actively crying or breathing?
- Does the baby have good muscle tone?



11

Special Considerations



• Abnormal Assessment of a Newborn

- **Airway:**
 - Sniffing position to maintain
- **Breathing:**
 - Administer oxygen by blow-by technique
 - Bag-valve-mask ventilation
- **Circulation:**
 - Start chest compressions when airway maneuvers and 30 seconds of positive-pressure ventilation fail
 - Thumb technique or 2-finger technique
- **Drug Therapy:**
 - IV/IO or UVC delivery

12

Special Considerations



• Child Abuse

- Child abuse can happen in any family and in any setting
- 3 million reports of suspected child abuse and neglect are made to Child Protective Services in U.S. annually
- 1,500 child deaths were reported in U.S. in 2004 from maltreatment; actual number is thought to be greater



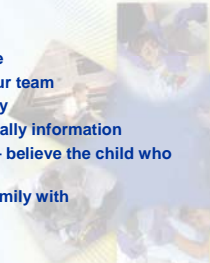
13

Special Considerations



• Prehospital Considerations for Abuse

- Prehospital providers have advantages as gatherers of information
- Remember SPICER:
 - S – Suspect; consider abuse
 - P – Protect the child and your team
 - I – Inspect the child for injury
 - C – Collect evidence, especially information
 - E – Expect the unexpected – believe the child who discloses abuse
 - R – Respect the child and family with non-judgmental care



14

Special Considerations



• Prehospital Considerations for Abuse

- The child's safety is paramount
- Assess the situation and transport the child to the emergency department as soon as possible
- Do not confront family members at the scene
- Listen, remember, and document
- Report all suspected abuse



15

Special Considerations



• Red flags for intentional injury:

- Injury inconsistent with history
- Changing history
- Witness who reports abuse or suspicions of domestic violence
- Inappropriate affect of the historian
- Child who demonstrates excessive fear or withdrawal from particular person(s)
- Child who discloses abuse



16

Special Considerations



• Physical findings of possible abuse:

- Unexplained injuries, abdominal or head trauma
- Marks or burns with appearance of man-made objects on unlikely body surfaces
- Cigarette burns
- Pinch marks
- Adult-sized bite marks
- Immersion burns ("glove" or "sock" pattern)
- Rope burns
- Unexplained mouth or dental injuries, fractures
- Bulging fontanel in infants



17

Special Considerations



• Death of a Child

- One of the most challenging situations for prehospital providers:
 - Intensive medical interventions
 - Overwhelming demands from parents and families
 - Provider's own emotional reaction
 - Balance needs of surviving family, authorities at scene of death



18

Special Considerations



• Death of a Child

– Prehospital providers typically encounter 3 stages of grief with child's family

– 1st Stage: Shock

- Denial, numbness, internal conflict, guilt

– 2nd Stage: Affective or emotional reaction

- Anger, sadness, fear, anxiety

– 3rd Stage: Alpha mourning



19

Special Considerations



• Families' grief reactions:

– Tearfulness or hysterical crying

– Flatness of affect

– Varying and extreme displays of emotion

– Anger or hostility directed at medical care providers

– Feelings of guilt, hopelessness and loss of control

– Be alert for symptoms that require emergency medical evaluation!



20

Special Considerations



• Recommendations for notifying families:

– Never release information to media before family

– Never notify a family by telephone

– A team of at least 2 providers is recommended

- 1 gives information, 1 observes reaction of the family

– Break the news in steps:

1. Confirm identity of family members
2. Tell them there has been an emergency
3. Tell them the situation was so serious that a death occurred and promptly give details about the situation
4. Use the child's name and provide specific, clear information tactfully and honestly

21

Special Considerations



• Care for the prehospital provider

- Often overlooked
- Injured children very stressful

• CISM

- Critical incident stress management and debriefing
- Consider other responding agencies involved in child's care



22

Special Considerations



• Case Study Continued

– ITLS Primary Survey findings:

- Child is very sleepy but arousable
- Airway is open
- Breathing is regular
- Heart rate is 52 bpm
- Blood pressure 120/80



- Child is a priority patient due to altered level of consciousness and underlying medical condition

23

Special Considerations



• Case Study Decisions & Wrap-Up

– Patient management:

- 100% oxygen administered
- Spinal motion restriction applied
- IV started
- Child placed on a monitor for transport with the head of the backboard elevated

– Hospital examination reveals:

- VP shunt disconnected
- Child developed enlarged ventricles
- Emergency surgery necessary

- Patient makes a complete recovery

24

Special Considerations



• Points to Remember

- Perform the Initial Assessment and Rapid Trauma Survey on CSHCN exactly as you would on any other injured child
- The majority of newly born infants require no intervention at birth beyond drying, warming, suctioning the mouth and nose, and placing the baby on the mother's chest



25

Special Considerations



• Point to Remember

- Parents, family members, and close friends may display many different behaviors during the initial stages of grief:
 - Hysterical crying
 - Flatness of affect
 - Anger or hostility toward medical personnel
 - Feelings of guilt, hopeless, or loss of control
- Prehospital providers must be aware of indicators of abuse, recognize high-risk situations, obtain pertinent information, and convey information to the appropriate authorities. Document everything!

26

Questions?



27
