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What’s New in EMS at PECARN

- Addition of EMS Affiliates (EMSAs)
- Engaging Field Provider Advisory Committees (FAC)
- Developed an EMSA Consortium
- Concentrated effort to conduct innovative and relevant pediatric prehospital research
PECARN (Pediatric Emergency Care Applied Research Network) is a collaborative research network:

- 18 Hospital Emergency Department Affiliates (HEDAs)
- 7 Research Node Centers (RNC)
  - Including CHaMP – the first EMS-focused Node
- A data coordinating center (DCC)

PECARN Organizational Structure

The CHaMP Node
The Pediatric Emergency Care Applied Research Network (PECARN) EMSAs

Common Elements

- All sites have prior research experience
  - Including RCTs
  - All sites have collaborated on research
- All sites maintain medical record databases
  - NEMSIS compliant
- All have an IRB of record
  - Able to review EFIC trials
- Have experienced field providers on advisory committees
Prehospital Provider Involvement

- Field Advisory Committees (FAC)
  - Active field providers review proposals for relevance and feasibility
  - All are EMS field providers with an interest in EMS research
  - Most meet monthly

The EMSA Consortium

The PECARN Process

- Concept
- Proposal
- Get Funded
- Go!
The PECARN Process for EMS Studies

- EMSAs work together on pilots
- EMSAs give each other general support and advice

1. Concept
2. Proposal
3. Get Funded
4. Go!

Participation

- Anyone can join the EMSA Consortium
- Need to have an interest in conducting an EMS study within the PECARN infrastructure
- Must be willing to support others and collaborate

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First project: create a database of EMS response data
Why Create A Database

- Variables could provide pilot data
- Understand EMS responses
- Determine sample size
- Conduct observational studies

But Why Create A NEW Database?

NEMSIS/PECARN Project

- Some minor obstacles
  - Needed collaboration from NHTSA and NEMSIS Technical Assistance Center (TAC)
  - Agency is not in public dataset
    - Need Data Use Agreements (DUA) from state and/or agency/municipality to allow NEMSIS to release
  - Not all of our agencies were in places that were participating in NEMSIS
DUAs

Complete
- California
- Colorado
- Maryland
- North Carolina

In Process
- More than one agency
  - Wisconsin – municipalities’ documented agreement; DUA now at state for review
- Working on State level NEMSIS submission
  - Ohio – legislation passed to release data to NEMSIS
  - Texas – municipality signing DUA in process
  - Arizona – starting process

Initial PECARN NEMSIS Data

- Data from 3 EMSAs over 6 months
- 451,615 EMS Runs
  - 6% pediatric
  - 51% Male
  - 34% 0-4 years

Breakdown of Pediatric Runs

- Treated/Transported: 18,868
- Treated and Released: 3,035
- Initiated by 911: Response: 14,460
- Transfer: Care: MT
- Refused/No Treatment Needed: 3,245
- Treated: 22,468
- Dead: 30
- Canceled/No Patient Found: 76
- Treated / Transported by Private: 118

0-4 Years: 34%
5-11 Years: 22%
12-14 Years: 12%
15-17 Years: 21%
18 Years: 11%
Leading Chief Complaints for Transported 911 Initiated Runs

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown/Unavailable</td>
<td>4,879</td>
<td>33%</td>
</tr>
<tr>
<td>Traumatic Injury</td>
<td>2,837</td>
<td>19%</td>
</tr>
<tr>
<td>Seizure</td>
<td>1,431</td>
<td>10%</td>
</tr>
<tr>
<td>Respiratory</td>
<td>1,307</td>
<td>9%</td>
</tr>
<tr>
<td>Behavioral</td>
<td>817</td>
<td>6%</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>640</td>
<td>4%</td>
</tr>
<tr>
<td>Syncope/Fainting</td>
<td>559</td>
<td>4%</td>
</tr>
</tbody>
</table>

Research Follows A Path

Our Path to Research

- Big picture idea
- Start with pilot
- Larger pilot
- Small steps to support idea
- Larger study
- Pilots support grants
- Complete study and expand
Select Research Under Development

- Improve prehospital pain management
- Development of tool to identify severely ill children
- Improve prehospital seizure management
- Improve airway management
- Improve potential c-spine injury management
- Identification of severely injured children

Other Research Resources

- Lecture series on EMS research
- NIH grant workshop lectures and notes
- [www.mcw.edu/Cha mp](http://www.mcw.edu/Cha mp)

Questions?

For More Information

- Website: [www.mcw.edu/champ](http://www.mcw.edu/champ)
- Like us on Facebook: [www.facebook.com/champernc](http://www.facebook.com/champernc)