

resuscitations per year were also used in the analysis. The authors found fewer equipment items were actually available during the on-site surveys compared with data provided in the questionnaires. The regression model demonstrated an increased unavailability of pediatric resuscitation equipment in Level III hospitals, those with a low annual census (<10,000 visits/y), those with less than 10% of ED visits by children, those without a pediatrician or PALS-trained physician on staff, those more than 200 km from a university center, and those with fewer than 3 pediatric resuscitations per year. These results highlight the need to target the smaller volume institutions for intervention to improve equipment availability for pediatric emergency patients.

This well-done and interesting study points out the limitations of doing paper surveys for hospital categorization and preparedness without on-site validation. Although there was generally good agreement between the paper survey and the on-site survey, in almost all cases, the on-site survey revealed an increase in unavailability of equipment. The authors note that a limitation of doing paper surveys is that there is no assurance that the person assigned to complete the survey is knowledgeable about the content and definitions of the survey required to accurately report the desired data. Indeed, the respondents may not be familiar with the terms or with the actual stocked equipment in the ED.

Guidelines for ED preparedness for pediatrics have been published by several groups; however, they have not been universally implemented.⁴⁻¹⁰ In response to the need for a unified strategy to improve care of children in the ED, guidelines have been jointly developed by the American Academy of Pediatrics and the American College of Emergency Physicians and are published in this issue of *Annals*.¹¹ These guidelines provide a positive step toward empowering ED administrators with the ability to provide staff and equipment to meet the needs of the pediatric patients in their community.

We have made significant progress in improving pediatric emergency care, but the article by our Canadian colleagues reminds us that simply having guidelines may not be enough. We need to motivate all those vested in pediatric emergency medical care to evaluate their equipment and staffing requirements for the ED. The authors of this article demonstrate that the costs of providing appropriate equipment are minimal. To achieve equipment preparedness, it simply takes commitment.

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Guidelines for Preparedness of Emergency Departments That Care for Children: A Call to Action

See related policy statement, p. 423.

[Gausche-Hill M, Wiebe RA. Guidelines for preparedness of emergency departments that care for children: a call to action. *Ann Emerg Med*. April 2001;37:389-391.]

In this month's issues of *Annals of Emergency Medicine* and *Pediatrics*, there is a policy statement from the American College of Emergency Physicians (ACEP) and the American Academy of Pediatrics (AAP) on guidelines for preparedness of emergency departments that care for children.¹ This joint effort by 2 large professional organizations to tackle the issue of preparedness for children seeking emergency care should be applauded. ACEP, in its review of policies related to emergency care for children, recognized the need to unify these policies in a single document. AAP also recognized that a policy addressing emergency care for children nationally was an important concept. ACEP and AAP are committed to quality care for the patients served by its members, and this policy statement reflects that commitment.

Now that the policy statement is in print, one might ask several questions:

- Why is there a need for this policy statement?

- Who should implement this policy statement?

Let's direct our attention to the first question: Why is there a need for this policy statement?

Seidel et al² noted in 1984 that pediatric patient "needs" were not being met by emergency medical services (EMS) systems that included out-of-hospital and ED care. Their study showed that death rates from trauma were higher for children (12%) compared with adults (7%). They also showed that 22% of all pediatric patients seen in EDs were transported to a second facility, indicating a possible lack of necessary services at the first hospital. These data, as well as subsequent studies comparing frequency of advanced life support treatment use by out-of-hospital providers for adults and children, highlight differences in care received by pediatric patients.³⁻⁶ It is not clear from these data whether the differences in care rendered for children have a true effect on patient outcomes or whether differences in outcomes are attributable to underlying differences in the cause and severity of illness and injury in adults and children.⁷ Although use of advanced skills in this setting may seem appropriate, a recent prospective study of advanced airway management in children showed a detriment in patient outcome for children in selected subgroups receiving endotracheal intubation versus the basic skill of bag-mask ventilation.^{8,9} Finally, it is neither practical nor financially feasible for all hospitals to have pediatric subspecialty and intensive care capability.

Other data addressing emergency preparedness have been obtained from surveys.^{10,11} The federal Emergency Medical Services for Children (EMSC) Program worked with the Consumer Product Safety Commission to survey hospitals through the Consumer Product Safety Commission National Electronic Injury Surveillance System to study distribution of pediatric services, the location of emergency care for children, availability of pediatric specialists, and availability of appropriately sized equipment.¹⁰ The sample of 101 hospitals surveyed was designed to represent the approximately 5,300 hospitals in the United States with 24-hour emergency services. Athey et al¹⁰ showed that 7% of hospitals routinely admitted critically injured children requiring intensive care to adult ICUs, rather than transferring them to a facility with a pediatric ICU. In addition, appropriately sized equipment for care of pediatric patients was more likely to be missing than comparable equipment for adult patients.

McGillivray et al¹¹ performed a survey of more than 700 EDs in Canada and found that pediatric resuscitation equipment was often unavailable. Specifically, intraosseous needles were unavailable in 16% of the EDs, pediatric drug dose guidelines in 7%, infant blood pressure cuffs in

15%, pediatric defibrillator paddles in 10%, infant warming devices in 59%, infant bag-valve-mask devices in 4%, infant laryngoscope blades in 4%, 3-mm endotracheal tubes in 2%, and pediatric pulse oximeters in 18%.¹¹ They also conducted onsite surveys of equipment at 38 hospitals and found that equipment was generally even less available than the written survey indicated. Smaller, low pediatric volume EDs were 3 to 5 times more likely to be missing equipment compared with high pediatric volume EDs. The cost of pediatric equipment, being less than \$1,000 (Canadian), was not believed to be a barrier to availability at these hospitals.

The Institute of Medicine Report on EMSC also concluded that agencies with jurisdiction over hospitals should "require that hospital EDs... have available and maintain equipment and supplies appropriate for the emergency care of children."¹²

ACEP and AAP have addressed issues of facility preparedness for care of children and, in the case of ACEP, for patients of all ages seeking emergency care.¹³⁻¹⁶ ACEP's policy statement on emergency care guidelines states that "hospital EDs must possess the staff and resources necessary to evaluate all persons presenting to the ED."¹⁴ In addition, a number of guidelines for preparedness have been promulgated by the federal EMSC Program and states seeking to regionalize pediatric care.¹⁷⁻²⁰ In 1995, AAP published guidelines that categorized facilities into different levels in their policy statement entitled "Guidelines for Pediatric Emergency Care Facilities."¹⁵ This categorization defines 4 different levels of services for emergency care facilities, including standby, basic, general, and comprehensive regional pediatric center. Each of these policies has addressed the issue of preparedness of the ED to care for children in different ways. Despite these efforts, the need for universally accepted guidelines to achieve pediatric emergency readiness remains.

Some EMS systems have opted for regionalization of pediatric care in an attempt to bring children to the "right place at the right time"; however, these plans do not necessarily affect triage practices of parents for their children. Parents often bring their children to the closest emergency facility, regardless of that facility's preordained category of emergency capability. It is also true that most children are brought to EDs not affiliated with a children's hospital or other tertiary care facility, because there are almost 90 times the number of EDs as children's hospitals.¹⁰ An appreciation of these statistics is important if one wants to develop an effective strategy for improving the availability of pediatric resources. One would not want parents

with a critically ill child to bypass capable EDs to bring them to the tertiary care facility when a delay in seeking care could result in added morbidity or mortality. Nor should a parent bypass hospital EDs on the basis of insurance issues for similar reasons. Finally, EMS administrators must balance the risk of additional minutes in transport of a critically ill or injured child to a pediatric tertiary care facility and the benefit of additional pediatric resources available at that facility. Thus, it may be prudent to adopt a strategy that ensures that all hospitals that serve as pediatric receiving facilities for emergency care, no matter their size, pediatric volume, or inpatient services, be prepared to handle the pediatric patient who may enter their doors and that protocols and transfer agreements are in place to ensure timely transfer of critically ill or injured children to the facility with subspecialists available to meet the complex needs of certain pediatric patients. The promotion of this strategy is the goal of the "Care of Children in the Emergency Department: Guidelines for Preparedness" policy statement,¹ which appears in this month's issue of *Annals* and *Pediatrics*.

Now to address the second question: Who should implement this policy statement? The simple answer to this question is all emergency physicians, pediatricians, administrators, hospital accrediting organizations, and health care organizations that are vested in quality care for children. This policy statement empowers emergency physicians and pediatricians to address the preparedness of their facility for the care of children with their hospital and health maintenance organization administrators. It is hoped that a statement by these 2 major professional organizations, whose members care for many of the nation's children, will be implemented widely by hospitals and hospital accrediting organizations. Some EMS systems may opt to further expand on these guidelines, as has been done in California; however, this policy statement is intended to serve as the benchmark. As an emergency medicine community, let's embrace the suggestions of the policy statement by implementing them. It is through such joint efforts that we can strive to improve care for children.

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