

AMERICAN ACADEMY OF PEDIATRICS

Committee on Pediatric Emergency Medicine

The Role of the Pediatrician in Rural EMSC

ABSTRACT. In rural America pediatricians can play a key role in the development, implementation, and ongoing supervision of emergency medical services for children (EMSC). Often the only pediatric resource for a large region, rural access pediatricians are more likely to treat pediatric emergencies in their own offices, and are a vital resource for rural physicians, or other rural health care professionals (physician assistants, nurse practitioners), and emergency medical technicians (EMTs) to improve system-wide EMSC by providing education about issues from prevention to rehabilitation, technical assistance in protocol writing, hospital care, and data accumulation, and as advocates for community and state legislation to support the goals of EMSC.

ABBREVIATIONS. ED, emergency department; EMSC, emergency medical services for children; AAP, American Academy of Pediatrics; CATCH, Community Access to Child Health; EMS, emergency medical services; PALS, Pediatric Advanced Life Support; APLS, Advanced Pediatric Life Support; NRP, Neonatal Resuscitation Program.

Ten percent of emergency response transports and one third of emergency department (ED) visits are for pediatric patients.^{1,2} One fourth to one third of the US population resides in rural areas,³ and additional families visit these areas during vacation periods. Children in rural areas differ little in their medical and surgical emergency needs from those in urban centers, but they may have greater exposure to work- and play-related vehicles and animals (eg, farm machinery, all-terrain vehicles, horses, grain silos) and environmental threats (eg, weather, terrain, toxins). The disproportionately increased number of rural motor vehicle fatalities and long travel times to care for many emergencies also contribute to the increased risk of death and disability from trauma and medical diseases in rural children.³

Access to care at all levels is the major difference between rural and urban emergency medical services for children (EMSC) systems. Decreased access to medical care increases the morbidity and mortality of rural children.^{4,5} Vital access issues include:

- Communication
- Transport method, availability, and time
- Proper equipment for infants through adolescents

- Pediatric care skills of prehospital providers
- Pediatric expertise at the immediate recipient facility
- Rural-to-urban hospital pediatric transport
- Referral center care
- Rehabilitation
- Local follow-up care

Related issues of financing, legislation, public awareness, prevention, and data collection confront rural and urban EMSC.

Pediatricians can play a valuable role in assuring quality and comprehensive care for children in rural communities. Pediatric leadership and support is needed for regional EMS organizations to provide expertise for education and emergency care and participate in data collection and legislative process. These area pediatricians can review and participate in implementation of the many diverse elements of EMSC, remaining sensitive to the unique needs of a particular rural community.

Education is the area in which all pediatricians can contribute to EMSC, especially in rural populations lacking primary care pediatrician access. Patient and parent education about prevention, recognition of emergencies, access to 911 service and poison control centers, first aid, and cardiopulmonary resuscitation should be an essential part of anticipatory guidance. Enlisting community resources in prevention education is invaluable, especially if a distinct domestic threat exists (eg, open water environments, disaster-prone areas). Prevention materials from the American Academy of Pediatrics (AAP) and EMSC centers are readily available (Table). Additional vital needs are preparation of the office for emergency response (a medical necessity in rural areas and a legal responsibility everywhere), education of prehospital responders in the nuances of pediatric emergency care and providing educational expertise and support to emergency department personnel (infrequency of pediatric emergencies in each rural environment requires frequent updating of the knowledge and skills of rural providers to maintain acceptable levels of response), service on advisory boards, collection of EMSC-sensitive data to improve the system, and involvement in education of legislators and the public.

Legislative input can be stimulated, developed, and presented by pediatricians knowledgeable about statewide EMSC issues. Building local and statewide coalitions is a sound approach to generate legislative responsiveness and community awakening to the importance of sophisticated EMSC, and such coalition building needs pediatri-

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

PEDIATRICS (ISSN 0031 4005). Copyright © 1998 by the American Academy of Pediatrics.

TABLE. Resources for Pediatric Emergency Medical Services

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EMSC National Resource Center 111 Michigan Avenue, NW Washington, DC 20010-2970		
National EMSC Data Analysis Resource Center 410 Chipeta Way, Suite 222 Salt Lake City, UT 84108		(801) 581-6410 (801) 588-2360
EMSC Project Grants US Department of Health and Human Services Health Resources and Services Administration		(301) 443-2250
Neonatal Resuscitation Program (NRP) 141 Northwest Point Blvd Elk Grove Village, IL 60007-1098	American Academy of Pediatrics	(847) 228-5005
Pediatric Advanced Life Support (PALS) 7272 Greenville Ave Dallas, TX 75231	American Heart Association	(214) 373-6300
Advanced Pediatric Life Support (APLS) 1125 Executive Circle Irving, TX 75038	American College of Emergency Physicians	(800) 798-1822

cian expertise and support. Rural issues that may need distinct legislative assistance include establishment of: universal 911 (preferably “enhanced”) service, communications technology, educational processes, advisory councils, regionalization issues, codifying standards, and data collection resources to justify EMSC agendas. Model legislation and guidelines are available to provide a framework for continued development of state EMSC; some amendment specific to the rural locales may be necessary.^{6,7}

Data collection and research are particularly needed in rural EMSC where certain problems are more prevalent than in urban settings (eg, skills retention, transport mechanisms, volunteer responder’s education and responsibilities, and delayed access issues). Interested pediatricians can find multiple opportunities to promote studies to generate outcome-based information to improve local (and national) EMSC, with potential grant funding from sources such as Community Access to Child Health (CATCH), AAP, and federal agencies (Table).

In many rural areas, limited resources have led to the development of *interstate* coalitions to pursue EMSC agendas.

Quality development of EMSC in rural America requires motivated pediatrician advocates to commit their expertise to education, legislation, and facilitation of these services. As highly-trained providers of child health care, rural access pediatricians are encouraged to pursue the following activities:

1. Help organize and continuously participate in an emergency medical services (EMS) community committee responsible for local system design and development, including educational programs, structured protocols, pediatric ready access communication availability (for dispatchers to emer-

gency department physicians), hospital care and transport (with a special focus on long time and distance issues), continuous reassessment of all procedural issues, data collection, and quality improvement. This system should integrate well with, and be supported by state EMS.

2. Assure appropriate pediatric equipment for physician (pediatrician, family practitioner) and other rural health care professional (physician assistant, nurse practitioner) offices, transport vehicles, and recipient facilities.
3. Prepare office staff to deal with pediatric emergencies and personally certify in pediatric resuscitation programs (Pediatric Advanced Life Support [PALS], Advanced Pediatric Life Support [APLS], and Neonatal Resuscitation Program [NRP]) (Table).
4. Prepare parents and child caretakers to deal with pediatric emergencies.
5. Provide guidance in recruiting and retaining small community prehospital and ED providers who have pediatric expertise, and help them maintain skills and comfort with pediatric emergencies by providing sensitive review (eg, critical incidents and stress debriefing, reassurance), continuing medical education, and pediatric office rotations.
6. Develop EMSC legislative agendas.
7. Generate and stimulate community prevention programs.

Pediatricians can develop strategies for *community-sensitive* outreach to rural areas with no pediatricians and assist in the organization of regionalized pediatric emergency care, using available rural expertise and assets to optimize outcome of seriously ill and injured rural children. Multiple resources are available for implementation and continuation of such an EMSC agenda (Table).

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SUGGESTED READINGS

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