

FUTURE OF EMERGENCY CARE

EMERGENCY CARE FOR CHILDREN GROWING PAINS

Committee on the Future of Emergency Care
in the United States Health System

Board on Health Care Services

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

THE NATIONAL ACADEMIES PRESS
Washington, D.C.
www.nap.edu

creates overlaps and gaps in program funding. The committee recommends that Congress establish a lead agency for emergency and trauma care within 2 years of the release of this report. The lead agency should be housed in the Department of Health and Human Services, and should have primary programmatic responsibility for the full continuum of emergency medical services and emergency and trauma care for adults and children, including medical 9-1-1 and emergency medical dispatch, prehospital emergency medical services (both ground and air), hospital-based emergency and trauma care, and medical-related disaster preparedness. Congress should establish a working group to make recommendations regarding the structure, funding, and responsibilities of the new agency, and develop and monitor the transition. The working group should have representation from federal and state agencies and professional disciplines involved in emergency and trauma care (3.6).

ADDRESSING SPECIFIC PEDIATRIC CONCERNS

In addition to the above reforms to the broader emergency care system, the delivery of optimum pediatric emergency care will require addressing a number of concerns specific to pediatric populations. It will be necessary to strengthen the capabilities of the emergency care workforce to treat pediatric patients, improve patient safety, exploit advances in medical and information technology, foster family-centered care, enhance disaster preparedness, and improve the evidence base.

Strengthening the Workforce

Ideally, because of the unique way in which pediatric patients should be triaged and treated, all children should be served by emergency care providers with formal training and experience in pediatric emergency care. In reality, providers' levels of pediatric emergency care training vary considerably. Residency programs, medical schools, nursing schools, states, EMS agencies, and hospitals have varying requirements for initial and continuing pediatric emergency care education and training. In some cases, the training is intensive; however, emergency medicine or pediatrics training often represents only a small part of a provider's total training time. Of particular concern are emergency care providers who rarely encounter pediatric patients, making it difficult for them to maintain pediatric skills. This is a long-standing problem that has improved somewhat over time, but naturally has led to continued concern about the ability of the emergency care workforce to care properly for pediatric patients. To reduce the consequences of illness and injury, the workforce must have the knowledge and skills necessary to provide appropriate pediatric emergency care. The committee believes all

emergency care providers should possess a certain level of competency to deliver emergency care to children. Therefore, the committee recommends that every pediatric- and emergency care–related health professional credentialing and certification body define pediatric emergency care competencies and require practitioners to receive the level of initial and continuing education necessary to achieve and maintain those competencies (4.1).

Treatment patterns of providers in emergency care for pediatric patients differ not only because of differences in training, but also because of the lack of evidence-based clinical practice guidelines for many different types of conditions. This is troubling since the use of such guidelines has been shown to improve the quality of care. The committee recommends that the Department of Health and Human Services collaborate with professional organizations to convene a panel of individuals with multidisciplinary expertise to develop, evaluate, and update clinical practice guidelines and standards of care for pediatric emergency care (4.2). The committee believes these guidelines should be evidence-based, developed through an evidence evaluation process. That process should include individuals from different disciplines and different types of emergency care organizations to promote consensus and uniformity.

Simply recommending more training and the development of guidelines is not enough, however. Someone must be responsible at the provider level for ensuring that continuing education opportunities are available and exploited. Similarly, the development of clinical guidelines is useless without widespread adoption by providers. Thus the committee believes that pediatric leadership is needed in each provider organization. **The committee recommends that emergency medical services agencies appoint a pediatric emergency coordinator, and that hospitals appoint two pediatric emergency coordinators—one a physician—to provide pediatric leadership for the organization (4.3).** The pediatric coordinator position would not be a full-time position, but a shared role. Still, the coordinators would have a number of responsibilities, including ensuring adequate skill and knowledge among fellow ED or EMS providers, overseeing pediatric care quality improvement initiatives, and ensuring the availability of pediatric medications, equipment, and supplies.

Improving Patient Safety

Emergency care services are delivered in an environment where the need for haste, the distraction of frequent interruptions, and clinical uncertainty abound, thus posing a number of potential threats to patient safety. Children are, of course, at great risk under these circumstances because of their physical and developmental vulnerabilities, as well as their need for care that may be atypical for providers used to treating adult patients.

care. The effort should be multidisciplinary and multiorganizational to promote consensus and uniformity. The more organizations are involved in the development, the more likely it will be that the guidelines will be used in practice in various disciplines.

Unless there is a commitment to funding pediatric emergency medicine research, however, there will not be an adequate evidence base from which to derive practice guidelines. The issue of research and research funding is discussed in depth in Chapter 7.

Providing Pediatric Leadership in EMS Agencies and EDs

Simply recommending more training and the development of guidelines is not enough. Someone must be responsible at the provider level for ensuring that continuing education opportunities are available and well attended. Similarly, the development of clinical guidelines is useless unless their widespread adoption by providers is ensured. To these ends, the committee believes pediatric leadership within each provider organization is needed. Therefore, the committee recommends that **emergency medical services agencies appoint a pediatric emergency coordinator and hospitals appoint two pediatric emergency coordinators—one a physician—to provide pediatric leadership for the organization (4.3)**. Hospitals could choose personnel for the two coordinator positions based on available resources; often they will be filled by a physician and a nurse, but other models are possible (e.g., a physician and an EMT-P). The activities of the pediatric coordinators should be a component of medical oversight.

The pediatric coordinator position is not necessarily intended to be full-time, but instead a shared role. Still, the coordinators would have a number of responsibilities that would include ensuring adequate skill and knowledge among fellow ED or EMS providers; overseeing pediatric quality improvement initiatives; ensuring the availability of pediatric medications, equipment, and supplies; ensuring that fellow providers are following clinical practice guidelines; representing the pediatric perspective in the development of hospital or EMS protocols or procedures, for example, for family-centered care; participating in pediatric research efforts; and developing prevention programs for the hospital or EMS agency. The pediatric coordinator would monitor pediatric care issues and present concerns to the organization's leadership when a problem with pediatric care was identified. For example, if medication errors for children in the ED appeared to be rising, the pediatric coordinator should bring this to the attention of hospital administrators. Additionally, pediatric coordinators would liaison in quality improvement efforts and education with community hospitals lacking pediatric resources.

There are two reasons why it is important for hospitals to have two

pediatric coordinators. First, as noted, the coordinator positions would not be full-time. However, the committee envisions the coordinator role as encompassing many responsibilities—enough that two coordinators would be necessary. Second, it is important for hospitals to have a physician serve as a pediatric coordinator rather than having the role filled by a lone nurse or EMT. While the nurse–physician relationship has generally evolved over time from an authoritarian to a collaborative one (Pavlovich-Danis et al., 2005), remnants of the old dynamic may prevent some physicians from taking suggestions for improving pediatric care amiably from nurses or EMTs and vice versa. Certainly both coordinators should collaborate on pediatric improvement initiatives within the ED.

The concept of a pediatric coordinator is not new. In fact, since 1983 all Los Angeles hospitals designated as emergency departments approved for pediatrics (EDAPs) have been required to have a pediatric liaison nurse (PdLN) on staff, similar to the pediatric coordinator proposed here. Additionally, the AAP/ACEP 2001 *Guidelines for Preparedness for the Care of Children in the Emergency Department* contain a recommendation regarding the use of a physician coordinator and a nurse coordinator for pediatric care. The guidelines stipulate that the physician coordinator may be a staff physician with other responsibilities in the ED, but should meet the criteria for credentialing as a specialist in emergency care, pediatric emergency medicine, or pediatrics and have a special interest, knowledge, and skill in emergency medical care of children. The guidelines stipulate further that the nurse coordinator should have an interest, knowledge, and skill in emergency care and resuscitation of infants and children as demonstrated by training, clinical experience, or focused continuing nursing education. The position includes such duties as coordinating pediatric quality improvement, serving as a liaison to in-hospital and out-of-hospital pediatric care committees, and facilitating nursing continuing education in pediatrics (AAP, 2001). Pediatric coordinators for EMS agencies appear to be less common, but are necessary to advocate for improved competencies and the availability of resources for pediatric patients. Preferably, prehospital pediatric coordinators would be EMT-Ps with the interest, knowledge, and skills necessary to deliver care to children. EMS pediatric coordinators would have many of the same responsibilities as physician and nurse pediatric coordinators.

One children's hospital currently employs two full-time coordinators who are responsible for both EMS and hospital-based emergency care services. The hospital-based coordinator, an EMT-P, spends the majority of his time coordinating the PALS and other education programs within the hospital. He also leads a task force that examines all resuscitation events and reviews policies and procedures for resuscitation. His duties include making sure that resuscitation equipment is available and that all crash carts are uniform across all hospital floors. The coordinator reports to

the administrator of the ED, as well as to the division chief of emergency medicine. The second coordinator focuses primarily on coordinating PALS and other continuing education courses for prehospital providers (Personal communication, D. LaCovey, March 13, 2006).

Approximately 18 percent of hospitals have a pediatric physician coordinator on staff; 12 percent have a nurse coordinator (Gausche-Hill et al., 2004). In Los Angeles, however, the hospitals that are best prepared for pediatric emergencies—those designated as EDAPs—are required to have pediatric coordinator positions. But pediatric coordinators are arguably most important for smaller EDs and EMS agencies that lack strong pediatric expertise; these are the facilities most in need of immediate pediatric leadership. They may not be able to staff the pediatric coordinator position with a physician that is an EM physician or a physician with pediatric expertise; however, the position should be assigned to a physician with the interest and desire to improve pediatric emergency care within the facility.

SUMMARY OF RECOMMENDATIONS

4.1 Every pediatric- and emergency care-related health professional credentialing and certification body should define pediatric emergency care competencies and require practitioners to receive the level of initial and continuing education necessary to achieve and maintain those competencies.

4.2 The Department of Health and Human Services should collaborate with professional organizations to convene a panel of individuals with multidisciplinary expertise to develop, evaluate, and update clinical practice guidelines and standards of care for pediatric emergency care.

4.3 Emergency medical services agencies should appoint a pediatric emergency coordinator, and hospitals should appoint two pediatric emergency coordinators—one a physician—to provide pediatric leadership for the organization.

REFERENCES

- AAP (American Academy of Pediatrics). 2000. Access to pediatric emergency medical care. *Pediatrics* 105(3 Pt. 1):647–649.
- AAP. 2001. Care of children in the emergency department: Guidelines for preparedness. *Pediatrics* 107(4):777–781.
- AAP. 2003. *Council of Medical Specialty Societies: Workforce Questions*. Washington, DC: AAP.