A Preventative Approach to Pediatric Trauma at a Level 1 Center

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Objectives

• The learner will be able to identify the key members of the Pediatric Trauma and Injury Prevention Team at UNC Hospitals.

• The learner will be able to discuss ways the Pediatric Trauma and Injury Prevention Team analyzes injury data, identify populations to educate and the educational strategies utilized.
Unintentional injury - leading cause of death among pediatric patients 0-19 years of age, exceeding all other causes combined.

- Accounts for 36% of all pediatric deaths annually
- Approximately 8,000/year or 20 deaths/day

UNC Hospital Pediatric Trauma Program - includes a comprehensive program aimed at mitigation and prevention of injuries in the pediatric population
Tools for Prevention

• Trauma Registry - identified the most vulnerable population
• Education – developed to address regional needs.
• Regional Advisory Committee – obtained buy-in from regional partners
• Community Outreach and Education - promotion of safety and injury reduction initiatives

Multi-disciplinary and evidence-based
### Selected Mechanism of Injury by Age

<table>
<thead>
<tr>
<th>AGE</th>
<th>FALL</th>
<th>MVT</th>
<th>STRUCK BY, AGAINST</th>
<th>TRANSPORT, OTHER</th>
<th>FIREARM</th>
<th>CUT/PIERCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>5,249</td>
<td>460</td>
<td>423</td>
<td>38</td>
<td>43</td>
<td>45</td>
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<tr>
<td>1</td>
<td>3,310</td>
<td>660</td>
<td>452</td>
<td>49</td>
<td>20</td>
<td>102</td>
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<tr>
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<td>3,697</td>
<td>834</td>
<td>649</td>
<td>134</td>
<td>45</td>
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<td>921</td>
<td>578</td>
<td>200</td>
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<td>126</td>
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<td>1,020</td>
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<td>961</td>
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<td>115</td>
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<td>982</td>
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<td>307</td>
<td>25</td>
<td>100</td>
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<td>319</td>
<td>40</td>
<td>101</td>
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<tr>
<td>8</td>
<td>2,378</td>
<td>919</td>
<td>452</td>
<td>314</td>
<td>49</td>
<td>84</td>
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<td>958</td>
<td>436</td>
<td>387</td>
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<td>107</td>
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<tr>
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<td>1,887</td>
<td>900</td>
<td>498</td>
<td>437</td>
<td>37</td>
<td>80</td>
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<tr>
<td>11</td>
<td>1,783</td>
<td>1,042</td>
<td>645</td>
<td>546</td>
<td>62</td>
<td>113</td>
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<tr>
<td>12</td>
<td>1,892</td>
<td>1,139</td>
<td>898</td>
<td>733</td>
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<td>923</td>
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<tr>
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<td>1,984</td>
<td>1,698</td>
<td>1,381</td>
<td>1,047</td>
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<td>1,093</td>
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<td>324</td>
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<tr>
<td>16</td>
<td>1,567</td>
<td>3,740</td>
<td>1,449</td>
<td>1,073</td>
<td>791</td>
<td>526</td>
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<td>17</td>
<td>1,467</td>
<td>4,879</td>
<td>1,540</td>
<td>981</td>
<td>1,074</td>
<td>694</td>
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<td>18</td>
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<td>1,650</td>
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<td>19</td>
<td>1,543</td>
<td>6,361</td>
<td>1,222</td>
<td>1,015</td>
<td>1,731</td>
<td>1,106</td>
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<tr>
<td>Total</td>
<td>50,740</td>
<td>38,109</td>
<td>16,257</td>
<td>11,083</td>
<td>6,757</td>
<td>5,260</td>
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</tbody>
</table>
It’s not surprising that our pediatric injury statistics are similar to what can be observed nationally. However, through data abstraction we have identified opportunities to target injury prevention unique to a state that has metropolitan areas, along with rural and coastal regions.
Most Recurring Injuries
UNCHC

Top 4 Pediatric Injuries in UNC Trauma Registry
Age < 15 years old
7/1/2013-6/30/2014

<table>
<thead>
<tr>
<th>Injury Type</th>
<th># Pediatric Patients with 4 Top Injury Types</th>
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<tbody>
<tr>
<td>Falls</td>
<td>129</td>
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<tr>
<td>MVC</td>
<td>45</td>
</tr>
<tr>
<td>Sports</td>
<td>17</td>
</tr>
<tr>
<td>ATV</td>
<td>17</td>
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</table>
It Takes a Village

Injury Prevention Team
- Trauma medical director
- Pediatric trauma coordinator
- Pediatric trauma Registrar
- Outreach coordinator
- Injury prevention coordinator

Support Team Members
- Speech, physical, and occupational therapy
- Child Life
- Chaplain services
- Child psychology
- Alcohol and drug counselor

Trauma Care is Collaborative Care
Working Together

• Weekly Pediatric Multidisciplinary Team Meetings
• Robust collaboration and communication among all team members
• Optimizing the EMR
  • Communicate patient needs between team members
  • Centralize & standardize educational materials accessible to all staff involved in patient education
• Injury Prevention Cart
• Staff education on injury Prevention Strategies
Regional Engagement

• Mid Carolina Regional Advisory Committee (RAC)
  • stakeholders from thirteen (13) regional hospitals, EMS systems, public health, and other community agencies

• UNC Hospital - Level I ACS pediatric and adult trauma center centrally located in the state
  • host agency for the Mid Carolina RAC

• RAC Mission
  • serve as a resource and guide in the development of standardized regional trauma care, as well as the establishment and maintenance of a coordinated trauma system to promote optimal trauma care and emergency preparedness
Mid Carolina RAC
Serving the Light Blue

North Carolina Regional Advisory Committee (RAC) Hospital Affiliations Map
July 2011

Administrative RAC Listing:
- Mountain Area Trauma RAC (Mission Hospitals)
- Metrolina Trauma Advisory Committee (Carolinas Medical Center)
- Triad RAC (WFU Baptist/Moses Cone)
- Southeastern RAC (New Hanover Regional)
- Eastern RAC (Pitt County Memorial)
- Duke RAC (Duke University Hospital)
- Mid Carolina Trauma RAC (UNC Health Care)
- Capital RAC (WakeMed)

Indicates a Level I Trauma Center
Indicates a Level II Trauma Center
Indicates a Level III Trauma Center

*A county with different colors indicates two or more hospitals with different RAC affiliations.
Its All About the Community

Outreach and Education
Community, Community, Community

Presence
Advocacy
Engagement
Relationships
Identify
Take Away

- Identify/recognize the real problems
- Educate your team, facility and community on an ongoing basis
- Get out in the community
- Build relationships, internally and externally
- Explore other avenues to expand educational opportunities
- Be innovative
- Share the responsibility for injury prevention
Questions???
Thank you!