

Is It Still an Emergency Department if It Can't Treat Children?

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Most children in the United States receive their emergency department (ED) care in nonchildren's hospitals. In this issue of *Annals*, Remick et al¹ demonstrate that a verification program demonstrated a greater level of "pediatric readiness" as measured by a score developed by an expert panel in EDs with a commitment to pediatric care.

The study was performed in California, a state that uses an Emergency Department Approved for Pediatrics model for their Emergency Medical Services for Children program. Multiple states use a model similar to that of California, in which EDs may optionally participate in the care of children within their regional emergency medical services (EMS) system. Those facilities meeting certain established criteria are designated as Emergency Departments Approved for Pediatrics and may receive EMS-transported children, whereas those without such approval are generally bypassed. Other state-specific variations of the Emergency Department Approved for Pediatrics model include tiered levels of pediatric ED care similar to those widely used for trauma or ST-segment elevation myocardial infarction (STEMI) centers. The underlying justification for these systems is the recognition that discrepancies exist in the ability of EDs to care for children, and that children who require emergency treatment would appear best cared for at centers with greater expertise and resources.

The concept of enhancing pediatric preparedness is certainly unimpeachable. However, whether scoring systems or Emergency Department Approved for Pediatrics-style programs actually improve patient care remains unknown. Indeed, such well-intentioned approaches may be paradoxically counterproductive.

A fundamental problem with the optional Emergency Department Approved for Pediatrics model is that it does not reflect how children typically access ED care. Unlike

trauma or STEMI patients who generally use EMS systems, most children visiting EDs arrive outside of an organized out-of-hospital program. Ill or injured children usually do not require an ambulance or stretcher for transport, but can be readily carried and transported by private vehicle, even when in critical condition.² Because parents or caregivers are unlikely to be aware of the latest pediatric ED designations, geography and chance rather than ED capabilities are going to determine the site of their child's initial care. Even should they be aware of the local Emergency Department Approved for Pediatrics, in a perceived emergency they are more likely to stop at the first large building they encounter with a red "Emergency" sign outside the driveway. Realistically, it does not seem reasonable to expect anxious parents or caregivers to be able to choose the best ED for their child when confronted with a sudden injury or illness, or to bear the emotional burden of responsibility for putting their child at risk by bypassing their closest ED.

EDs are access points to medical care, not referral points. They cannot be treated like neonatal ICUs and other similar regionalized health care cooperatives that concentrate specialized care in high-volume centers. If we truly want to improve care for children, our goal should not be to limit the available number of qualified centers but instead to maximize the number of access points.³

The second difficulty with the optional Emergency Department Approved for Pediatrics model for Emergency Medical Services for Children is that it permits hospitals to self-select their level of pediatric preparedness. A hospital that seeks an Emergency Department Approved for Pediatrics designation will by their choice be suitably staffed and equipped, whereas another hospital can declare it does not wish to treat children and make no such preparations. The focus of the Emergency Department Approved for Pediatrics program is then entirely on the management provided in sites already committed to the treatment of children while ignoring the care that will inevitably continue to occur in the non-Emergency Departments Approved for Pediatrics. The study by Remick et al¹ demonstrated that a verification process is

needed to push even dedicated EDs to optimal pediatric readiness. Such a finding brings into question, then, the level of pediatric care expected in an ED that has opted out of a commitment to pediatric patients and undergoes no outside monitoring. In essence, the problem with the Emergency Department Approved for Pediatrics model is not that it requires certain EDs to meet published standards for pediatric preparedness but rather that it does not require every ED to meet these standards. Computer models demonstrate that time to emergency pediatric care is directly related to the number of pediatric-competent EDs in any geographic area.^{2,3} If an improved outcome for an entire community of children is the goal for Emergency Medical Services for Children, then this can be accomplished only when a child's parents or caregivers do not need to seek a designated ED for care but instead can find that care in the closest ED.

In their study, Remick et al¹ use prominent and authoritative pediatric readiness guideline recommendations that are readily attainable by every ED.⁴ Unlike trauma or STEMI centers, EDs providing recommended pediatric care do not require extensive in-house resources.

Much of the equipment specified in the guidelines is readily available in all EDs, such as monitor defibrillators, pulse oximeters, and scales. Additional pediatric-specific supplies such as variable-sized endotracheal tubes and suction catheters can be obtained for less than \$1,000 total.⁶ Unlike trauma or STEMI care, pediatric resuscitation and stabilization is almost always an ED-focused activity, with prompt attention to airway management, intravenous fluids, timely antibiotics, and appropriate pain control before transfer to a tertiary referral center when necessary.⁷

So why not make all EDs Emergency Departments Approved for Pediatrics? The real obstacle is not the needed equipment but rather the skills of the staff. Board-certified emergency physicians should have the requisite knowledge to provide emergency care for children; however, the supply of these physicians is insufficient to staff every ED 100% of the time.⁸ In a well-designed Emergency Medical Services for Children system, though, not every ED requires the continuous presence of a physician expert in all aspects of emergency and ambulatory pediatrics such as pediatric emergency medicine fellowship-trained physicians. What is required, though, is a clinician able to promptly recognize and act when a sick child presents to the ED.^{5,9}

In an all-Emergency Department Approved for Pediatrics model, pediatric emergency medicine subspecialists must become more involved in care beyond children's hospitals and other pediatric referral centers.^{9,10} Their expertise can be used in developing policies, protocols, and quality

improvement programs, and to help general emergency physicians to educate and provide critical care training to nonemergency medicine-trained physicians.¹⁰ They will need to be sensitive to the special challenges of treating children in facilities with no in-house pediatric support, particularly smaller, rural EDs.³

An all-Emergency Department Approved for Pediatrics model would not prevent EMS systems from directing ambulances to pediatric centers of excellence but would ensure the shortest possible time to stabilization for all patients, regardless of their means of arrival at an ED.^{3,11}

Currently, New Jersey is the only all-Emergency Department Approved for Pediatrics state, with all EDs required to comply with current preparedness guidelines. All physicians staffing EDs in the state must have completed a residency in emergency medicine, pediatrics, internal medicine, family practice, or surgery and then—if not board certified or board prepared in emergency medicine or pediatric emergency medicine—must complete a current pediatric advanced life support course or an advanced pediatric life support course. Although admittedly not ideal, these regulations ensure at least a baseline level of readiness in all EDs.⁸

If we are to optimize care for children, we must optimize access to that care. Achieving this goal requires a system in which every ED accepts the responsibility for resuscitating and stabilizing any child presenting to their facility. Permitting EDs to ignore this fundamental obligation only puts children at risk. Once such a uniform safety net is in place, the true value of a pediatric readiness verification program such as that described by Remick et al¹ can be realized.

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IMAGES IN EMERGENCY MEDICINE

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DIAGNOSIS:

Left-sided atrial myxoma causing mechanical inflow obstruction and congestive heart failure. Myxomas are the most common primary cardiac neoplasm and can vary widely in size. Small friable tumors tend to present with emboli, whereas larger tumors typically cause cardiovascular symptoms. Left-sided atrial tumors simulate mitral valve disease by obstructing inflow and resulting in heart failure.^{1,2}

The treatment of acute decompensated heart failure typically involves positive-pressure ventilation and afterload reduction.³ However, in the case of inflow obstruction this therapy can be detrimental because it reduces preload and can precipitate cardiovascular collapse.

This patient continued to receive positive-pressure ventilation, preload was supported with an intravenous crystalloid bolus of 500 mL, and cardiac surgery was consulted. The patient was taken urgently to the operating room for left-sided atrial myxoma resection (Figure 3) and has done well postoperatively.

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