

# Pediatric Emergency Care in Minnesota

## *It's Time to Bring Up Our Grade*

BY PAULA FINK KOCKEN, M.D.

The National Pediatric Readiness Project is a partnership of Emergency Medical Services for Children, the American Academy of Pediatrics, the American College of Emergency Physicians and the Emergency Nurses Association. The first phase of the project, a national assessment of hospitals' ability to treat children with emergent needs—both illnesses and injuries—was completed in July 2013. All Minnesota hospitals providing care for children responded. The overall score for Minnesota was 63, six points lower than the national overall score. This article explains what was assessed, why Minnesota's results may be sub-par and what hospitals need to do to become “peds ready.”

**Case 1.** *It is 1 a.m., and you are on call for your group when you get a call from a woman whose 2-month-old daughter has had a fever all day. The girl is now listless and does not want her bottle. You advise the mom to quickly get her to the nearest hospital for an evaluation. The family lives in northwestern Minnesota. Will the local hospital be able to evaluate, stabilize and treat this patient?*

**Case 2.** *It is 4 p.m. on a cold February day in central Minnesota. It has been snowing since noon, and the roads are getting slick. You get a call from the hospital informing you that a school bus has slid off the road and many injured children are being taken to the emergency department. You are asked to come in and help treat these children. Will the rural hospital be able to handle a busload of injured students? Does it have enough appropriately sized equipment to treat the victims? How will the staff organize the surge of patients?*

**Case 3.** *You are driving along the Gunflint Trail. You see a car accident with several victims and stop to help. One is a child who has chest trauma and is having trouble breathing. An ambulance arrives and takes the child to the nearest hospital. Will the staff be able to stabilize and treat or transfer the child if needed?*

**A**re these hospitals ready for these cases? Do they have the “right stuff” to handle pediatric emergencies? Do their staffs have the right training and protocols for treating children?

Ensuring that hospitals can handle situations such as the ones described is the focus of the National Pediatric Readiness Project, a nationwide multiphase quality-improvement initiative designed to ensure that all U.S. emergency departments (EDs) have the plans and resources in place to provide effective emergency care to children. The project is a partnership among the Emergency Medical Services for Children (EMSC), the American Academy of Pediatrics, the American College of Emergency Physicians and the Emergency Nurses Association. It also has received support from the Joint Commission, the Healthcare Corporation of America and other organizations.

### Why the Focus on Pediatric Readiness

Children younger than 18 years of age account for about 25% of all visits to emergency departments in the United States.<sup>1</sup> Most of those children are in communities far from major medical centers or specialized pediatric hospitals.<sup>1</sup>

Concern about whether hospital EDs were equipped and ready to treat sick or

injured children grew after a 2003 survey on pediatric readiness showed that only 55% of all EDs in the United States were indeed ready and able to do so.<sup>2</sup> The 2006 Institute of Medicine report “Emergency Care for Children: Growing Pains” further spotlighted the need for improvement in pediatric emergency care.<sup>3</sup> Summarizing the situation, its authors wrote: “For decades, policy makers and providers have recognized the special needs of children, but the emergency and trauma care system has been slow to develop an adequate response to those needs.” The report highlighted three areas of need: disaster preparedness, pediatric training and research/data collection.<sup>2</sup>

Pediatric emergency care has been recognized as an area of concern in Minnesota since 2006. The statewide trauma system, which was established in 2005, improved our ability to get injured kids to definitive care quicker. But questions about the quality of pediatric care in EDs remained.

Emergency Medical Services for Children (EMSC) of Minnesota has led the state's work on pediatric readiness, pulling together nurses, physicians and trauma coordinators from the major trauma and pediatric centers in the state. EMSC of

Minnesota facilitated Minnesota’s involvement in the National Pediatric Readiness Project.

**The National Assessment**

The first phase of the National Pediatric Readiness Project was to evaluate pediatric readiness in hospitals across the nation. A total of 5,017 facilities with EDs that care for children were assessed. These included children’s hospitals, community-based hospitals, military hospitals and freestanding EDs. The assessment was completed in August of 2013.

The questionnaire, which was comprehensive and lengthy, was to be filled out by a hospital representative (often the ED manager). It assessed the EDs in six areas: administration and coordination; competency of physicians and other providers; quality- and process-improvement efforts; patient safety; policies, procedures and protocols; and equipment, supplies and medications. Each hospital could earn a maximum of 100 points. Scores were made available to hospitals upon completion of the questionnaire.

Eighty-three percent of the nation’s hospitals responded. The national overall readiness score was 69, meaning on average, hospitals in the United States have 69% of the suggested staff, plans, and equipment and medications in place to adequately care for very sick or injured children. Clearly, there is room for improvement.

TABLE 1

**Minnesota Average Scores Compared with National Average Scores**

ASSESSMENT SECTION (possible points)	MINNESOTA	NATIONAL
Administration and coordination (19)	9.6	10.1
Competency of ED staff (10)	3.2	5.3
Quality improvement/process improvement (7)	2.0	2.9
Patient safety (14)	10.4	10.8
Policies, procedures and protocols (17)	9.0	10.5
Equipment, supplies and medications (33)	28.8	29.4
Overall score (100)	63	69

Source: National Pediatric Readiness Project (<http://pediatricreadiness.org/>)

**Minnesota’s Readiness**

The good news for Minnesota is that 100% of eligible hospitals and EDs in our state participated in the national assessment. The bad news is that Minnesota’s overall readiness score, 63, was below the national overall score (Table 1). It should be noted that scores varied by region (Table 2) and there was variability within regions as well. For example, in the metro region, scores ranged from 40 to 100.

So why did the state, which considers itself to be “above average” in so many areas, score below the national average on pediatric readiness? There are several possible explanations. One is simply that the wrong person may have filled out the assessment in some cases. Although EMSC staff attempted to have the individual with the most knowledge about the ED (typically nurse managers or trauma coordinators) complete the assessment, some may have delegated the task to another person on staff, and that person may have incorrectly answered certain questions.

Another possible reason for Minnesota’s low score is the fact that many ED staff in Minnesota are trained in Comprehensive Advanced Life Support (CALS). CALS addresses the care of pediatric patients but is not nationally recognized like Pediatric Advanced Life Support and other similar courses. Therefore, the assessors may not have given credit for CALS training and scored Minnesota EDs lower on staff competency.

Such factors, however, do not entirely explain our low score, and it is clear we have deficits. The biggest problem Minnesota EDs had was not having guidelines in place for administration and coordination of care for ill and injured children. Simple policies, such as weighing every child in kilograms rather than pounds and notifying caregivers of abnormal vital signs, are missing from many of them. In addition, many hospitals lack protocols for such things as handling suspected child abuse. Guidelines for quality assurance and performance improvement relating to

TABLE 2

**Summary of Average Scores by Region**

	Central	Metro	NE	NW	South Central	SE	SW	West Central
Coordination	9.5	10.3	11.9	7.3	8.7	12.7	9.9	3.2
Staffing	4.3	5.6	3.1	2.3	1.7	4.2	1.7	0.6
QI/PI	1.5	3.5	1.5	0.8	1.5	2.6	2.4	1.2
Safety	9.8	12.2	10.2	9.5	10.2	12.0	9.7	8.1
Policies	9.3	11.9	8.3	6.8	9.3	10.7	8.2	6.2
Equipment	30.1	31	28.7	28.6	26.2	30.0	27.3	27.0
Overall Score	65	75	64	55	58	72	59	46

Source: National Pediatric Readiness Project (<http://pediatricreadiness.org/>)

pediatric patients are also lacking in some hospitals. Hospitals with low pediatric volumes had the lowest scores in this area may lack the resources they need to focus on these issues.

### Going Forward

With the assessment complete, it is time to work on improving the quality of pediatric emergency care in the state. As a first step, hospitals should identify a staff person who will champion pediatric readiness. Often, it takes only one committed nurse, physician, physician assistant, nurse practitioner or emergency medical technician, who can focus on advancing the care of children in the ED, to begin the improvement process. The next step is to examine the deficits highlighted by the assessment. Then the pediatric “point person” can begin to work on such things as developing protocols, getting staff educated and initiating reviews of pediatric cases.

A number of resources are available to help that person. Templates for protocols can be easily downloaded from the EMSC website ([www.emscnrc.org/EMSC\\_Resources](http://www.emscnrc.org/EMSC_Resources)). Experts from the state’s pediatric trauma centers can be brought in to train staff or lead case reviews. In addition, representatives from EMSC of Minnesota will be meeting with each region’s trauma advisory committee about issues identified through the assessment. As of July, EMSC representatives had visited five communities and planned to visit a sixth by the end of the year. At these meetings, staff explain the results and describe how to improve the emergent care of children.

The medical advisors from EMSC of Minnesota are also creating a shorter Minnesota-specific assessment that will focus on what they consider to be the most important aspects of pediatric emergency preparedness. This more specific evaluation will help them as they advise EDs and facilitate improvements in care.

### Picturing Peds-Ready Care

The goal of these efforts is to have all hospitals in Minnesota ready and able to provide excellent pediatric emergency care—that their staffs are trained, their emergency departments have appropriate equipment for babies and children, and protocols for care and transfer of care are in place.

What might such care look like? In Case 1, the infant would have been seen in the ED immediately and recognized as being very ill. The ED staff would have quickly assessed her vital signs, including taking her temperature using a rectal thermometer. The physician assistant on duty, concerned about the baby’s poor tone and lethargy, would have had the nurse place an IV to give fluids and obtained blood for laboratory tests. She would have called the referral hospital to arrange for transfer and asked for advice regarding treatment of the patient. The ambulance would have arrived and transported the child to the regional referral hospital.

In Case 2, the nurse manager at the rural hospital would have remembered the discussion from two months ago on “pediatric surge” and printed out the protocol on how to handle a large number of injured children. He would have asked an administrative assistant to contact the on-call nurses and other providers about helping with the incoming patients. He would have set up a triage area at the ED entrance and divided the ED and clinic area into zones of high, medium and low acuity. He would have told the staff to ready the pediatric equipment and the length-based treatment tapes.

In Case 3, the emergency responders would have radioed the local hospital, advising them that they were bringing in a child who may have a pneumothorax. The ED staff would have pulled out the pediatric equipment and called the helicopter dispatch, knowing that the child would need to be transferred after being stabilized. When the child arrived, the nurse in the ED would have used the length-based tape to determine the size of equipment needed and the physician would have

recognized that the child had a tension pneumothorax. Recalling a similar scenario during her CALS course, she would have “needed” the child’s chest so that the child’s respiratory distress would improve. The helicopter would have arrived and transported the child to a hospital in Duluth.

As these scenarios show, all hospitals in Minnesota can deliver high-quality emergency care. Now that hospitals know where their deficits with regard to pediatric emergency care lie, they can begin taking the steps to improve. There is much we can do now to ensure that next time we are assessed for pediatric emergency readiness, our score will be very far above average. ■■■

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### For more information

To find out more about resources available from Emergency Medical Services for Children of Minnesota, contact:

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