Childhood Injury in Central Texas: Medical Perspective

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Childhood Injury in the Austin-Travis County EMS System

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Most Common Causes of Childhood Injuries Worldwide

- Children make over 9 million visits to the emergency department each year due to unintentional injury
- Over 12 thousand deaths occur annually due to unintentional childhood injury
- Motor vehicle related accidents are the leading cause of death (>50%)
- Falls are the leading cause of nonfatal injuries
  - Account for >50% on nonfatal injuries in children <1yr of age
- Head injuries are the single most common type of injury children suffer
- Texas injury death rate is 16.6 per 100,000

CDC Childhood Injury Report: 2008
Isabella’s Story
Austin-Travis County Pediatric Trauma Runs By Month, 2012-2013

• 164 pediatric traumas (age <17yrs) from Oct 2012-Sept 2013
Austin Travis County Motor-Vehicle Related Injuries By Time of Day

Time of Day

- 6a-12p
- 12p-6p
- 6p-MN
- MN-6a
Austin Travis County
Trauma Runs By Age (0-16yrs)

- Head trauma as primary injury: 50 cases (30%)
- Motor-vehicle related injury: 71 cases (43%)
- Auto-pedestrian injuries: 18 cases (11%)
Child Passenger Safety Seat Recommendations

| Phase 1 | Rear-Facing Seats | Infants: Birth – 35+ pounds, 2+ years old. |
| Phase 2 | Forward-facing Seats | When children outgrow the rear-facing safety seat (2+ years), up to the upper height or weight limit (40 – 80+ pounds) of the harnesses. Usually 4+ years old. |
| Phase 3 | Booster Seats | After age 4 and 40+ pounds, children can ride in a booster seat with the adult lap and shoulder belt until the adult safety belt will fit them properly (usually when the child is 4'9" tall, 10 – 12 years old). MUST have a lap/shoulder belt to use a booster seat. |
| Phase 4 | Adult Safety Belt | |

Children are better protected the longer they can stay in each phase. Keep children in each seat up to the maximum age/weight/height limits before moving to the next phase. ALL children younger than age 13 years should ride properly restrained in the back seat.
Child Injury Prevention Strategies

- Legislation and law enforcement
- Product modification
- Environmental changes
- Promotion of safety devices
- Education, skills development
- Community-based projects
- Prehospital, acute care, and rehabilitation
Childhood Injury in Central Texas: Trauma Center Perspective

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Why does it matter?

• Organized system improves care
• Children are unique, with unique injuries
• Specialists and providers with extensive training with children
  – Pediatric Surgery, Pediatric Emergency Medicine, Ortho, Neurosurgery
  – Child life services
  – Family centered care
• Advocacy
Figure 3. Geographic representation of access within 60 minutes to a verified pediatric trauma center (PTC).
Level 1 Adult Trauma Centers

http://www.traumamaps.org/Trauma.aspx
Level 1/2 Pediatric Trauma Centers

http://www.traumamaps.org/Trauma.aspx
Traumatic Injury is the Leading Cause of Death in Texas for Ages 1 to 14 years
Types of Injuries

- **Blunt**
  - ‘Sudden Stop’
    - Motor vehicle collisions
    - Sports injuries
    - Falls
    - ATV
    - Pedestrian vs car
    - Horse/farming
    - Abuse

- **Penetrating**
  - Cut/puncture
    - Snake bites
    - Animal bites
    - Guns
    - Knives

- **Burns**
Figure 1: The shaken infant. (Illustrated by Laura Perry, M.D., based on descriptions by assailants. Reproduced with permission from Kleinman PK: Diagnostic imaging in infant abuse. Review article, AJR 155:703-712, 1990.)
Level 1 Trauma Center at Dell Children's Medical Center

- 250 bed hospital
- 24 hour coverage/ 367
- Physicians and staff dedicated to the care of children:
  - Specialized training
  - Clinical needs, as well as the psychological, emotional, and financial needs of the family.
  - Child life specialists
  - Focus on entire family
Trauma Service Line at Dell Children’s Medical Center

Comprised of 3 teams:

- Clinical Team
- Injury Prevention
- Research
Clinical Team

- Provides clinical care, performance evaluation, data collection regarding patient care and education to staff both at Dell Children’s as well as the Central Texas region.

- Includes:
  - Physicians, Mid level providers, Trauma Coordinators, Trauma Social Work, Trauma Data Registrars, and Trauma Program Manager.
Injury Prevention

• IP department is focused on preventing injury to children in Central Texas through education, research and advocacy.

• Programs include:
  - In-patient consultation
  - Teen Parenting
  - Austin Area Safe Kids Coalition
  - Safety programs- passenger safety, Pedestrian, sports, water and wheel safety.
Research

• Conducts research in the fields of:
  – Injury prevention
  – Clinical care and rehabilitation
  – Child abuse