Integrating Evidence-Based Pediatric Prehospital Protocols Into Practice

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Targeted Issues Grant

Overall Aim

- To create a model statewide infrastructure for the development, implementation, and measurement of outcomes of evidence-based pediatric prehospital protocols in a state with independently functioning Emergency Medical Services (EMS) systems

Specific Aims

- To establish and evaluate a process for the development of evidence-based pediatric prehospital protocols for the state of Texas through the existing Emergency Medical Services for Children (EMSC) State Partnership and the Texas Children's Hospital Evidence Based Outcomes Center (TCH EBOC)

- To implement a pediatric prehospital protocol in 3 targeted EMS systems in Houston, Dallas, and Austin through training of prehospital personnel in the use of the protocol

- To evaluate the impact of a pediatric prehospital protocol by tracking process and outcomes measures after its implementation in multiple systems

Objectives: Aim #1

- **Objective #1.1:** To establish a protocol development committee comprised of pediatric emergency medicine physicians and nurses, emergency medical technicians (EMTs), EMS medical directors, evidence-based outcomes specialists, data managers, members of the community from the targeted EMS systems

- **Objective #1.2:** To train all protocol development committee members in the evidence-based protocol development process utilized through the TCH EBOC, including training in the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) approach

- **Objective #1.3**: To create a pediatric prehospital protocol for a common clinical condition (i.e. respiratory distress) for which an existing protocol is significantly limited or lacking

Objectives: Aim #2

- **Objective #2.1:** To create a collaborative relationship between pediatric referring hospitals and the major EMS systems in Houston, Dallas, and Austin

- **Objective #2.2:** To train prehospital personnel from the targeted EMS systems on the indications and use of the protocol developed by the protocol development committee

- **Objective #2.3:** To implement the protocol within EMS infrastructures statewide by publishing it in the offline medical direction manuals of the targeted EMS systems and on the Texas EMSC State Partnership website

Objectives: Aim #3

- **Objective #3.1:** To gather prospective data on pediatric patient outcomes for the targeted EMS systems prior to implementation of the evidence-based protocol

- **Objective #3.2:** To gather prospective data on process measures related to the utilization of the pediatric protocol

- **Objective #3.3:** To gather and analyze prospective data on pediatric patient outcomes for the targeted EMS systems after implementation of the evidence-based protocol

Protocol Development Committee

- **Houston**
  - **Manish Shah:** Pediatric Emergency Medicine Physician, Texas Childrens' Hospital
  - **Paul Sirbaugh:** Asst. Medical Director, Houston Fire Department EMS
  - **Chris Kelly:** Paramedic, Houston Fire Department EMS
  - **Betsy Furler:** Parent
  - **Jennifer Jones,** Data Manager, Baylor College of Medicine

- **Dallas**
  - **Halim Hennes:** Pediatric Emergency Medicine Physician, Children's Medical Center Dallas
  - **Ray Fowler:** Asst. Medical Director, BioTel EMS
  - **Stephen Bock:** Paramedic Chief, Farmers Branch EMS
  - **Jon Duckert:** Data Manager, Children's Medical Center Dallas

- **Austin**
  - **Sujit Iyer:** Pediatric Emergency Medicine Physician, Dell Children's Medical Center of Central Texas
  - **Paul Hinchey:** Medical Director, City of Austin/Travis County EMS
  - **Liz Yankiver:** Paramedic ,City of Austin/Travis County EMS
  - **Ben King**, Data Manager, Hospital Physicians in Clinical Research

Brief Timeline

- 09/10-12/10: Preliminary project planning
- 01/11-03/11: Protocol development process
- 04/11-09/12: Data collection (pre)
  - 04/11-03/12 : Pre-implementation data collection: Houston
  - 07/11-06/12 : Pre-implementation data collection: Austin
  - 010/11-09/12 : Pre-implementation data collection: Houston
- 02/12-09/12: Prehospital provider training
  - 02/12-03/12 : Training: Houston
  - 05/12-06/12 : Training: Austin
  - 08/12-09/12 : Training: Houston
- 04/12-09/13: Data collection (post)
  - 04/12-03/13 : Post-implementation data collection: Houston
  - 07/12-06/13 : Post-implementation data collection: Austin
  - 010/12-09/13 : Post-implementation data collection: Houston
- 10/13-12/13: Analysis and dissemination