CONCLUSION

Summary of Issues Demanding Solutions Before the Next One

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The authors have indicated they have no financial relationships relevant to this article to disclose.

This supplement contains many hands-on experiences of pediatricians and others who cared for children during the Hurricane Katrina disaster. They have all offered significant insightful suggestions to help planners better prepare for care of children during the next disaster. This summary focuses on a few of the key lessons learned.

Disaster planning must address the unique needs of children

All too often, planners assume that any hospital and any licensed health care provider can care for the full range of pediatric needs, including in times of crisis. Even for those who do recognize that seriously ill or injured children need to be cared for by pediatricians and pediatric subspecialists, it is sometimes assumed that existing hospitals are, in fact, sufficiently staffed and equipped to handle unlimited numbers of such cases. Few planners recognize the limited supply of pediatric hospital beds in their area and, therefore, do not prepare before a disaster for the potential transfer of children to distant facilities as needed, even if it requires consideration of out-of-state hospitals. More study is required to determine when and how adult-oriented providers and facilities can, in fact, care for children. Special protocols and understandings for the care of children in the midst of disasters need to be refined.

Surge capacity is exceeded when the number of children requiring inpatient care exceeds the number of beds, staff, and equipment available. Obviously, with Katrina, all of the pediatric beds in Louisiana were overwhelmed, demonstrating the need to plan for care (including evacuation) of existing pediatric inpatients as well as new patients requiring admission within an impacted area.

Disaster plans for children should include regional capacity and the likelihood that children may have to be moved a significant distance to assure proper care.

Furthermore, it is essential that pediatricians, particularly those with an interest in disaster management, should be included in all aspects of disaster planning on state, regional, and national levels.

Public and private health care resources need to be highly coordinated to best serve the needs of children in disasters

Non-federal hospitals responded rapidly, improvising and evacuating critically ill children from the hazardous, unsecured disaster zone. By every conceivable measure, the outcome was astoundingly effective. In stark contrast, federal support for the management and care of hospitalized pediatric patients during the crisis was minimal, at best, and clearly disorganized.

There was a persistent disconnect between federal and private efforts. New strategies to coordinate between these 2 worlds must be considered and implemented before the next major disaster. Each sector has strengths, and each must contribute appropriately to the process of managing care during a crisis. As in the immediate post-Katrina period, the next disaster may well also see volunteer physicians, hospitals, transport teams, etc providing care before the government resources can start functioning. The government will provide broad services under the most austere conditions that are otherwise not

Key Words: Hurricane Katrina, disaster planning, disaster relief, pediatrics, flood, surge capacity, terrorism

www.pediatrics.org/cgi/doi/10.1542/peds.2006-0099W
doi:10.1542/peds.2006-0099W

Accepted for publication Jan 25, 2006
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PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275). Copyright © 2006 by the American Academy of Pediatrics.
available. Both systems need to function collaboratively and optimally during a disaster.

There is need for enhanced collaboration of public and private skills, resources, talents, and facilities.

FINANCIAL ACCESS TO HEALTH CARE SERVICES FOR CHILDREN MUST BE AVAILABLE RAPIDLY DURING A MAJOR EMERGENCY

Many evacuees had limited or no financial access to health care before the disaster, which complicated post-disaster care. It is axiomatic that displaced evacuees likely need more care, not less. Yet, even months after the disaster in the Gulf Coast, there still was not availability of emergency Medicaid. As we write this, access to care continues to be a growing problem for children and families in the Katrina-affected states.

Clearly, it is noble (and typical) for pediatricians to offer free care after a disaster. Volunteer organizations have provided short-term care, and some have committed to long-term care. However, providing care with no or limited financial resources beyond the first few days after a major disaster is unreasonable and unsustainable.

Provisions for health care, medicines, and durable medical equipment have to be automatically assured in a disaster. Families who have lost their possessions and identification should not be subjected to an arduous application procedure for Medicaid or verification of private insurance, a painful reality for many victims of Hurricane Katrina.

Every effort should be made to ensure equity between private- and public-sector reimbursement schedules. Discrepancies between the 2 sectors only serve to create barriers to care and substantial confusion among patients and providers. Attempting to work through these challenges in the aftermath of a major disaster is problematic.

Patients would benefit from active reimbursement negotiations among Medicaid, provider organizations, purchasers, insurance companies, and relevant state health organizations before the next disaster.

PEDIATRICIANS SHOULD TAKE AN ACTIVE ROLE IN HELPING FAMILIES PREPARE FOR DISASTERS

Pediatricians and other providers need to educate families on many aspects of disaster planning. Families should know that help may not be available for many hours or even days in the immediate aftermath of a major community-wide disaster. Pediatricians can help by advising families directly or providing information with respect to available resources, online or otherwise. Discussing and even rehearsing a family emergency plan and developing disaster kits with essential supplies are essential. Pediatricians and families should be aware of the superb informational resource available from the American Academy of Pediatrics at www.aap.org/terrorism.

Also, there is a need to prepare for the possibility that family members may become inadvertently separated during a disaster. This was a major problem during and after the Gulf Coast storms. Pediatricians could suggest that children learn to identify themselves and their parents. Children can carry self-identification, and parents should carry pictures of their children. Each family also should have a plan of how to reunite if they become separated.

Primary care physicians should counsel families to think about and prepare for disasters.

FOCUS ATTENTION ON THE PEDIATRIC WORKFORCE

As patients are evacuated, so are physicians, many out of state. The need for care of those displaced patients continues, requiring increased demands of the local workforce. The displaced physicians have the skills to meet medical needs, especially of the patients who were under their care before the evacuation. However, licensing, credentialing, and insurance issues present real and perceived barriers for displaced physicians in other states, as well as for those who volunteer in affected regions but may have come from different states.

Systems have to be clarified for licensed physicians in one state to provide care to patients in other states in declared disaster situations.

EFFECTIVE COMMUNICATIONS SYSTEMS ARE ESSENTIAL

This supplement contains many examples of fragile or absent communications capacity in the affected region. This problem took on broad and important ramifications, frustrating attempts to organize care efficiently. For instance, many physicians reported that advisories of “incoming patients” were often incorrect, causing unnecessary deployment of limited workforce to prepare for patients who never arrived. In other cases, hospitals needed to actually send staff to the disaster area to obtain and communicate necessary identifying and diagnostic information regarding incoming patients. There also were reports of critically ill neonates who were on life support and needed evacuation but were, at least transiently, “lost” in the system.

Many authors reported a lack of any medical information, much less credible medical or medication history, on patients for whom they were caring. Although there are efforts to fill this gap with an electronic medical chart, there is a need for patients to be better educated and to have some record with them. Children with special health care needs are a readily identifiable target group that should have emergency information on a piece of paper or a chip. Fortunately, a form has been approved and is readily available for printing and copying at www.aap.org/advocacy/blankform.pdf.

Reliable and effective patient and crisis-management information must be organized before any disaster and be in place when needed to ensure effective patient care.
Critical specific health information on every patient should be available electronically or, at least, in paper form.

**CONCLUSIONS**
A concise but complete summary of the essential lessons learned by our collective experience in the Gulf Coast after Hurricane Katrina is impossible. However, a reading of all of the contributions in this supplement will surely provide more detailed insights that we believe will help practitioners, disaster-preparedness planners, research scientists, bureaucrats, hospital workers and administrators, legislators, and others to understand the complexity of effective planning for major disasters.
Critical Concepts for Children in Disasters Identified by Hands-on Professionals:
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*Pediatrics* 2006;117;S458
DOI: 10.1542/peds.2006-0099W

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/content/117/Supplement_4/S458.full.html