Improving Emergency Care To Meet Children's Needs

Most people assume that the same emergency medical services that use sophisticated technologies to treat an adult's heart attack can provide similar advanced care when their children need emergency treatment.

Often that is not the case. For too many children, appropriate emergency care is not available when needed, and too many children die or suffer long-term disabilities as a result.

A recent Institute of Medicine (IOM) report points out that even though children make up about one-third of all patients admitted to emergency departments and 10 percent of cases transported by ambulances, these services often lack proper equipment and expertise to provide appropriate care in pediatric emergencies.

Emergency Medical Services for Children. Committee on Pediatric Emergency Medical Services, Division of Health Care Services, Institute of Medicine. J.S. Durch and K.N. Lohr, eds. (1993, 408 pp.; ISBN 0-309-04888-5; available from National Academy Press, tel. 1-800-624-6242; $49.95 plus $4.00 shipping for single copies).

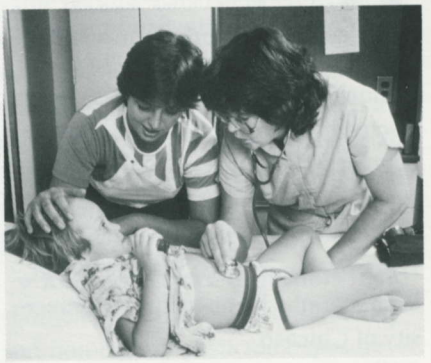
"We feel that children have been left out," said Donald Medearis Jr., chair of the IOM study committee and chief of Children's Service at Massachusetts General Hospital, Boston. "Too many ambulances, emergency wards, and personnel are not trained and equipped to care for the needs of children."

Better pediatric care capabilities must be developed within the many emergency medical services systems throughout the country, the committee concluded. Improvements are needed across the full range of emergency medical services for children — prevention, pre-hospital care and transport, emergency department and inpatient care, and follow-up care, including rehabilitation.

Important Differences

Children "are not little adults" when it comes to emergency care, the committee emphasized. They are smaller and proportioned differently than adults, and their vital signs such as breathing and blood pressure levels cannot be assessed against adult standards.

The severity of children's illnesses or injuries can be more difficult to "read" than adults'. For example, a drastic drop in blood pressure signals a severe loss of blood or dehydration in adults, but this symptom may not occur in children until they are near death. Broken ribs in adults are a signal of possible lung injuries. In children, even though the lungs may be injured, their more flexible bones may not break.



©Rick Brady/UnipHoto

Children are not only different from adults, but also from younger or older children as they move through various stages of emotional and behavioral development. Such differences mean that equipment and procedures for

adult care are likely to be inappropriate for children.

Improved Training

Without adequate training, emergency care professionals often lack the skills they need to assess and treat sick and injured children. Yet many receive little training in pediatric emergency medicine. One study found that physician residency programs in emergency medicine devoted only about 15 percent of the training time to pediatrics, even though children constituted about 25 percent of the patients. Others have found that, on average, training programs for paramedics allotted less than 10 percent of the training hours to pediatrics. Other emergency personnel, including nurses, emergency medical technicians, and ambulance dispatchers also often lack appropriate training.

Emergency care for children seems to fall between the cracks, the committee noted. Programs that train emergency care professionals often do not adequately address care for children because they stress adult injuries and illnesses such as cardiac conditions. Training programs in pediatrics often focus on primary care and do not give enough emphasis to emergency care.

To counteract these shortcomings, the committee recommended that accrediting organizations ensure that training programs for paramedics and emergency medical technicians include pediatric resuscitation skills and address children's medical, developmental, and social needs in emergency care. Graduate education in emergency, pediatric, and family practice nursing, as well as physician residency programs in emergency medicine, family practice, pediatrics, and surgery, also should give greater emphasis to pediatric emergency care.

Education in coping with childhood emergencies should not be limited to health care professionals.

Education in coping with childhood emergencies should not be limited to health care professionals, the committee pointed out. Programs are needed to educate parents, teachers, day-care providers, coaches, and other responsible adults and adolescents. Public education efforts should include child safety and injury prevention, pediatric first aid, and cardiopulmonary resuscitation. Noting that delay in seeking emergency care can threaten the lives of ill or injured children, the committee also advocated educating the public on when and how to use emergency medical services appropriately for children.

Child-Sized Equipment

To provide good care, emergency personnel also need equipment that fits children's smaller proportions — smaller blood-pressure cuffs, oxygen masks, intravenous needles, and airway tubes, for example. The lack of such equipment can further endanger children needing emergency medical care. Adult blood pressure cuffs can give inaccurate readings, and without properly-sized intravenous needles, health care workers may not be able to administer life-saving drugs.

Children also need dosages of medications scaled to their size. Pre-filled syringes with adult doses — often carried by ambulances and kept in emergency departments — cannot be used "as is." Practitioners should have access to simple measuring devices for estimating a child's weight and appropriate drug dosage.

Despite these special needs, many ambulances, emergency departments, and even some pediatricians' offices lack vital pediatric equipment, studies show. What's particularly striking is that much of what is needed represents only a fraction of the total cost of emergency medical equipment routinely stocked in ambulances and emergency departments. "Costs cannot be and should not be advanced as a justification for depriving children of necessary, basic emergency care," the committee said.

The state agencies overseeing emergency departments and ambulances should require them to have equipment and supplies appropriate for the emergency care of children, the committee recommended.

It is also important for emergency care professionals to have information about the level of pediatric care that community facilities can provide, the committee said. Emergency medical service systems should use this information to guide ambulance crews to appropriate destinations. A hospital with a pediatric trauma center and within a reasonable distance, for example, may be a better choice for a seriously injured child than the closest hospital, which may lack vital pediatric facilities.

Only a relatively few hospitals are able to provide the most advanced care. Regional planning can help ensure that children have access to these specialized services when they need them. The committee called for state agencies that regulate hospitals and emergency medical services to include regional planning and classifying hospital capabilities in their efforts to improve emergency care for children.

Communication plays an important role in coordinating the efforts of emergency medical services systems and ensuring that ill or injured children receive all the services they need, from prevention to acute care to rehabilitation, the committee stressed. As an essential element of emergency services, the committee recommended that all communities have access to 9-1-1 emergency telephone systems.

Government Centers

Government action is needed to improve emergency care for children, the committee concluded. "Children don't vote, so somebody has to be their advocate," said Medearis.

All communities should have access to 9-1-1 emergency phone systems.

The committee recommended the formation of federal and state centers and advisory councils with specific responsibility for emergency medical services for children.

"We feel that without constant attention, oversight, and stimulus," Medearis emphasized, "the needs of children in terms of emergency care will be lost."

As envisioned by the committee, a federal center would develop a national strategy to improve emergency medical services for children. The center could also provide technical assistance to states and communities and support a clearinghouse for general and technical information on pediatric emergency medical care. Both federal and state centers could promote better education and training.

The committee suggested, in addition, that the federal center collect data and sponsor research to pinpoint more clearly the emergency care needs of children, as well as the treatments or procedures that are most likely to save lives and prevent disabilities. State centers could also be charged with collecting and analyzing data.

Although some critics might question the need for new centers at a time of serious budget constraints, the committee stressed that "[i]n seeking to bring major attention to children's needs, [it] is not proposing to establish a new entitlement for children's medical care." Instead, the committee explained that "it is trying to ensure that children are not *deprived* of the level of care that is the expected norm for adult patients."

When children's emergency care needs are viewed in this manner, the committee noted, an ethical imperative exists not to ignore them.

"Children's needs have been (and continue to be) overlooked in emergency medical care," the report stated, "and the committee wants to see that oversight corrected."

— *Margie Patlak*

The author is a free-lance science writer in the Philadelphia area.