



Emergency Medical Services for Children (EMSC): Improving the Care of Ill and Injured Children Nationwide

What Is the EMSC Program?

In 1984, Congress signed into law the federal Emergency Medical Services for Children (EMSC) Program. The goal of EMSC is to reduce pediatric mortality and morbidity across the nation by ensuring appropriate and effective pediatric emergency care. The EMSC Program is administered by the Health Resources and Services Administration (HRSA) within the U.S. Department of Health and Human Services (HHS). It is the only federal program focused on the emergency care needs of America's children. Whether in times of a disaster or an everyday emergency, the HRSA EMSC Program supports every state, U.S. territory and freely associated state to provide the right care, in the right place, at the right time for every child. Since its inception, all 50 states, the District of Columbia, five U.S. territories, and three freely-associated states have received funding from the Federal Program. The Program administers several types of grants or Cooperative Agreements:

State Partnership grants fund state programs and activities designed to improve, refine, and integrate pediatric care within the state Emergency Medical Services (EMS) system, including hospital and pre-hospital settings. EMSC Performance Measures guide the activities of all State Partnership grant recipients; grantees are required to collect and report data on the performance measures to assess progress toward Program goals. For more information on the EMSC Performance Measures refer to the EMSC PM Fact Sheet, <http://bit.ly/2DTGMlv>.

State Partnership Regionalization of Care (SPROC) grants focus on the development of models of inclusive care that increase access to specialized pediatric medical treatment for those isolated by geographical distances or jurisdictional borders, particularly in tribal and rural areas.

The framework supports an emergency care system that assures access to comprehensive, culturally competent, quality care. These regionalized care systems also bring specialized pediatric resources to ill and injured children in their communities via teleconference. Components of these models include approaches to community engagement, cross-jurisdictional governance, improved pediatric capacity, telehealth networks, and mechanisms for sustainability.

30 Million Children Will Visit the Emergency Department This Year...

Are ill and injured children receiving the best care possible in your community?

Before answering this question, keep these facts in mind...

Children respond differently to illness or injury than do adults. They have different physical, emotional, and psychological needs, and suffer from a different spectrum of diseases and injuries. Equipment, supplies, and medication dosages must be available for children of all sizes to get the best care during emergencies and disasters. The communities best prepared to handle childhood emergencies are those with properly trained emergency personnel, sufficiently equipped ambulances and emergency departments, and well-defined pediatric treatment protocols and procedures.

Targeted Issues projects support innovative, cross-cutting projects focused on improving pediatric health outcomes across the continuum of pediatric emergency care. Targeted issues projects are investigator-initiated projects that are nationally significant, translatable into practice, replicable to meet a demonstrable need, and directly improve the quality of care of pediatric emergency care services.

The Pediatric Emergency Care Applied Research Network (PECARN) is the first and only federally-funded, multi-institutional network for pediatric emergency medicine research. EMSC funding supports the PECARN network infrastructure and with external funding it conducts high priority, multi-institutional research on the prevention and management of acute illnesses and injuries in children and youth of all ages. PECARN includes 18 academic children's hospital emergency departments (ED) and nine EMS agencies (EMSA). These nine EMSAs collectively provide EMS coverage for a population of 1.1 million children and transport approximately 66,000 pediatric patients annually. "The federal EMSC Program also funds two resource centers: the **EMSC Innovation and Improvement Center (EIIC)** and the **EMSC Data Center**. The EIIC uses quality improvement science as the basis for collaborative efforts to address known gaps in the US healthcare system. The EMSC Data Center is comprised of the **National EMSC Data Analysis Resource Center (NEDARC)** and the **PECARN Data Coordinating Center (DCC)**."

NEDARC provides technical assistance to EMSC grantees in the collection, analysis and use of performance measure data and other data sets needed to drive pediatric prehospital and hospital emergency care improvements. The PECARN DCC provides epidemiological support, data analysis, implementation of PECARN-wide standards for data collection and analysis in order to ensure uniformity and quality of the data, and monitoring the safety and timely progress of PECARN studies.

EMSC Making a Difference in the Emergency Care of Children

Since 1984, EMSC grant funds have supported EMSC grantees and partners in each state and territory to integrate quality pediatric emergency care in prehospital and hospital settings. Efforts have included the integration of pediatrics in prehospital and acute care provider training; development of evidence-based EMS and hospital guidelines and protocols for pediatric patients; defined pediatric equipment requirements for ambulances; promotion of pediatric readiness in EDs; the formation of state advisory committees, inclusive of family representatives; and collaboration with national stakeholder organizations and federal partners.

The two EMSC resource centers work collaboratively to assist grantees in many capacities. The EIIC conducts quality improvement work using the Institute for Healthcare Improvement's Collaborative Model for Achieving Breakthrough Improvement. The first collaborative, *Facility Recognition Collaborative (FRC)*, worked with 14 states to develop and/or implement a program to recognize EDs that are prepared to stabilize and/or manage children with medical emergencies based on *National Guidelines for the Care of Children in EDs*. Fourteen states participated in the first EMSC Collaborative. By its December 2017 close, all participating states progressed toward development of medical recognition programs, with seven states prepared to pilot and/or fully implement their pediatric readiness recognition programs. The *Pediatric Readiness Quality Collaborative (PRQC)*, launching in early 2018 will use a train-the-trainer model to provide 15 teams from 119 hospitals with tools, education, and resources to improve pediatric readiness. NEDARC provides technical assistance to all states and territories in data-related matters. NEDARC is currently helping states collect and analyze both EMS and hospital performance measures data to identify gaps and drive system improvement. They also work with investigators to use the national pediatric readiness dataset for research and quality improvement purposes.

EMSC Targeted Issue grantees take a unique investigator-driven approach to translate research into practice and improve pediatric emergency care and health outcomes. TI grants have resulted in more than 50 journal articles, 12 web-based products, trainings and toolkits and evidence-based guidelines (EBG) for pediatric prehospital care. Some examples include online trainings on disaster triage and safe transport; toolkits on pediatric resuscitation, quality measurement, and facility recognition; and the development and implementation of pediatric prehospital EBGs for multiple conditions including airway management, allergic reactions, spinal care, and shock.

Since its inception in 2001, PECARN has had 36 research studies funded, published 126 peer-reviewed manuscripts and provided more than 170 national scientific presentations. PECARN has mentored more than 95 new investigators, increasing the number of future researchers trained in

pediatric emergency medicine. In addition, two clinical guidelines, based on the findings of PECARN studies are published (1) when it is appropriate to do computed tomography (CT) scans for children with minor head injuries (reducing unnecessary scans); and (2) the common use of steroids does not improve outcomes or reduce hospitalizations for infants with bronchiolitis.

Looking toward the future, EMSC aims to ensure all EDs are ready to care for children through the continuation of the **National Pediatric Readiness Project**, a national quality improvement initiative to ensure every ED has the essential resources and guidelines in place to provide effective emergency care to children. In addition, recently implemented performance measures aim to further develop the ability of pre-hospital providers to care for children. EMSC also continues to support the creation and improvement of systems of care that share resources and provide access to health care services for children in tribal, territorial, insular and rural areas. Continued EMSC funding of multicenter pediatric emergency research in both the prehospital and hospital settings is expected to reveal new knowledge and produce evidence-based findings that will impact clinical practice and improve health outcomes in diverse health care settings that serve children.

EMSC Partners for Success

The Federal EMSC Program currently works with more than 20 national and professional organizations to identify and address the key issues affecting EMSC, including, but not limited to: disaster preparedness; mental and behavioral health; family-centered care; quality improvement; hospital medical and trauma recognition; and cultural diversity. The Program also has established a **Family Advisory Network** to ensure inclusion of the family perspective in all activities.

Department of Health and Human Services partners include the Centers for Disease Control and Prevention; the Assistant Secretary for Preparedness and Response; the Agency for Healthcare Research and Quality, the Indian Health Service, the National Institutes of Health, the Substance Abuse and Mental Health Services Administration, and the HRSA Federal Office of Rural Health Policy. Other federal partners include: the Department of Transportation, National Highway Traffic Safety Administration, the Department of Defense, and the Department of Homeland Security, and the National Institute for Standards and Technology. Through these partnerships, the EMSC Program works to ensure that pediatric emergency care needs are considered and addressed throughout the Federal government. The Program participates on Federal interagency working groups, including the Federal Interagency Committee on EMS and Children's HHS Interagency Leadership on Disasters (CHILD) Working Group.

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