



## Health Resources and Services Administration's Emergency Medical Services for Children Targeted Issue Grants Fact Sheet 2016-2019

*This year, the Health Resources and Services Administration (HRSA), Emergency Medical Services for Children (EMSC) Program funded five Targeted Issues (TI) grants focused on improving pediatric health outcomes related to emergency care through research and innovative cross-cutting projects. TI grants fill the knowledge gaps in pediatric emergency care in the prehospital and hospital setting. These grants employ innovative strategies to improve the care of severely injured and acutely ill children. Emergency Medical Services for Children is the only federally funded program specifically focusing on pediatric emergency care. The Targeted Issues grants advance the field by selecting projects that focus on improving knowledge and skills of providers as well as improving the system of pediatric emergency care. Over the next three years, EMSC will invest 4.5 million dollars in this area. The grants include four projects focusing in the prehospital setting and one in the Emergency Department. The grants are summarized here.*

**MARYLAND – Johns Hopkins University.** **PDTree: An EMS Triage Tool for Pediatric Destination Decision Making** (*Principal Investigator: Jennifer Anders, MD*).

Pediatric care at designated pediatric centers is a limited resource. Unfortunately, EMS protocols lack guidance for EMS transport destination for ill or injured children. An ideal triage tool would reduce under-triage by identifying children in need of pediatric-specific care and avoid over-triage and the attendant resource utilization in tertiary care centers for children who could be treated in non-

pediatric facilities. The objectives include to: (1) develop a Pediatric Destination Decision-making tool (PDTree) to guide EMS transport destination for ill and injured children; (2) measure impact of PDTree in pilot test use in three Maryland EMS agencies (rural and urban); and (3) disseminate PDTree and create a tool-kit to allow EMS agencies in other parts of the country to adapt the tool.

**MICHIGAN – Western Michigan University School of Medicine.** **The Michigan Pediatric EMS Error Reduction Study (MI-PEERS)** (*Principal Investigator: John Hoyle, MD*).

The need for weight-based dosing can result in drug dosing errors in children. This may be exacerbated in the prehospital setting, where children comprise a minority of patients transported. The investigators will implement a drug dosing safety system (DDSS) through web-based modules to decrease dosing errors in children younger than 13 years of age. The evaluation of this education module will be multifaceted and include EMS data, simulation medicine, and a culture of safety instrument. The objectives include to: (1) develop educational modules for the 10 DDSS components; (2) have at least 80% completion rate of modules by prehospital providers; (3) demonstrate at least a 50% reduction in drug dosing error rates based on both simulation medicine and EMS data; (4) improve the culture of safety in the prehospital setting; and (5) refine the DDSS components for widespread dissemination.

**NORTH CAROLINA – University of North Carolina, Chapel Hill.** Pediatric Performance Measures: Improving EMS Care for Time-Critical Illness and Injury (*Principal Investigator: Jane Brice, MD, MPH*).

Translation of medical knowledge into practice in the prehospital setting can be challenging. The investigators will implement a focused program of education and performance improvement feedback tools to both EMS providers and up to nine EMS Systems in North Carolina using quality improvement (QI) methodology. The three areas of targeted EMS care include sepsis, respiratory distress, and trauma. The objectives are to: (1) develop and disseminate a performance improvement program using online educational modules and individualized feedback through provider adherence reports (PARs); (2) quantify changes in EMS performance measure compliance; and (3) identify the benefits of and barriers to use of PARs and the online educational modules.

**PENNSYLVANIA – Children’s Hospital of Philadelphia.** Advancing Family-Centered Care and Quality Self-Assessment for Pediatric Resuscitation Readiness (*Principal Investigator: Sage Myers, MD, MSCE*).

Pediatric resuscitations are low-frequency, high-risk events even at large children’s hospitals. Pediatric resuscitation readiness at community emergency departments (EDs) has been shown to be variable, likely in part due to reduced frequency of resuscitations. The goal of this project is to create capacity for rigorous QI on pediatric resuscitation readiness by creating and testing evidence-based QI tools. The objectives are to: (1) develop an interactive web-based Pediatric Resuscitation Quality Self-assessment Toolkit; (2) develop a family-centered care (FCC) QI package for the toolkit using online modules; (3) conduct a randomized controlled trial to evaluate the ability of the FCC module to improve performance of family-centered care during pediatric resuscitations in community EDs. This project will collaborate with INSPIRE, the International Network for Simulation-based Pediatric Innovation, Research, and Education, and will complement existing EMSC work with the Pediatric Readiness Toolkit.

**WISCONSIN – Medical College of Wisconsin.** The Charlotte, Houston, and Milwaukee Prehospital (CHaMP) Research Node (*Principal Investigator: Brooke Lerner, PhD*).

The CHaMP node is an EMS Research Node Center of the Pediatric Emergency Care Applied Research Network (PECARN) to continue to conduct innovative and significant prehospital research. The 3 EMS agencies associated with CHaMP are the Mecklenburg (Charlotte) EMS, Houston Fire Department EMS, and Milwaukee County EMS. First established by a HRSA EMSC TI grant in 2013, the renewal of the TI grant will sustain and strengthen the capacity of CHaMP. The objectives include to: (1) contribute to the science of prehospital pediatric care by submitting research concepts to PECARN; (2) use CHaMP and PECARN infrastructure to implement multi-site studies; (3) create an integrated research network with all 9 PECARN EMS Affiliates; and (4) build a PECARN EMSA data collection and analytics system in collaboration with the National Highway Traffic Safety Administration (NHTSA) and the National EMS Information System (NEMSIS).

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