

January 2022

Principles for a Child-appropriate Disaster and Pandemic Response System

The national disaster and pandemic response infrastructure must be able to meet the unique physical, mental, developmental and social needs of all children. To do so, it must appropriately account for differences between the way health care delivery and support systems are structured for children compared with adults.

Children are not little adults and their health care needs and support systems (e.g., schools, childcare settings, etc.)—and the delivery system to meet those needs—are different from those of adults. Children are constantly growing and developing and child-appropriate care will support that healthy development. Disruptions in their care, trauma, social isolation, financial insecurity, food and housing insecurity, and grief associated with a natural disaster or pandemic can have a significant negative impact on children's mental and physical health and their long-term well-being. This is especially true for children and families in underserved, under-resourced, and racial and ethnic minority communities.

Pediatric care typically involves other family members or guardians, and requires extra time, monitoring, specialized medications and equipment, as well as specially trained health care providers who are compassionate and understand kids of all ages. Children's hospitals, unlike adult-focused medical facilities, are equipped to provide this child-centric care. However, children's specialty care is regionalized in nature. Children's hospitals serve large geographic areas and are increasingly the only places in their region with the breadth of pediatric specialists and subspecialists, equipment and other resources required to treat children, particularly those with rare and complex clinical conditions. Furthermore, teams of pediatric specialists are typically concentrated near large children's hospitals, underscoring the regional nature of pediatric specialty care for high-acuity conditions.

As a result, it is not uncommon for children, particularly those with medical complexity, to travel out of their community, region or state to receive the extremely specialized care that can only be provided at a children's hospital. For these children, the children's hospital is the focal point of care, as pediatric specialists are frequently needed to provide expertise in treating their rare and complex clinical conditions. Given the regionalization of pediatric specialty care, children's hospitals' critical care and "surge" capacity for children is limited during a widespread public health emergency, such as a pandemic or natural disaster, adding a significant level of complexity to the nation's capacity to meet children's needs.

As Congress considers a legislative package around key pillars of pandemic preparedness, children cannot be ignored or forgotten. The following principles are focused on ways to help ensure that the needs of all children, including the very specialized needs of children with complex conditions, are addressed during a public health emergency.

Key Pillar: Strategies for strengthening and modernizing federal public health and medical preparedness and response systems and programs, including infrastructure, to better support states, localities, and Tribes.

Principle: Pandemic and disaster relief preparedness strategies must include coordinated pediatric care plans that address the operational capacity of the nation’s medical facilities to meet children’s physical and mental health needs—as well as their entire caregiving/support system—through appropriate staffing, specialized equipment, training and other child-centric resources. Pediatric experts, including children’s hospitals, community pediatricians, pediatric specialists, child mental health providers, pediatric pharmacists, pediatric physical and occupational therapists, pediatric nutritionists and pediatric medical suppliers, should be included in short and long-range planning.

Key Pillar: Ensuring sufficient public health and medical capacity to continue providing critical services to at-risk populations. This includes applying lessons learned from COVID-19 to address health disparities in future public health preparedness and response efforts.

Principle: Preparedness and response efforts must include targeted support now to address pediatric workforce shortages and strengthen pediatric capacity to allow for the triage/consolidation of pediatric patients to centers best designed for their care. When a children’s hospital is not in the general geographic area, more general improvements to medical surge capacity for pediatric care are needed to equip all hospitals and free-standing emergency facilities with the operational capability to provide care for children during a public health emergency. Those medical facilities should have age- and size-appropriate equipment and medications, staff training on children’s physical and mental health needs during a public health emergency, age-specific policies and procedures, as well as written pediatric interfacility transfer agreements and interoperability capabilities to allow for electronic access to specialized pediatric clinical and mental health care providers for remote consultations.

Principle: All medical facilities should be required to have policies and procedures for the provision of nutrition (e.g., formula), cribs and other appropriate sleeping accommodations, diapers, etc. for infants and toddlers. They also should be equipped to provide accommodations, including beds and food for the families of child patients during pandemic and disaster situations.

Principle: The pandemic and disaster response system must include mechanisms to allow for the continuation of key pediatric services in the community. These include immunization programs, services for children with special health care needs, child nutrition programs, newborn screening, children’s mental health services and other services for at-risk children.

Key Pillar: Strengthening readiness within the medical countermeasure enterprise to ensure that countermeasures can be rapidly identified and advanced through clinical development and manufacturing and appropriately deployed and distributed when a new public health threat is identified.

Principle: There needs to be a strong focus on research, development, procurement, strategy and guidance in medical countermeasures for children to ensure timely access to sufficient pediatric-appropriate equipment, medications and supplies. Countermeasures must address not only immediate threats to children’s physical health but the impact of public health emergencies on children’s long-term physical and mental health.

Principle: The advancement (clinical development and manufacturing) of medical countermeasures for children must include pediatric formularies that support proper pediatric pharmaceutical dosing, as well as practical methods for appropriate medication delivery for children (such as oral, pediatric auto-injectors, etc.). In addition, priority should be given to research on pediatric dosing and formulations for medical countermeasures already approved for adults. Both properly dosed medications and delivery mechanisms must be available and ready for rapid deployment.

Principle: Relevant agencies—CDC, the Assistant Secretary for Preparedness and Response (ASPR) and FDA—should develop a process that allows for the advance approval, through the emergency use authorization

process, of off-label use of medical countermeasures for children before the declaration of a public health emergency.

Principle: Research on pediatric countermeasures should not be limited or delayed due to any additional costs related to special protections required for children in clinical trials.

Key Pillar: The development of medical countermeasures to address public health threats.

Principle: Formal linkages and communication systems must be established and used between key federal agencies—such as the ASPR and FDA—and pediatric providers to ensure that the needs of children and their families are identified and incorporated into the planning and development of medical countermeasures.

Key Pillar: Improving and securing the supply chain for the U.S.’s critical medical supplies needed to swiftly address public health threats.

Principle: The national stockpile must include emergency medications in age-appropriate delivery formulations, equipment and related supplies that meet children’s needs. The stockpile’s distribution system must include a communication structure on the availability of specific supplies to ensure the appropriate allocation of necessary pediatric supplies to all medical facilities.

Principle: At minimum, all emergency departments should be equipped with a basic kit that can be adapted for use with children and includes infant formula, diapers, safe sleeping facilities and other necessities for the care of infants and toddlers.

A national disaster and pandemic response infrastructure that appropriately addresses the needs of children, as delineated by these principles, should build on existing pediatric-focused initiatives at ASPR and HRSA, as well as the National Advisory Committee on Children and Disasters, the American Academy of Pediatrics and the Children’s Hospital Association. With congressional leadership and adequate funding support, these efforts and others throughout government must be aligned, coordinated and strengthened to ensure a shared pediatric mission and framework.

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