

EMSC REPORT

2023

BY THE NUMBERS

82,000
children seek care in EDs
each day.¹

69%
of these visits occur in EDs
that see fewer than 14 pediatric
patients per day.²

81%
of EMS agencies receive fewer
than eight pediatric calls
per month.³

Children have unique physiological, developmental, and medical needs, especially in emergencies. But due to low pediatric volume relative to adult volume, EDs and EMS agencies may not be fully prepared to provide high-quality care to children.

The EMSC Program works to ensure that – no matter where a child lives – the health systems in their area provide high-quality emergency care.



EMSC
Emergency Medical
Services for Children

OUR PURPOSE

Since 1985, the Health Resources and Services Administration's (HRSA) Emergency Medical Services for Children (EMSC) Program has worked to improve outcomes for ill and injured children and reduce rates of serious injury, illness, or death. We strive to ensure that – no matter where a child lives – the health systems in their area provide high-quality, equitable emergency care. We work to improve care across the continuum, including when children are cared for and transported by emergency medical services (EMS) and once they arrive at a hospital's emergency department (ED). We pursue these goals through research, practice, and partnership.

PROGRAM ADMINISTRATION

The EMSC Program is administered by the U.S. Department of Health and Human Services HRSA Maternal and Child Health Bureau, Division of Child, Adolescent, and Family Health, EMSC Branch.

LEGISLATION AND APPROPRIATIONS

In August 2019, the Emergency Medical Services for Children Program Reauthorization Act of 2019 reauthorized the EMSC Program for five years, until fiscal year 2024, under the Public Health Service Act, Section 1910. As a discretionary grant program, the EMSC Program must have its appropriations approved by Congress each year. In fiscal year 2023, Congress appropriated funding of approximately \$24 million for the EMSC Program.

THE EMSC PROGRAM



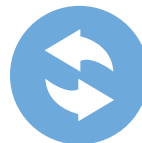
STATE PARTNERSHIP PROGRAMS
Infrastructure &
Systems Integration



TARGETED ISSUES GRANTS
Innovation



PEDIATRIC EMERGENCY CARE APPLIED RESEARCH NETWORK
Evidence Generation



DATA CENTER
Data Management &
Analysis



INNOVATION & IMPROVEMENT CENTER
Quality Improvement &
Communications

EMSC COLLABORATIONS

Everyday Readiness

- National Pediatric Readiness Project (Hospital EDs)
- National Prehospital Pediatric Readiness Project (EMS agencies)

Disaster and Pandemic Preparedness

- Pediatric Pandemic Network



INNOVATION

The EMSC Targeted Issues (TI) grants support the development of innovative strategies to

address pediatric emergency care needs in both the prehospital and ED settings. In 2019, the EMSC Program funded five TI grants. Over the four-year grant period, the EMSC Program invested \$6.5 million in these projects, which aim to demonstrate the link between ED and EMS system readiness improvements and improved pediatric clinical care and health outcomes. The grant was recently extended for one additional year.

2019–24 TI Grant Projects

- **CONNECTICUT** — Yale University. Pediatric Emergency Care Coordination in EMS Agencies: Measuring the Influence, Magnifying the Improvement (Principal Investigator [PI]: Mark X. Cicero, MD, FAAP)
- **LOUISIANA** — Louisiana Department of Health, Office of Public Health. Pediatric Care Coordination in EMS Agencies — Improving Child Health Outcomes in Louisiana (PI: Toni Gross, MD, MPH)
- **NORTH CAROLINA** — University of North Carolina at Chapel Hill. System Readiness Improvements through the EMS Pediatric Emergency Care Coordinators Program (PI: Jane Brice, MD, MPH)
- **OREGON** — Oregon Health and Science University. A Multi-State Evaluation of Emergency Department Pediatric Readiness: Guideline Update and Association with Quality, Outcomes, and Cost (PI: Craig D. Newgard, MD, MPH)
- **TEXAS** — Dell Medical School at the University of Texas at Austin. Developing a National Pediatric Readiness Project Quality Improvement Data Registry (PI: Katherine Remick, MD, FAAP, FACEP, FAEMS)

Learn more about each project at bit.ly/TIgrants.

AT LEAST 1,400

children's lives could be saved each year through higher pediatric readiness at EDs nationwide, according to a 2023 study funded in part by a TI grant.⁴

PEDIATRIC READINESS: DRIVING IMPROVED OUTCOMES FOR CHILDREN

Ensuring EDs and EMS agencies adopt national guidelines on pediatric emergency care — also known as being “pediatric ready” — is the cornerstone of the EMSC Program. The EMSC Program leads the National Pediatric Readiness Project (NPRP) for EDs and the National Prehospital Pediatric Readiness Project (PPRP) for EMS agencies. Through these parallel projects, the EMSC Program and numerous collaborators are driving improved outcomes for children across the continuum of emergency care. In fact, research has shown that EDs that are pediatric ready demonstrate a 76% lower rate of mortality for ill children; trauma centers demonstrate a 60% lower rate for injured children.^{5,6}

71%

of EDs across the nation (3,647) responded to the NPRP assessment in 2021.⁷

READINESS FOR EDs

The NPRP is a multiphase quality improvement initiative to ensure all U.S. EDs have the infrastructure they need to provide effective emergency care to children. The NPRP is a multidisciplinary effort across the EMSC Program and its investments working in tandem with the American College of Emergency Physicians

(ACEP), the American Academy of Pediatrics (AAP), and the Emergency Nurses Association (ENA).

The NPRP involves the development of high-quality resources and education, along with periodic assessments of the nation's EDs. Hospitals that participate in the national assessment receive a readiness score and gap analysis. Data from the assessment are used to guide future systems-level approaches to improving care.

For more information, visit bit.ly/pedsreadyproject.

READINESS FOR EMS AGENCIES

The PPRP launched in 2019 with a focus on improving pediatric care within EMS agencies. The project is led by a steering committee comprising representatives from federal partners, EMSC grant recipients, subject matter experts, and national organizations. (To view a complete list of organizations, visit bit.ly/3z5vAml.)

Thus far, based on a joint policy statement — “Pediatric Readiness in Emergency Medical Services Systems,” co-authored by AAP, ACEP, ENA, the National Association of Emergency Medical Technicians, and the National Association of EMS Physicians — the PPRP has developed a checklist and a toolkit. The PPRP aims to launch a national assessment by 2024.

For more information, visit bit.ly/prehospitalpedsready.



ACCOUNTABILITY

The EMSC Data Center (EDC), based at the University of Utah, has two major functions.

1. EMSC grantee data collection and analysis

The EDC assists EMSC Program grantees in the collection, analysis, and utilization of EMSC performance measures and other data to improve the quality of pediatric care in state and territory EMS, hospital, and trauma systems. The EDC is also the data coordinating center for the NPRP, the PPRP, and the EMS for Children Survey. These data collection efforts are ongoing and have consistently yielded survey response rates of 50–80% nationally over the past decade.

2. Support for PECARN

In addition, the EDC serves as a central resource for the Pediatric Emergency Care Applied Research Network (PECARN), assisting with data collection and management, quality assurance, statistical analysis, and coordination of selected PECARN activities.

Learn more at emscdatacenter.org.



QUALITY IMPROVEMENT & COMMUNICATIONS

The EMSC Innovation & Improvement Center (EIIC) helps bring evidence-based research and innovation to clinical practice through quality improvement science. It also supports EMSC-wide dissemination efforts.

The EIIC is led by University of Texas at Austin Dell Medical School and University Hospitals Rainbow Babies and Children's, with partners at Yale University, Baylor College of Medicine, and The Lundquist Institute. The center comprises leading experts across multiple focus areas, including Prehospital, Hospital, Trauma, Disaster Preparedness, Research, Advocacy, Analytics, Collaboratives, and Knowledge Management.

Below, we highlight ongoing work in three areas.

Quality Improvement (QI) Collaboratives

QI collaboratives are forums that leverage QI science to rapidly transform care across settings and disciplines. The EIIC has engaged hundreds of health care teams in collaboratives on topics ranging from pediatric readiness to suicidality to telehealth.

Clinical Resources

The EIIC's Pediatric Education and Advocacy Kits (PEAKs) are curated best practice toolkits developed around an urgent area of clinical focus, such as status epilepticus, suicide, pain, and agitation. These toolkits include foundational guidelines and algorithms developed through international collaboration.

Trauma Center Care

Thanks to the EIIC's close collaboration with the American College of Surgeons Committee on Trauma, the NPRP assessment is now incorporated as a trauma center verification standard for all pediatric and adult trauma centers.

Learn more at emscimprovement.center.



INFRASTRUCTURE & SYSTEMS INTEGRATION

The EMSC Program provides funding throughout the nation to 57 states, territories, and freely associated states to expand and improve emergency medical services for children in need of treatment for injuries and illnesses. These programs build bridges to local and state emergency systems to promote and implement pediatric readiness initiatives.

Since 2006, the EMSC State Partnership Programs have driven national efforts through defined performance measures that promote and evaluate the systems in place to ensure optimal care for children in the emergency setting. Current measures focus on areas such as establishing programs that recognize EDs and EMS agencies for achieving certain standards in pediatric readiness; increasing the presence of pediatric champions, also known as pediatric emergency care coordinators (PECCs) in both EDs and EMS agencies; and integrating pediatric-specific components in disaster preparedness plans.

Learn about the State Partnership Program at bit.ly/EMSCSP and about performance measures at bit.ly/EMSCPerformanceMeasures.

ENSURING FAMILIES ARE HEARD

The EMSC Program continues to ensure that the family voice is at the center of all of its work. The Family Advisory Network (FAN) is the EMSC Program's connection to children and families across the nation; FAN representatives are integrated throughout EMSC efforts.



EVIDENCE GENERATION

PECARN includes seven multi-institutional research

node centers that work collaboratively with hospital ED and EMS affiliates to develop and submit research proposals. The larger PECARN cohort conducts PECARN-reviewed and approved research at their respective institutions. Each of the six hospital-based nodes includes three hospitals and one EMS-affiliated agency. The CHaMP (Charlotte, Houston, Milwaukee Prehospital) EMS Research Node has three EMS-affiliated agencies.

PECARN's Seven Research Nodes

Great Lakes Area Children's Emergency Research (GLACiER), led by PIs Rachel Stanley, MD, MHSA, and Julie Leonard, MD, MPH, of Nationwide Children's Hospital

Hospitals of the Midwest Emergency Research Node (HOMERUN), led by PI Lynn Babcock, MD, MS, of Cincinnati Children's Hospital Medical Center

Pediatric Emergency Medicine Northeast, West and South (PEM-NEWS), led by PI Peter Dayan, MD, MSc, of New York-Presbyterian Morgan Stanley Children's Hospital

Pediatric Research in Injuries and Medical Emergencies (PRIME), led by PIs Nathan Kuppermann, MD, MPH, and Daniel Nishijima, MD, MSc, at University of California, Davis

San Francisco-Oakland, Providence, Atlanta Research Collaborative (SPARC), led by PIs Thomas Chun, MD, MPH, of Hasbro Children's Hospital and Claudia Morris, MD, FAAP, of Emory University

Seattle, Texas (Dallas), Los Angeles Research (STELAR), led by PI Eileen Klein, MD, MPH, of Seattle Children's Hospital

Charlotte, Houston, Milwaukee Prehospital EMS Research Node (CHaMP E-RNC), led by PIs E. Brooke Lerner, PhD, FAEMS, of Medical College of Wisconsin and Manish Shah, MD, MS, of Texas Children's Hospital

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published papers were written by, were contributed to, or mentioned PECARN researchers in 2022.⁸

Learn more at pecarn.org.

COLLABORATION

Recognizing that improving pediatric emergency care requires a systems-wide, multidisciplinary approach, the EMSC Program collaborates closely with numerous organizations, particularly ACEP, AAP, ENA, the National Association of State EMS Officials, and the American College of Surgeons Committee on Trauma. The program also works with multiple federal partners. Below are updates on how the EMSC Program and federal partners are collaborating to improve emergency care for children.

Administration for Strategic Preparedness and Response (ASPR)

ASPR and the EMSC Program collaborate to help sync up pediatrics and disaster response at the national level. They have worked together on a pediatric checklist for hospital disaster preparedness and pediatric content for ASPR's information exchange. ASPR also is a member of the NPRP Steering Committee. In addition, ASPR funds the Pediatric Disaster Care Centers of Excellence. The three centers collaborate closely with the EMSC Program and the Pediatric Pandemic Network.

Indian Health Service (IHS)

IHS is a vital collaborator with the EMSC Program, particularly through the NPRP. IHS works to encourage all 47 IHS and tribal EDs to participate in the NPRP assessment. It also helps strengthen channels with these EDs in order to share data and disseminate pediatric resources. In addition, the EMSC Program and IHS are collaborating on an initiative to designate and support pediatric emergency care coordinators (PECCs) for IHS, tribal, and rural EDs and EMS agencies. The initiative connects PECCs with academic medical centers and is creating a simulation training program co-facilitated by the PECCs.

National Highway Traffic Safety Administration (NHTSA), Office of Emergency Medical Services

NHTSA has collaborated with the EMSC Program on many key guidelines and resources, including the EMS Agenda for the Future, the National EMS Scope of Practice Model, the National EMS Education Standards, and the development of multiple evidence-based guidelines. Most recently, NHTSA and the EMSC Program have worked to update several of these resources — developing a process to rapidly update the EMS Scope of Practice Model, which proved important during the pandemic, and working to revise the EMS Education Standards to include pediatric content. NHTSA and the EMSC Program also are collaborating on building Pediatric National EMS Information System (NEMSIS) dashboards and exploring opportunities to support state EMS agencies to conduct quality improvement.

National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Pediatric Trauma and Critical Illness Branch (PTCIB)

The PTCIB supports research and training activities aimed at preventing, treating, and reducing all forms of childhood traumatic injury and critical illness across the care continuum. The NICHD supports a robust portfolio of EMSC-related activities, ranging from cooperative agreements to research grants and training awards. For example, the NICHD recently had a notice of special interest soliciting research on emergency medical services for children.



NEW FEDERAL PROGRAM FUNDED BY CONGRESS FOR PEDIATRIC DISASTER PREPAREDNESS

HRSA announced the awarding of two grants in 2022 and 2023 to 10 total children's hospitals to establish the Pediatric Pandemic

Network. The goal of the network is to improve the nation's ability to meet the specialized needs of children during natural disasters and global health threats — including pandemics — in part by improving everyday pediatric readiness.

The network brings together the expertise of the 10 children's hospitals, located across distinct regions of the United States, with the work of the EIIC and three Pediatric Disaster Care Centers of Excellence (funded through ASPR): the Western Regional Alliance for Pediatric Emergency Management, Region V for Kids, and the Gulf 7-Pediatric Disaster Network.

Learn more at pedspandemicnetwork.org

**For more information, contact
the team at the Federal EMSC
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SOURCES

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