



The Injured Child

3rd Edition

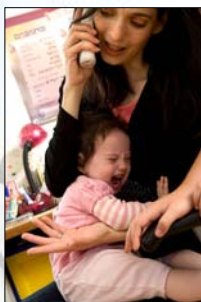
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• Objectives

- Identify factors that are important when dealing with children and their families
- Identify the stages of development in children
- Discuss the importance of understanding mechanisms of injury for traumatic events
- Discuss injury prevention measures



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• Case Study Scenario

- Team called to a motor vehicle collision reportedly involving more than 1 child
- Scene Size-up reveals a minivan with significant damage to the front driver's side of the vehicle with entrapment of passengers
- Two small children secured in child safety seats next to each other in the middle seat
- Both children are crying; one tells team to "Go away!"; other screaming, "I want my mommy."
- Firefighters are extricating an adult female from the driver's seat

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• You arrive on the scene

- How would you approach these patients?
- How do you estimate their age?
- What do you need to understand about the mechanism of injury related to the pediatric patient?



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• Communication is key to care

- Be familiar with the developmental milestones of infants and children
- Understand the basic fears of infants and children



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• Communicating with parents and families

- Treat not only the child but the family
- Families/parents are an integral part of the child's life
 - They know their child best!
Input can be invaluable
- Primary caregiver may not always be the parents



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• Mechanisms of injury also vary by age and affect the child differently

- Motor vehicle collisions
- Auto vs. pedestrian
- Cycling
- Falls
- Abuse
- Drowning
- Firearms



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• Development - Infant

- Birth to 12 months
- Rapid growth and development
- Eye contact, cooing, response to visual stimuli, strong suck
- Sitting, crawling, walking
- Non-verbal



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• Communications Techniques – Infants

- Separation from parents causes stress, so keep child in contact with parents whenever possible
- Infants are sensitive to the physical environment
 - Make sure your hands are warm
 - Keep the scene and the child warm when possible



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• Mechanisms of Injury - Infants

- Dependent on others for all needs – rare for this age group to cause harm to themselves
- Child abuse is a leading cause of injury
- Motor vehicle crashes
- As this age group becomes mobile, other common mechanisms of injury are:
 - Falls
 - Drowning
 - Burns



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• Prevention - Infants

- Focused on parents
- Parenting classes can help to avoid the tendency toward abuse
- Stress proper use of restraint devices in automobiles
- Review developmental milestones of infants
- Teach parents the dangers to their children with respect to falls, drowning and burns



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• Development - Toddlers

- 12-30 months old
- Walking – running
- Curious and investigative
- Speak in words and phrases, may ask for things
- Follow simple directions
- Fear parental separation



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• Communications Strategies – Toddlers

- Allow parents to be present whenever possible to keep toddlers calm
 - Familiar items (blanket, toy) also provide comfort
- Always be honest when performing interventions
 - Maintain verbal communication and warn them if it will hurt
- Be aware of toddlers' fear of restriction of movement
 - Spinal motion restriction particularly challenging



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• Communications Strategies – Toddlers

- Don't ask yes/no questions
 - Children likely to answer "no" to all of your statements
- Recognize toddlers' fear of strangers
 - Children are likely to be afraid of people they haven't met before.
 - Older toddlers taught not to talk to strangers



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• Mechanisms of Injury – Toddlers

- Falls are the leading cause of injury
- Other major MOIs:
 - MVCs
 - Drowning
 - Burns



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• Prevention – Toddlers

- Concentrate on parents and caregivers
- Stress the proper use of restraint systems in motor vehicles
- Highlight the need for constant supervision
- Begin teaching prevention activities to children:
 - Importance of seat belts
 - Bicycle safety
 - Wearing a helmet
 - Fire safety



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• Development - Preschool Age

- 30 months - 5 years old
- Very mobile
- Fear body mutilation
- May have a favorite toy or blanket
- Excellent expressive skill for thoughts, feelings, wants and needs
- Rich fantasy life



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• Communications Strategies - Preschool Age

- Explain procedures and prepare children in advance of performing interventions
 - Encourage their participation in care
- Parental involvement still important
- Encourage fantasy and play
- Show acceptance of their feelings
 - Allow expression

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• Mechanisms of Injury - Preschool Age

- A very independent age:
 - Bicycle accidents
 - Pedestrian vs. car injuries
- MVC injuries common
 - Many are preventable with proper use of car seats and restraint devices
- Curiosity and lack of fear:
 - Drowning
 - Firearm accidents



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• Prevention - Preschool Age

- Educate parents and children
- Use activities to get children involved:
 - Bicycle safety/helmet use
 - Roadway, parking lot safety
 - Still need child restraints in the car
- Teach fire, water, and firearm safety



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• Development - School Age

- 6-12 years old
- Storytellers
- Able to reason and think concretely
- Understand body structures and functions
- Fear of loss of bodily control
- Incomplete understanding of death leads to fear



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• Communications Strategies – School Age

- Explain procedures, pathophysiology and treatment
 - Be honest in order to maintain the child's trust
- Stress the child's ability to master the situation
 - Allow child to make decisions about care when possible
 - Have the child assist in their care if possible
 - Do not eliminate parents from process
- Respect physical modesty

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• Mechanisms of Injury - School Age

- Age group at greatest risk for pedestrian-motor vehicle accident
 - Easily distracted
 - Lack capability for quick reflexive action
- Bicycle injuries
- Falls
- Burns
- Drowning



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• Prevention - School Age

- Educate children about prevention
 - Stress taking responsibility for their own actions
- Parents should still be involved in prevention education
 - Prevention taught to children at school but should be reinforced at home
- Activities should focus on safety:
 - Motor vehicles
 - Bicycles
 - Fire safety
 - Firearms



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• Development - Adolescents

- 12-18 years old
- Establishing independence; conflicted about whether they want to be treated like children or adults
- Lack of trust and enforced dependence are stressors
- Allow adolescents to make decision about parental involvement when possible



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• Communications Strategies – Adolescents

- Involve them in their own care and let them make decisions when possible
 - Respect their autonomy
- Recognize the importance of their peer group
 - Stress acceptance by peers



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• Mechanism of Injury- Adolescents

- Risky behaviors
- Injured in MVCs as inexperienced drivers, not as passengers
- Use of drugs and alcohol
- Extreme sports
- MVCs and firearms the leading causes of injury for this age group
- Drowning and falls less common but still prevalent



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• Prevention - Adolescents

- Motor vehicle safety
- Abstinence from drugs and alcohol
- Parents and communities need to be active in prevention activities in addition to schools



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• Team Roles and Responsibilities

- Team Leader
 - Assesses the scene
 - Establishes rapport with child and family
 - Performs Initial Assessment
 - Makes decisions on patient care
 - Documents care
 - Reports mechanism of injury, assessment, and interventions to receiving hospital

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• Team Roles and Responsibilities

- Additional rescue personnel
 - Rescuer 2
 - Stabilizes cervical spine
 - Performs airway maneuvers and management at direction of Team Leader
 - Rescuer 3
 - Selects appropriate equipment
 - Initiates interventions at direction of Team Leader
- Family liaison

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• Parental Involvement

- Involve the parents or family in the care of the child
- A team member should explain terms and procedures
- Allow parents to accompany child to the hospital in the ambulance when possible



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• A Confident Approach

- Rescuers must be confident and organized in their approach to the care of pediatric patients
- Standardized ITLS patient assessment process has demonstrated a significant increase in patient's chances for successful outcome
- Should not regard questions from parents as questioning the responder's abilities



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• Equipment

- Use equipment designed for pediatric patients when possible
- Be familiar with the proper use of child-size equipment



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• Equipment

- Do not trust your memory!!!
 - Use a length-based tape or chart to determine the correct size equipment and drug dosages



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• Case Study Continued

- Based on size, language, and interactions, the children are estimated to be 2 and 4 years old
- Upon inspection, no damage to interior of vehicle where children are located
- Car seats are properly installed, and children are properly restrained in the car seats
- Initial Assessment reveals no injuries
- Only one ambulance at the scene

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• Case Study Decisions and Wrap-Up

- Team transports children in their car seats in the ambulance with their mother, who is unconscious
- Children settle noticeably when team speaks to them in calm, reassuring voices and when they can see their mother



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• Points to Remember

- Communication
- Physiologic and psychological differences
 - Children are not small adults
- Caring for children = child and family
- Trauma is the leading cause of death and disability in children over the age of one year
- Be organized and confident

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Questions?



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