



2014-2015 Report of the Children's HHS Interagency Leadership on Disasters (CHILD) Working Group: Update on Department Activities

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Citation

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Executive Summary

Since the establishment of the Children’s HHS Interagency Leadership on Disasters (CHILD) Working Group in 2010, the United States Department of Health and Human Services (HHS) made significant progress in integrating the needs of children (birth through age 17) across all disaster and public health emergency preparedness, response, and recovery activities. This report details HHS’s advancements in its commitment to the health and well-being of children in disasters from 2014 through 2015 in the following areas: behavioral health; medical countermeasures (MCM); child physical health, emergency medical services (EMS), and pediatric transport; child care, child welfare, and human services; pregnant and breastfeeding women and newborns; and children at heightened risk.

Some examples of HHS efforts and progress towards the CHILD Working Group’s 2011 recommendations are below.

- The Healthy People 2020 Preparedness Topic Area Working Group introduced four new objectives related to children and preparedness. Assistant Secretary for Preparedness and Response (ASPR)/Division for At-Risk Individuals, Behavioral Health, and Community Resilience (ABC) and the Centers for Disease Control and Prevention (CDC)/Office of Public Health Preparedness and Response (OPHPR) co-led the working group and utilized supporting data from CDC, Federal Emergency Management Agency (FEMA), and nongovernmental organizations (NGOs). The Healthy People objectives promote preparedness activities in schools and child care settings.
- Administration for Children and Families (ACF)/Office of Human Services Emergency Preparedness and Response (OHSEPR) created a series of fact sheets about Ebola Virus Disease (EVD) to help reduce the stigma of EVD in early childhood settings, and help parents and caregivers deal with the possibilities of exposure.
- The Food and Drug Administration (FDA) approved Neupogen® (filgrastim) and Neulasta® (pegfilgrastim) in 2015 under the [Animal Rule](#) for adults and pediatric patients to increase survival in patients acutely exposed to myelosuppressive doses of radiation (hematopoietic syndrome of acute radiation syndrome [ARS]). Animal efficacy studies conducted under Good Laboratory Practices supported by the National Institute of Allergy and Infectious Disease (NIAID) provided data for FDA approval.
- National Library of Medicine (NLM)/Disaster Information Management Resource Center (DIMRC) at the National Institutes of Health (NIH) developed [Health Resources on Children in Disasters and Emergencies](#) and [Health Resources on Pregnant Women in Disasters and Emergencies](#). These online compendia of resources focus on medical and public health issues of children and pregnant and postpartum women in disasters and emergencies.
- The Health Resources and Services Administration (HRSA)/Emergency Medical Services for Children (EMSC) worked with ASPR and a group of subject matter experts (SME) to develop the [Checklist of Essential Pediatric Domains and Considerations for Every Hospital’s Disaster Preparedness Policies](#).

HHS and the CHILD Working Group remain committed to addressing the needs of children in disasters and public health emergencies.

Introduction

ASPR and ACF created the CHILD Working Group in February 2010 to integrate the needs of children across all HHS disaster planning activities and operations. The CHILD Working Group assessed current capabilities and facilitated coordination at the policy and response levels. The CHILD Working Group also developed a set of recommendations that could enhance how the Department provides and facilitates care to address the disaster-related health and human services needs of children (birth through age 17) during and after disasters or public health emergencies. The [2011 Update on Children and Disasters](#) (2011 Summary) reported on the following areas: (1) mental and behavioral health; (2) medical countermeasures; (3) child physical health, emergency medical services, and pediatric transport; and (4) child care and child welfare. The [2012-2013 CHILD Report](#) provided updates on those topics and added three additional areas of focus: (1) pregnant and breastfeeding women and newborns; (2) children with special health care needs and other sub populations of children at heightened risk and historically under-represented in disaster planning efforts; and (3) enhancing collaboration across government and with non-governmental organizations (NGO).

Similar to the 2012-2013 CHILD Report, this report details departmental updates within the following six themes: (1) behavioral health; (2) MCMs; (3) child physical health, EMS, and pediatric transport; (4) child care, child welfare, and human services; (5) pregnant and breastfeeding women and newborns; and (6) children at heightened risk. The report covers activities in progress from 2014 through 2015, including those that originated in years prior. Each area of focus includes background information and a description of programs, activities, and research, including governmental and NGO collaboration.

Because public health works to assure the conditions in which people can be healthy, items in this report represent activities that are consistent with the HHS role in public health emergency preparedness and response. This includes activities such as the surveillance for the possible risk of emergent infectious disease or re-introduction of infectious disease in local communities and vaccinating children and adults to prevent the spread of disease. Furthermore, the 2013 Pandemic and All-Hazards Preparedness Reauthorization Act (PAHPRA) defines “at-risk individuals” to include “children, older adults, pregnant women, other individuals who have special needs in the event of a public health emergency, as determined by the Secretary.” Some HHS initiatives address the needs of children in disasters through broad, cross-cutting approaches for all at-risk individuals: these projects are described in this report under the broader term “at-risk individuals.” In particular, some initiatives in this report target both pregnant women and newborns. Because PAHPRA emphasizes an all-hazard approach by definition, this report addresses an array of emergency events, such as school violence, emerging infectious diseases, and biological threats, in addition to natural disasters.

Behavioral Health

Background

Experts note that children are particularly vulnerable to the mental health impacts of disasters. They may lack the experience, skills, and resources to meet their mental and behavioral health needs independently.¹ The following is a descriptive list of 2014-2015 behavioral health activities supported or completed by HHS agencies.

Programs and Activities

The activities listed below detail HHS activities promoting the coordination of behavioral health into public health preparedness and response.

HHS Disaster Behavioral Health Concept of Operations

ASPR/ABC revised the [HHS Disaster Behavioral Health Concept of Operations](#) (DBH CONOPS) in February 2014. The DBH CONOPS considers children as a particularly vulnerable population after disasters and provides a description of their needs. It also identifies those responsible for coordination of services at the federal level to provide child expertise and technical assistance to communities impacted by disasters. The DBH CONOPS is currently under revision with an expected release date of FY 2017.

Disaster Behavioral Health Coalition Guidance

ASPR/ABC developed [Disaster Behavioral Health Coalition Guidance](#), a tool to help regional emergency managers and others plan and coordinate behavioral health services during disaster response and recovery, including services specific to children. Additionally, after a disaster occurs, the Substance Abuse and Mental Health Services Administration (SAMHSA) and ASPR/ABC develops and disseminates a disaster behavioral health resource list, always including a section on child-related resources. These resource lists are tailored from general resource documents. ASPR/ABC also provided subject matter expertise and technical assistance during several HHS response and recovery activities affecting children, such as the 2014 Washington mudslides and the 2015 shootings in Roseburg, Oregon.

Federal Disaster Behavioral Health Preparedness Forum

On October 7, 2014, ASPR/ABC convened the “Federal Disaster Behavioral Health Preparedness Forum: Innovative Strategies for Enhancing Disaster Behavioral Health.” The meeting included representatives from ASPR, SAMHSA, ACF, HRSA, FEMA’s volunteer organization (FEMA Corps), UCLA’s National Child Traumatic Stress Network, Department of Veterans Affairs (VA), and the American Red Cross. The panel on Innovation Exemplars in Disaster Behavioral Health included a presentation by the National Child Traumatic Stress Network on innovative efforts they developed working with children after disasters. A discussion about EVD focused on concerns regarding the pediatric population and ways to address the needs of children.

¹ David Schonfeld, “Are We Ready and Willing to Address the Mental Health Needs of Children? Implications From September 11th,” *Pediatrics* 113, no. 5 (2004): 1400.

EVD Behavioral Health Resources

During the EVD outbreak, ASPR/ABC developed a resource to help Public Health Service officers deployed to Liberia with reintegrating at home. The resource addressed communicating with toddlers and young children about quarantine and isolation measures and best ways to interact with children while complying with the restrictions. ABC also developed and updated an Ebola and Behavioral Health Resources document with pediatric specific resources. Participants on the Ebola and Behavioral Health coordinating calls and various partners disseminated the resource document.

Guidelines for Deployed Staff

In June 2014, ASPR/ABC developed “Recommended Guidelines for Support of Deployed Staff for the Unaccompanied Alien Children (UAC) Mission” when there was a heightened influx of UAC crossing the border.

Building Public Private Partnerships to Enhance Disaster Resilience

In October 2015, ASPR/ABC and Grantmakers in Health co-hosted [Building Public-Private Partnerships to Enhance Disaster Resilience: A Listening Session](#), bringing together representatives from HHS, other federal agencies, national partners, and private foundations. The summary report detailed several strategies identified during the discussions specifically focused on children.

Project AWARE

In FY 2014, SAMHSA provided \$54.9 million to support Project AWARE (Advancing Wellness and Resilience in Education) to increase awareness of mental health issues and connect students with behavioral health issues and their families with needed services. Local educational agencies and their communities provide Mental Health First Aid and Youth Mental Health First Aid training to teachers, counselors, and other school personnel, as well as emergency responders, caregivers, parents, and other youth-serving adults.

Coordinated State Efforts for School Safety

In FY 2014, SAMHSA funded 20 State Educational Agency Grants to promote comprehensive, coordinated state efforts to make schools safer and 68 Mental Health First Aid grants to those serving youth and their families. Partnering agencies include the Department of Education and the Department of Justice (DOJ). These grants resulted in approximately 750,000 individuals trained or served.

Research

HHS and HHS-funded entities collaborated to address the behavioral health needs of children and pregnant women through research. Examples include:

Comorbidity Among Adolescents Affected by Disasters

After a disaster, some individuals may develop posttraumatic stress disorder (PTSD), major depressive episode (MDE), and substance use disorder (SUD). NIH funded a study, [Mental Health Among Adolescents Exposed to a Tornado: The Influence of Social Support and Its Interactions with Social](#)

[Demographic Characteristics and Disaster Exposure](#). This study sought to estimate the prevalence of comorbid disorders and identify risk factors for patterns of comorbidity among adolescents affected by disasters. The study revealed the most common comorbidity among youth exposed to tornadoes was PTSD + MDE; followed by PTSD + SUD; MDE + SUD; and PTSD + MDE + SUD. The researchers also reported that parental injury was associated with elevated risk for PTSD + MDE, noting that youth should be evaluated for comorbid problems following disasters and the impact of the disaster on the family.

Bounce Back Now

NIH funded a study, [Web Intervention for Adolescents Affected by Disaster: Population-Based Randomized Controlled Trial](#). BBN features web modules for adolescents and parents targeting the mental health symptoms of the adolescents and parents. Researchers invited all families to access the BBN study web portal irrespective of mental health status at baseline. The reported results suggest nearly 50 percent of families participating in the study accessed the web portal. In addition, adolescents in the experimental versus control conditions reported fewer PTSD and depressive symptoms at 12-month follow-up. These findings suggest the intervention is feasible and helpful for adolescents and warrants research on the integration of such models of care into routine mental health response to disasters.

Implementing Evidence-Based Practices in Child Welfare

Another NIH-funded study attempting to enhance the availability and uptake of models of mental health care after disaster exposure includes [A Technology-Enhanced Approach for Implementing Evidence-Based Practices in Child Welfare](#).

PTSD and Preterm Birth

After a disaster, some individuals may develop PTSD. Approximately 8 percent of pregnant women have PTSD. Stressful conditions, including PTSD, have been inconsistently associated with preterm birth. This is important because preterm birth is a major cause of death in newborns. The National Institute of Mental Health (NIMH) funded a prospective, longitudinal study, [Pregnant Women with Posttraumatic Stress Disorder and Risk of Preterm Birth](#). The study examined 2,654 pregnant women to determine if PTSD, MDE, antidepressant, or anti-anxiety medications were associated with risk of early delivery (less than 37 weeks). They found that PTSD + MDE increased the risk of preterm birth four-fold. These findings may have important implications for women exposed to natural disasters or other emergencies that may increase the risk for PTSD.

Iowa Floods and Perinatal Depression

NIMH examined the impact of the 2008 Iowa floods on perinatal depression and well-being in a study, [Peritraumatic Distress Mediates the Effect of Severity of Disaster Exposure on Perinatal Depression: The Iowa Flood Study](#). The investigators assessed 171 women who were pregnant during the floods at five time points, from pregnancy to 30 months postpartum. Women exposed to greater hardships from flood exposure during pregnancy had higher levels of depressive symptoms and lower levels of well-being. Researchers identified peritraumatic distress (i.e., transient reactions to trauma exposure such as

hyper arousal) as a significant mediator of the link between severity of flood exposure and depression. This study suggests that exposure to a natural disaster during pregnancy has significant effects on the mental health of women and suggests that peritraumatic stress may be a possible target for interventions.

Medical Countermeasures

Background

The 2009 Interim Report by the National Commission on Children and Disasters (2009 NCCD Report) recommended ensuring the availability and access to pediatric MCMs at the federal, state, and local levels for chemical, biological, radiological, and nuclear (CBRN) threats in addition to emerging infectious diseases and pandemic influenza threats. As evidenced in the previous reports and the activities listed below, HHS continues to make significant progress towards fulfilling this recommendation by providing funding for the development, acquisition, and stockpiling of MCMs specifically for children. The activities described below include inter- and intra-governmental collaboration to integrate the needs of children in MCM planning activities and operations comprehensively. This section is organized by the group or agency driving the activity: National Advisory Committee on Children and Disasters (NACCD); Biomedical Advanced Research and Development Authority (BARDA); Public Health Emergency Medical Countermeasure Enterprise (PHEMCE); CDC; FDA; and NIH.

National Advisory Committee on Children and Disasters

The NACCD provides expert advice and consultation to the Secretary of HHS on the medical and public health needs of children in disasters.

Health Care Preparedness Work Group

In 2014, the NACCD formed the Health Care Preparedness Work Group (HCPWG) to assess the current state of national health care readiness to care for pediatric patients after disasters. Through an analysis of multiple national disaster scenarios that could harm children in communities across the nation, the NACCD focused on health care capabilities such as transport systems, MCMs, the workforce, and health care coalitions as they relate to pediatric patient care. In 2015, the HCPWG published [Healthcare Preparedness for Children in Disasters](#), a report with several recommendations in the area of MCMs.

Biomedical Advanced Research and Development Authority

Important gaps exist in the scientific knowledge regarding the use of MCMs in children. BARDA supports research efforts to close these gaps, in alignment with the prioritization criteria detailed in the 2012-2013 CHILD Report, and with ethical guidance.

BARDA Industry Days

BARDA promotes the inclusion of at-risk populations, particularly children and pregnant women, in MCM procurement and development programs. BARDA annually hosts a “BARDA Industry Day” meeting that attracts between 500 to 700 participants interested in MCM development. At these meetings, BARDA staff stresses the need for discussions on the inclusion of appropriate pediatric MCM development activities in all current and future BARDA-funded programs.

Presidential Commission for Study of Bioethical Issues

The Presidential Commission for the Study of Bioethical Issues proposed a unique age de-escalation approach starting with the youngest adults, 18 to 20 years of age, and then to the oldest group of children. If the risk level for the oldest group of children is determined to be minimal, then progressive testing with younger and younger children should be employed. Following the publication of the Commission's report, investigators from BARDA and CDC collaborated to conduct and publish a retrospective analysis from their BioThrax® (also known as Anthrax Vaccine Adsorbed or AVA) studies in adults. If AVA was safe and immunogenic in this youngest adult age group, then investigators could consider proceeding to study these outcomes in 16- and 17-year-olds as a first step to study AVA in even younger adolescents. The combined data revealed AVA was safe and immunogenic when given as a post-exposure prophylaxis (PEP) regimen in adults aged 18 to 20 years. These data will be useful for designing future HHS-funded pre-event studies of AVA in children that utilize this age de-escalation pathway.

Midazolam Auto-Injector

In September of 2013, BARDA awarded a new contract under Project BioShield (PBS) to develop an auto-injector containing midazolam for treatment of seizures as well as for use as a MCM against organophosphorus (nerve agent) exposure. As part of this development effort, BARDA funded data extraction from a completed Rapid Anticonvulsant Medication Prior to Arrival Trial (RAMPART) study. This RAMPART study assessed midazolam treatment for seizures and included children.

IMVAMUNE

BARDA continues to support the development of a smallpox vaccine for individuals with relative contraindications for currently approved vaccines, including contraindications with respect to pediatric use. Under the existing PBS program, Bavarian Nordic is developing IMVAMUNE, the modified vaccinia Ankara smallpox vaccine. IMVAMUNE is an investigational product that is stored in the U.S. Strategic National Stockpile (SNS). CDC submitted a pre-emergency use authorization (pre-EUA) submission to FDA for its potential use during a public health emergency² involving smallpox. The pre-EUA submitted to FDA for review and authorization during an emergency may allow the use of IMVAMUNE for persons of all ages with a diagnosis of HIV or atopic dermatitis during a post-event, pre-exposure setting.

Broad-Spectrum Antimicrobials for Bacterial Pneumonia

BARDA supports the development of broad-spectrum antimicrobials to address biodefense requirements and to counter the rising antibiotic resistance issue. One BARDA-funded program involves development of solithromycin; a fourth generation macrolide antibiotic for the treatment of community acquired bacterial pneumonia in children from infancy to age 17 years. FDA agreed to the solithromycin

² Under Section 564 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 360bbb-3), the Secretary may determine that emergency use of a product is justified based on one of four prior determinations by the Secretary, the Secretary of Defense, or DHS. The Secretary does not need to formally declare a public health emergency under Section 319 of the Public Health Service Act (42 U.S.C. § 247d) to authorize the Commissioner of FDA to issue an EUA.

pediatric study plan in February 2014. At the completion of this program, next steps include submitting an application for the suspension formulation for oral dosing in children.

Pre-Pandemic H5N1 Vaccine

Preparation for future pandemic influenza outbreaks remains a major priority for HHS. BARDA funded two major programs to study pre-pandemic H5N1 vaccine in children aged six months to 17 years.

- The first program demonstrated an ASO3b adjuvanted H5N1 antigen was immunogenic and had an acceptable safety profile in children aged six months to 17 years. Approved for adults in 2013, the company submitted a supplemental Biologics License Application to consider licensure of this vaccine for children in November 2015.
- The second BARDA-funded program demonstrated the MF59 adjuvanted H5N1 antigen was immunogenic and had an acceptable safety profile in children aged six months to 17 years.

Recombinant Quadrivalent Vaccine for Pandemic and Seasonal Influenza

In the fall of 2013, as part of a BARDA-funded recombinant pandemic and seasonal influenza vaccine contract, one of the programs tested their recombinant quadrivalent vaccine in children. The results indicated this recombinant vaccine was safe, tolerable, and immunogenic in children six to 17 years of age. The company submitted a Biologics License Application (BLA) for the quadrivalent recombinant vaccine for adults in the fall of 2015 with plans to conduct a pivotal quadrivalent trial in pediatrics as a post-licensure study and amend this BLA to include an indication for children.

Nitazoxanide Study

HHS placed a high priority on developing new drugs to treat influenza illnesses to help address the growing problem of antiviral resistance and add to the stockpile to fight pandemic and severe seasonal influenza. In the 2012-2013 report, BARDA funded advanced development of a unique drug, nitazoxanide, for the treatment of pandemic and seasonal influenza. This program supported the development of pediatric formulations of nitazoxanide in addition to pharmacokinetics and safety studies of these new formulations in younger age groups. Unfortunately, the Phase III study did not show effectiveness of this agent and therefore BARDA ended funding of this contract. However, the pharmaceutical company plans to repeat the Phase III study in the near future.

Rapid Polymerase Chain Reaction Diagnostic of Influenza

Rapid diagnosis of influenza is critical for an emergency response, especially with respect to treatment and infection control of future influenza pandemics or severe seasonal outbreaks. In 2013, BARDA funded a study to examine the effect of using rapid polymerase chain reaction diagnosis on early treatment of influenza illness in high-risk individuals. A key part of this ongoing study is developing clinical guidelines for using rapid testing in high-risk hospitalized children.

Clinical Trial of Prussian Blue for Radiological MCM

Pediatric MCMs for radiation exposure secondary to nuclear attacks is a key goal of HHS. However, at present, there are no approved oral decorporation MCMs for this exposure in children under two years

of age. In March 2011, BARDA awarded a contract for advanced development of a safe and effective way to administer a MCM, Prussian Blue, to children aged two years and younger who may have been exposed to radioactive material as a result of a dirty bomb attack or nuclear fallout. The company plans to develop a single formulation for all ages from adults to infants less than six months of age. They anticipate the formulation development and associated pre-clinical and clinical studies will continue through 2018.

Meropenem-Vaborbactam Trial to Treat Antibiotic Resistant Infections

In the present era of increased antibiotic resistance to cephalosporins, carbapenem agents may serve as a “last defense” for severe infections. BARDA funded the development of meropenem-vaborbactam for administration as a fixed combination by intravenous infusion to treat serious Gram-negative infections including those caused by bacteria resistant to currently available carbapenems. This pediatric study is an open label, dose-finding, pharmacokinetics, safety, and tolerability investigation of a single dose intravenous infusion of meropenem-vaborbactam in children from birth through 17 years of age with serious bacterial infections. The study plans to enroll 56 children with an expected completion date of September 2019.

Public Health Emergency Medical Countermeasure Enterprise

The PHEMCE coordinates federal efforts to enhance CBRN and emerging infectious disease preparedness from a MCM perspective.

Pediatric and Obstetrics Integrated Program Team

The PHEMCE established the Pediatrics and Obstetrics Integrated Program Team (PedsOB IPT) to provide subject matter expertise for assisting with the MCM requirements framework, for developing MCM strategies, and for promoting the availability of pediatric and obstetric MCMs in public health emergencies. The PedsOB IPT assesses MCM needs of pediatric populations and of pregnant, post-partum, and lactating women, in relation to the current or proposed holdings of the SNS, and makes prioritized recommendations for formulary additions or changes. SMEs on the PedsOB IPT determined and prioritized pediatric MCM gaps in the SNS as part of the 2015 SNS Annual Review, emphasizing pediatric preparedness for anthrax prophylaxis. Senior PHEMCE leaders considered the PedsOB IPT’s recommendations during the 2015 SNS Annual Review (FY 2018 Plan).

MCM Templates Include At-Risk Individuals

As described in the 2012-2013 CHILDR Report, ASPR is developing MCM requirements templates that require analysis for at-risk population needs. New templates for requirements documents require the assessment of at-risk individuals’ needs, ensuring that this analysis be performed throughout the requirements process. Furthermore, the PHEMCE PedsOB IPT actively reviews requirements documents to ensure the needs of at-risk pediatric populations are considered.

Development of Scenarios and Validation Assumptions for At-Risk Populations

The PedsOB IPT and other PHEMCE partners assist in the development of scenarios and the validation of assumptions for specific at-risk populations in public health and medical consequence assessments.

BARDA/Division of Analytic Decision Support (ADS) consults the PedsOB IPT when modeling scenarios are developed and applied involving MCM scenarios for the pediatric and obstetric populations. For example, ADS worked with the PedsOB IPT to validate their modeling parameters for the pediatric and obstetric populations for purposes of the anthrax Material Threat Assessment 2.0 and the Anthrax Scenario-based Analysis. Likewise, the PedsOB IPT leads the PHEMCE in validating or modifying assumptions regarding the pediatric and obstetric populations; for example, the PedsOB IPT used data to redefine the assumption that all children nine years and younger should be given liquid formulation antimicrobials for anthrax PEP.

ASPR Supplements State and Local MCM Distribution and Dispensing Efforts

During an emergency, ASPR/Office of Emergency Management (OEM) assists and supplements state and local MCM distribution and dispensing efforts as needed under [Executive Order 13527](#), including those aimed at children and other at-risk individuals. Current activities include developing models and formulations that account for the particular needs of children, pregnant women, older adults, and individuals who are immunocompromised. The PedsOB IPT drafted a white paper on pediatric issues during emergencies and provided it to OEM for use in future annexes.

Anthrax Text Messaging Outreach

StopAnthrax™ is an anthrax MCM text messaging outreach program that targets parents and pregnant women to increase adherence with recommended PEP regimens among children and pregnant women. The program developed scripts and text messages to test with target populations.

Guidance for Decontaminating Pediatric Patients and Pregnant Women in Chemical Exposures

National planning guidance for decontaminating pediatric patients and pregnant women in a mass exposure chemical incident is under development. This document complements the general guidance published in December 2014, [Patient Decontamination in a Mass Chemical Exposure Incident](#). Based on the strategic level principles described in the general guidance, this companion document offers tactical recommendations to incident commanders, planners, trainers, responders, receivers, and other personnel of emergency response organizations for managing the unique needs of pediatric patients and pregnant women. A federal interagency working group is reviewing the literature and drafting material with expected additional SME input from within and outside of the federal government once full draft guidance is available.

Pediatric Formulations of Antiviral Drugs

In March 2014, PHEMCE updated the National Antiviral Drug Strategy to include pediatric formulations of antiviral drugs, including stockpiling targets.

Centers for Disease Control and Prevention

CDC's SNS is the nation's largest supply of potentially life-saving pharmaceuticals and medical supplies for use in a public health emergency severe enough to cause local supplies to run out. The stockpile ensures the right medicines and supplies are available when and where needed to save lives.

Workshop to Develop Anthrax Clinical Guidance

CDC/Children's Preparedness Unit (CPU) and the American Academy of Pediatrics (AAP) convened a workshop with over 50 AAP and federal representatives to develop anthrax clinical guidance addressing pediatric issues related to antibiotics, vaccine PEP, and other treatments. In May 2014, AAP published [Pediatric Anthrax Clinical Management](#) and [Pediatric Anthrax Clinical Management: Executive Summary](#).

Clinical Framework and MCM Use During an Anthrax Mass-Casualty Incident

In December 2015, CDC published a guidance document, [Clinical Framework and Medical Countermeasure Use During an Anthrax Mass-Casualty Incident](#), for the utilization and prioritization of MCMs after a mass casualty anthrax incident. CDC engaged AAP in developing this guidance to address pediatric needs.

Stockpiling Considerations for SNS

CDC takes into account at-risk individuals' needs when stockpiling through the annual review of the SNS formulary. CDC successfully developed, piloted, and evaluated a next-generation MCM evaluation tool for assessing state and local operational readiness. The MCM operational readiness review included provisions for mapping locations of at-risk populations according to jurisdictional risk assessments, providing training for community partners representing at-risk populations, and translation of MCM information for at-risk populations.

Tamiflu Oral Suspension

In 2015, the SNS began replenishment of Tamiflu (oseltamivir) for oral suspension, increasing response capability. CDC is also stockpiling suspension and other pediatric formulations for targeted use in children under 12 years of age.

Food and Drug Administration

As a member of the PHEMCE, FDA works with partners at all levels of government—state, local, national, and international—to support MCM-related public health preparedness and response efforts. FDA also works with non-government organizations, universities and research centers, and industry to further the development of MCMs for public health emergency preparedness.

Pediatric Recommendations for MCM

FDA/Office of Counterterrorism and Emerging Threats established a [Pediatric subsection under the Medical Countermeasures Initiative website](#), which includes relevant information concerning pediatric MCM issues. This includes updates on status of approvals for MCMs with pediatric indications, links to relevant documents and other resources, and contact information for SMEs.

Pediatrics and Maternal Action Team

The FDA/Pediatrics and Maternal Action Team ensures the MCM needs of at-risk individuals, specifically pediatric and maternal populations, are met during public health emergencies. The action team stands ready to provide additional support as needed. They completed an analysis examining current SNS

holdings used in pediatric populations including regulatory status, dosing instructions, and availability of alternative MCMs. This action team worked with CDC to identify data gaps that could inhibit the effective use of stockpiled MCMs in children and other at-risk populations.

Approval for Cipro Use in Plague

In February 2015, FDA approved Cipro (ciprofloxacin) under the Animal Rule³ for the treatment and prophylaxis of pneumonic and septicemic plague due to *Yersinia pestis* in adults and pediatric patients from birth to 17 years of age. The approval of Cipro for plague covers all age groups, including newborns.

Approval for Anthim Use in Inhalational Anthrax

In 2015, FDA used the Animal Rule to approve Anthim (obiltoxaximab), an antibody-based therapy for the treatment of inhalational anthrax in adult and pediatric patients when used in combination with appropriate antibacterial drugs. Anthim is indicated for prophylaxis of inhalational anthrax due to *B. anthracis* when alternative therapies are not available or are not appropriate.

Neupogen and Neulasta for Use in Exposure to Myelosuppressive Doses of Radiation

FDA approved Neupogen® (filgrastim) and Neulasta® (pegfilgrastim) in 2015 under the Animal Rule for adults and pediatric patients to increase survival in patients acutely exposed to myelosuppressive doses of radiation (hematopoietic syndrome of ARS). These were the first MCMs approved for ARS. Animal efficacy studies conducted under Good Laboratory Practices supported by NIAID provided data for FDA approval.

Innovative Approaches to Pediatric Drug Development and Pediatric MCMs

On May 5, 2014, FDA held a workshop, “Innovative Approaches to Pediatric Drug Development and Pediatric Medical Countermeasures: A Role for Physiologically-Based PK?” The University of Maryland Center of Excellence in Regulatory Science and Innovation (CERSI) and America College of Clinical Pharmacology co-sponsored the workshop.

Models to Estimate Pediatric Pharmacokinetics for Antibacterial and Antiviral MCMs

FDA is evaluating a study that establishes a model to estimate pediatric pharmacokinetics for antibacterial and antiviral MCMs. This is the first study in the field that quantitatively evaluates renal tubular transporter function in pediatric subjects, including neonates. The results assist in the accurate prediction of pediatric exposure and thereby appropriate pediatric dosing regimens for critical drugs. The University of California San Francisco and CERSI support this project.

National Institutes of Health

NIH is responsible for conducting and funding research to better understand public health threats and establish a foundation for developing MCMs. The Institutes and Centers within the NIH fund and conduct basic, clinical, and translational research to expand scientific knowledge and apply it to enhance

³ For more information on the [Animal Rule see the FDA website](#)

health, lengthen life, and reduce the burdens of illness and disability. The NIH works in partnership with other PHEMCE members involved in the MCM enterprise.

Evaluation of Off-Patent Approved MCMs in Animal Models

NIH evaluated previously approved, off-patent MCMs in animal models in an effort to expand approved indications to other threat agents or infectious diseases, as well as, to increase the repertoire of MCMs with pediatric indications.

- Amoxicillin and amoxicillin-clavulanate (Augmentin) – tested and found to be efficacious in PEP of inhalational anthrax
- Doxycycline – tested and found 100 percent effective in treatment of pneumonic tularemia

Development of Rodent and Porcine Juvenile Models of ARS

NIH, in collaboration with BARDA and the Department of Defense, plans to explore the development of rodent and porcine juvenile models of ARS. The NIAID funded a 2010-2015 product development support services contract and an interagency agreement with the Armed Forces Radiobiology Research Institute to outline the models for mice and minipigs.

Pediatric Trials Network

NIH established the Pediatric Trials Network in 2010 to create an infrastructure to study critical drugs and diagnostic devices in children with the goal of improving their labeling for pediatric use. The Network plans to conduct 16 trials over the next five years that may enhance pediatric labeling. As of July 2015, the Network initiated 38 task order studies. Two of these studies obtained new labeling for the pediatric population and another two will have new labeling imminently. A recently completed task order involved a comprehensive review of the SNS and key acute care supportive drugs, focusing on the adequacy of information for dosing obese children.

Pediatric Safety in Off-Patent Approved Drugs with CBRN Indications

In the area of off-patent, approved drugs being pursued for additional CBRN indications, NIH and FDA specifically identified products for which pediatric safety databases exist. They assessed existing data necessary to demonstrate efficacy for pediatric populations using those data without the need for additional studies in these populations.

Pediatric Acute Radiation Syndrome MCMs Conference

NIAID/Radiation and Nuclear Countermeasures Program and BARDA co-organized the 2015 Pediatric Acute Radiation Syndrome Medical Countermeasures Conference held on June 10, 2015. The goal of this meeting was to identify gaps in preparedness for the medical treatment of ARS in children. Featured speakers focused on the following: scenarios that would occur in a radiological or nuclear emergency including pediatric populations; FDA regulatory considerations and challenges; pediatric animal model development; clinical requirements; and product development in the context of a pediatric population.

Human Immunology Project Consortium

As discussed in the previous report, NIAID began the Human Immunology Project Consortium (HIPC), with an overall goal of supporting immune profiling efforts to measure the diversity and commonalities of human immune responses coupled with detailed clinical phenotyping in 2010. The long-term program goal is to make this information available to the broader research community for the development of molecular signatures that define immune responses that correlate with the outcome of infection or vaccination. In June 2015, NIAID [awarded three cooperative agreement grants](#) under the HIPC renewal. Each of the studies funded by these awards includes a cohort of children to examine host immune responses to licensed vaccines or candidate vaccines and natural infections (Varicella and Dengue, respectively).

Grants for Infant Immune System

In 2015, NIAID staff continued to supervise the progress of 15 R01 grants that comprise the Infant Immune System: Implications for Vaccines and Response to Infections program. The goal of this program is to advance understanding of immune defense mechanisms in infants. Studies include the role of purine metabolism in regulating innate immunity, mechanisms of T and B cell subset differentiation in response to infection, and the effects of other modulators (e.g., maternal antibodies, nutrition, microbiome) on infant immune system development and response to infections or vaccines. A more detailed understanding of infant immunity will provide foundational information for the development of more effective MCMs, including vaccines and immune-based therapeutics, for this vulnerable population. This program showed considerable progress in late 2014 through 2015.

Clinical Trial to Evaluate 2009-2010 H1N1 Vaccine

As noted in the previous report, NIAID launched a series of clinical trials in August 2009 to evaluate the safety and effectiveness of vaccines developed in response to the 2009-2010 H1N1 influenza pandemic. The trials identified how many doses and what size doses would be needed per person, including healthy adults, older adults, children, pregnant women, people with asthma, and people with HIV. The trials also investigated the tolerability of the H1N1 vaccine in the presence of the seasonal influenza vaccine and whether adjuvants increased the efficacy of the H1N1 vaccine. In August 2014, the *Pediatric Infectious Disease Journal* published [Clinical and Immune Responses to Inactivated Influenza A\(H1N1\)pdm09 Vaccine in Children](#), reporting the results of one of the trials that assessed the safety and immunogenicity of inactivated influenza A(H1N1)pdm09 vaccine in healthy children aged six months to 17 years. The vaccine exhibited a favorable safety profile. While a single 15 or 30 microgram dose induced seroprotective antibody responses in most children 10-17 years of age, younger children required two doses, even when receiving dosages four- to six-fold higher than recommended.

Clinical Trial to Evaluate H3N2v Vaccine

NIAID launched a clinical trial in August 2014 to evaluate the safety and effectiveness of vaccines developed in response to the H3N2v influenza virus with pandemic potential. The vaccine exhibited a favorable safety profile. Assay work is ongoing during the current reporting period.

Child Physical Health, Emergency Medical Services, and Pediatric Transport

Background

The 2009 NCCD Report highlighted several areas of concern including child physical health, EMS, and pediatric transport. HHS-supported activities during the 2014-2015 period are below.

Collaboration

The following activities involved significant collaboration across HHS and/or non-federal stakeholders to promote the integration of child physical health, EMS, and pediatric transport in disaster preparedness, response, and recovery.

Surge Capacity Work Group

In November 2014, the NACCD formed the Surge Capacity Work Group (SCWG) to assess the current state of readiness, nationally, to respond to a surge of very ill and contagious pediatric patients. Specifically, they assessed the current state of transport systems, children's and non-children's hospitals, general emergency and pediatric emergency surge capacity, and health care coalitions as they relate to readiness to care for large numbers of ill, contagious children. In the spring of 2015, the SCWG approved and published [Near Term Strategies to Improve Pediatric Surge Capacity During Infectious Disease Outbreaks](#). This report provided recommendations for near-term solutions on the state of EMS and pediatric transport readiness in the event of a surge of pediatric patients in an infectious disease outbreak as well as the challenges facing children's and non-children's hospitals and emergency departments (ED).

National Pediatric Coalition Conference

The National Pediatric Coalition Conference, led by the ASPR/Hospital Preparedness Program (HPP)-funded Coyote Crisis Collaborative, gathered hundreds of health care and public health practitioners to learn best practices in pediatric preparedness planning. The conference provided tools, training, resources, and information to facilitate improvement in pediatric disaster preparedness. A diverse group of speakers offered insights from their experiences with unanticipated pediatric incidents across the country, addressing a broad spectrum of pediatric disaster response, resilience, extended care, recovery, and coalition topics learned from caring for children and families impacted by Superstorm Sandy, the Boston Marathon bombing, the Joplin tornado, the Sandy Hook shooting, and more. The AAP Disaster Preparedness Advisory Council (DPAC) created a [Children and Disasters website](#) to promote information shared at the meeting. The November 2015 meeting generated numerous findings and an infrastructure for establishing a new National Pediatric Disaster Coalition Executive Committee to share information and resources.

Pediatric Preparedness for Health Coalitions Webinar

Disaster preparedness requires health care systems have the capabilities to care for infants and children. In June 2014, HPP developed the [Pediatric Preparedness for Health Coalitions webinar](#). Presenters included ASPR/ABC and several states, who described resources, partnerships, and strategies that HPP

directors and health care coalitions implemented to strengthen pediatric components within their jurisdiction's health care preparedness capabilities. Topics discussed include federal policy and efforts to address the needs of children in disasters; Superstorm Sandy lessons learned; putting the pieces together on pediatric response planning; Los Angeles County pediatric surge plan; and pediatric lessons learned (Alaska Shield/Hale Borealis 2014 National Capstone Exercise).

CDC Partnerships to Address Needs of Children

CDC/CPU develops partnerships with leaders in preparedness planning across the federal government, NGOs, and state and local government to ensure greater collaboration to build a network of agencies and organizations who address the needs of children. The Unit recently:

- Supported Save the Children's 10 Days to Get Connected effort
- Hosted the Spring 2015 AAP DPAC
- Coordinated Preparedness Month activities with ACF and FEMA

Children's Health Desk in 2014-2015 EVD Response

CDC activated the Children's Health Desk as part of the 2014-2015 EVD response. The team worked to address the needs of children throughout both the international and domestic responses. Team activities ranged from developing recommendations, compiling resources, consulting with hospitals, and advising other response teams. Specific accomplishments are noted.

- Developed [Resources for Parents, Schools, and Pediatric Healthcare Professionals](#) to help visitors find relevant information about children and how they may be affected by the EVD outbreak
- Coordinated bi-weekly calls with hospitals prepared to treat or evaluate a pediatric EVD patient, facilitating the sharing of lessons and best practices
- Assisted in identification of hospitals to treat pediatric EVD cases
- Developed [How to Talk with Your Children About Ebola](#) tools for parents
- Facilitated development of consistent school guidance and materials by CDC, Department of Education, and ACF
- Published [Guidance on the Care of a Neonate Born to a Mother with Exposure to, Suspected, or Confirmed Ebola Virus Disease in U.S. Hospitals](#)
- Published [Key Messages for Safe School Operations in Countries with Outbreaks of Ebola](#) in collaboration with the United Nations International Children's Emergency Fund and World Health Organization
- Created [Q&A's about the Transport of Pediatric Patients \(< 18 years of age\) Under Investigation or with Confirmed Ebola](#) to keep workers, children, and family members safe while handling inquiries and responding to calls related to pediatric patients under investigation for EVD
- Published [Ebola Virus Disease and Children: What Pediatric Health Care Professionals Need to Know](#)
- Provided technical consultation to U.S. hospitals evaluating children suspected to have EVD

- Assessed CDC's technical assistance to providers and health departments by publishing an analysis of the [Clinical Inquiries Received by CDC Regarding Suspected Ebola Virus Disease in Children — United States, July 9, 2014–January 4, 2015](#)

Matrix of EVD Resources for At-Risk Populations

ASPR/ABC, with support from NLM, developed a matrix of EVD resources for various at-risk populations and cultural and linguistic competency. ABC shared the matrix with CDC Vulnerable Populations team and ACF/OHSEPR.

Incorporating Active Shooter Incident Planning into Emergency Plans

In 2014, HHS/ASPR, DOJ, and Department of Homeland Security (DHS)/FEMA released [Incorporating Active Shooter Incident Planning into Health Care Facility Emergency Operations Plans](#). Designed to encourage facilities to consider how to better prepare for an active shooter incident, the guidance incorporates pediatric unit considerations.

Epidemic of Rocky Mountain Spotted Fever in Arizona

Rocky Mountain spotted fever (RMSF) is a potentially deadly, yet preventable tickborne disease. An ongoing epidemic of RMSF affects tribal lands in Arizona with nearly 350 cases and 21 deaths since 2003—a case fatality rate 15 times higher than the national rate. Children are among the most highly impacted age groups and are five times more likely to die from RMSF than adults.

- CDC and the Indian Health Service (IHS) collaborated to describe the clinical ([Rocky Mountain Spotted Fever Characterization and Comparison to Similar Illnesses in a Highly Endemic Area](#)) and epidemiologic ([Risk Factors for Fatal Outcome from Rocky Mountain Spotted Fever in a Highly Endemic Area](#)) features of the RMSF epidemic in Arizona and to improve clinical response to suspected cases. While timely initiation of the antibiotic doxycycline⁴ is critical during the first five days of illness to prevent severe illness and death, doctors often avoid prescribing doxycycline to young children because of a concern that tooth staining may occur. In [No Visible Dental Staining in Children Treated with Doxycycline for Suspected Rocky Mountain Spotted Fever](#), experts at CDC and IHS documented that short courses of the antibiotic doxycycline can be used in children without causing tooth staining or weakening of tooth enamel.
- In addition, in 2012, CDC collaborated with the San Carlos Apache Tribe on an integrated community-based RMSF prevention and control project, the [RMSF Rodeo](#). This project demonstrated that placing long-acting tick collars on dogs reduces the number of ticks not only on dogs, but also in the environment. Reducing the number of ticks on dogs results in fewer cases of RMSF. At the time of this report, Arizona tribes are at various stages of implementing RMSF prevention programs modeled on the RMSF Rodeo.

⁴ Labeling changes approved in early 2016.

Education and Rabies Mitigation in Haiti

Haitian officials spearheaded an effort to control rabies by collaborating with CDC, Pan American Health Organization, U.S. Embassy in Port-au-Prince, Humane Society International, Global Alliance for Rabies Control, Christian Veterinary Mission, and International Fund for Animal Welfare. Part of these ongoing efforts to control animal bites and rabies in Haiti included a comic book for children. The comic book targeted children and youth by featuring a character popular in Haiti, Ti Joel. The comic book contained a captivating story, colorful pictures, important messages about how rabies spreads, how to avoid dog bites, and what to do if a potentially rabid dog bites someone. Schools and school-aged children received the comic book.

- From 2014-2015, approximately 577 children were bitten by dogs, for which CDC confirmed rabies exposure for 25 (4.3 percent) through laboratory or clinical diagnosis.
- In 2014, officials conducted 96 school outreach events, reaching 11,009 children; in 2015, this number increased to 116 school/church outreach events reaching 13,890 children.
- In 2014 on World Rabies Day, 1,000 schoolchildren received a half-day rabies educational course, increasing to 5,000 schoolchildren in 2015.

Programs and Activities

The activities listed below detail HHS activities promoting the coordination of child physical health, EMS, and pediatric transport.

Technical Resources, Assistance Center, and Information Exchange

ASPR developed [Technical Resources, Assistance Center, and Information Exchange](#) (TRACIE). TRACIE highlights key resources under specific health and medical preparedness topics. SME Cadre members vet and choose materials they consider the best and most useful in helping local, state, regional, tribal, federal, and private sector health care and public health practitioners with improving preparedness, response, recovery, mitigation, clinical care, workforce training, and exercises. Collections include peer-reviewed as well as other public and privately developed materials such as fact sheets, reports, technical briefs, white papers, articles, bulletins, toolkits, webinars, plans, guidelines, best practices, lessons learned, and templates. HPP awardees and health care coalitions continue to develop products for distribution via TRACIE, and build on partnerships with HRSA/EMSC and other pediatric champions to incorporate pediatric expertise in health care coalitions. Sample products developed include:

- [TRACIE Pediatric Topic Collection](#)
- Resources from [New York City Pediatric Disaster Coalition](#), [Utah Bureau of Emergency Medical Services and Preparedness](#), and [Illinois Emergency Medical Services for Children](#)

Incorporating Children in Preparedness Planning

Increasing awareness of the importance of incorporating children in preparedness planning is the first step in encouraging families, schools, child care centers, health care professionals, and emergency planners to take actions that better protect the children. CDC/CPU conducts awareness activities that include social media, presentations, exercises, and development of new tools:

- Facilitated a CDC Grand Rounds on [Addressing Preparedness Challenges for Children in Public Health Emergencies](#) in March 2015 featuring Drs. Georgina Peacock, Michael Anderson, Esther Chernak, and Nicole Lurie
- Delivered 27 presentations on the unique needs of children during emergencies and disasters
- Disseminated more than 100 tweets
- Created and shared seven “Real Stories” highlighting the experiences of family and pediatric health care providers during disasters
- Maintain one website that catalogs resources on preparedness and response for parents, child care providers, schools, and health care professionals
- Developed [Easy as ABC: Three Steps to Protect Your Child From Emergencies During the School Day](#) – tool to help parents develop a plan for supplies, reunification and emergency contacts

Technical Assistance to Federal, State, and Local Public Health

CPU also offers technical assistance and serves as a SME to federal, state, and local public health to help increase their capacity and expertise in protecting children during emergencies through large activities and individual consultations. Recent accomplishments include:

- Participated in four exercises to represent the needs of children
- Consulted with a state health department regarding their upcoming initiative focused on pediatric preparedness
- Reviewed materials from AAP to help pediatricians discuss preparedness with families of children and youth with special health care needs

Everyday Pediatric Readiness for Extraordinary Events

HRSA/EMSC hosted a webcast, [Everyday Pediatric Readiness for Extraordinary Events](#), on April 22, 2014. This webcast highlighted best practices and lessons learned from the Commonwealth of the Northern Mariana Islands (CNMI) where the threat of a tsunami or typhoon is an everyday reality and where routine and extraordinary often intersect. The CNMI EMSC program discussed successes and challenges in pediatric disaster preparedness and response, including the EMS systems and resources; interagency collaboration; and community planning, practice, response, and recovery. Approximately 40 physicians and nurses attended and through a partnership with the IHS Clinical Support System (CSC); EMSC issued 35 continuing education credits.

Increasing Statewide Pediatric-Specific Training

EMSC continues to support State Partnership Regionalization of Care (SPROC) demonstration grants. All six sites (Alaska, Arizona, California, Montana, New Mexico, and Pennsylvania) focused on improving patient access and systems of care to improve the coordination of emergency health care systems. Alaska focused specifically on increasing statewide pediatric-specific training in disaster preparedness, integrating pediatric components in disaster response planning, and establishing a regionalization of care program. A site visit team in Alaska observed promising alliances with health care facilities that have taken the EMSC Team a step closer to officially recognizing its first facility as part of the Alaska Pediatric Medical Recognition Program.

Checklist of Essential Pediatric Domains and Considerations for Hospital Disaster Preparedness Policies

EMSC worked with ASPR/HPP and a group of SMEs to develop the [Checklist of Essential Pediatric Domains and Considerations for Every Hospital's Disaster Preparedness Policies](#). The checklist serves as a tool to help hospital administrators and leadership incorporate essential pediatric considerations into existing hospital disaster policies. It complements and augments existing disaster resources, pediatric-specific and general, rather than serve solely as a stand-alone document. Included resources provide examples and references for 10 domains. This project serves as a direct response to the National Pediatric Readiness Assessment of all EDs across the country that found, with an 83 percent response rate, more than half of all hospitals reported they do not have a written disaster plan that includes the specific care and needs of children. A multi-disciplinary workgroup created the checklist and distributed it via multiple presentations and webinars.

EMSC Pediatric Disaster Planning and Preparedness Community of Practice

The EMSC Pediatric Disaster Planning and Preparedness Community of Practice (CoP) launched in June 2014. It provides a collaborative learning format in which participants exchange technical information, share experiences, and best practices in addressing pediatric disaster planning and preparedness, hear from SMEs, and engage in collaborative problem solving. Forty-two states, territories, and freely associated states participated in the monthly meetings. Presentations and discussion included the following topics archived at the [EMSC National Resource Center](#):

- Leveraging the EMSC Communities of Practice Towards Pediatric Disaster Preparedness
- EMSC and HPP: A critical partnership to improve Pediatric Preparedness
- Relationship building and working across diverse groups for pediatric disaster planning and preparedness
- Evaluating Disaster Training: Practice Many Times Because We Only Get One Shot
- Tour of Pediatric Data Sources and Discussion of Ways to Use Data
- Checklist Tools for Hospitals and EMS Systems
- Preparing Communities and Families to Protect Children in Disasters
- Trauma-Informed Care: Perspectives and Resources Tool
- Building a Pediatric Statewide Coalition
- Helping to Build a Pediatric Coalition
- Perinatal Disaster Preparedness
- CoP Project Evaluation Overview
- Pediatric Disaster Preparedness Resources
- School Emergency Triage Training: A Program for School Nurses
- Small Hospital Pediatric Disaster Preparedness: Building Local Capability

Synchronization of Pediatrics and Disasters at the National Level

EMSC continues to collaborate with ASPR/HPP on a monthly basis to synchronize program efforts around pediatrics and disasters at the national level. Ongoing and past collaborative activities include networking for EMSC and HPP managers. Meetings between federal project officers of both programs

include discussion of crosscutting topics of relevance and national initiatives concerning the planning and treatment of pediatric patients in disasters.

Health Resources on Children in Disasters and Emergencies

NLM/DIMRC collaborated with ASPR and HRSA to develop [Health Resources on Children in Disasters and Emergencies](#). This site is a compendium of resources related to medical and public health issues of children in disasters and emergencies. Topics include natural disasters; psychological and behavioral health; chemical, biological, radiological, nuclear, and explosives (CBRNE); emerging diseases; disabilities; schools; hospital preparedness; resilience; etc. The intent of this compendium is to consolidate the multitude of resources available across a variety of organizations, web sites, databases, and training sites, making the search for relevant materials simpler. The resources target health providers, emergency and community planners, and others in the disaster workforce who work with or on behalf of children. On September 11, 2014, NLM hosted a joint EMSC, NLM, ASPR/ABC, and ASPR/HPP webcast to launch the website.

Disaster Medicine and Public Health Resource Database

[Disaster Lit®: the Resource Guide for Disaster Medicine and Public Health](#) database contains links to over 700 resources (documents, multimedia, training classes, etc.) on children and disasters. Disaster Lit® is a database of links to disaster medicine and public health resources (non-journal articles) available for free on the Internet. Resources include expert guidelines, research reports, training classes, fact sheets, web sites, databases, and similar materials from over 700 organizations and supplement disaster-related resources from PubMed (journal literatures) and MedlinePlus (health information for the public). In 2014, NLM worked with HRSA and EMSC to incorporate the PedPrepared database into Disaster Lit® in order to reduce duplication of effort and provide one source for users to obtain this information.

Chemical Hazards Emergency Medical Management

The [Chemical Hazards Emergency Medical Management](#) (CHEMM) is a web resource and mobile app that assists first responders, first receivers, health care providers, and emergency managers plan for, respond to, recover from, and mitigate the effects of mass-casualty incidents involving chemicals. NLM and its partners (ASPR, National Institute of Child Health and Development, DHS) worked closely to ensure CHEMM included the special needs of children (infant-adolescence) and pregnant women. CHEMM includes information on decontamination, basic and advanced life support, countermeasures and treatment, burn triage and treatment, and psychological issues as they pertain to these specific population groups.

Telehealth Links to Enhance Pediatric Emergency Care Capacity

IHS is responsible for providing health care services to American Indians and Alaska Natives. Most IHS hospitals and clinics are located on reservation lands in very rural or remote areas, and they often handle pediatric emergencies. To enhance their pediatric emergency care capacity, IHS collaborated with the University of New Mexico (UNM) to link IHS facilities in New Mexico and Arizona to the UNM Pediatric Emergency Department. Two rural clinics and one hospital in New Mexico now have a telehealth link to the UNM Pediatric Emergency Department and their pediatric emergency medical and

nursing staff. Through this link, IHS medical and nursing staff can obtain immediate pediatric emergency consultation, coordination of patient transfers, and EMSC continuing education. UNM, through its SPROC grant, will be adding telehealth links at hospitals in Oklahoma as well, including IHS and tribal hospitals.

IHS and Pediatric Readiness

IHS is working with the State of Arizona and the Arizona Chapter of the AAP to review all IHS hospitals for pediatric readiness. AAP reviewed Chinle Comprehensive Health Care Facility, which is now recognized by the state of Arizona as a Prepared Care Hospital. In addition, all IHS hospitals in Montana have received a Pediatric Readiness site visit, and all now have a telehealth link with referral hospitals that have pediatric emergency care, pediatric intensive care, and maternal-fetal medicine capacity.

Research

HHS and HHS-funded entities collaborated to address child physical health, EMS, and pediatric transport through research. Examples include:

Evidence Base of Best Practices, Tools, and Resources

CDC/CPU works to build an evidence base of best practices, tools, and resources to guide planning. Establishing the science, guidelines, and best practices ensures the utilization of the most effective and efficient approaches to protect children during emergencies and disasters. Publications include:

- [Influenza vaccination in children with neurologic or neurodevelopmental disorders](#)
- [Influenza vaccination and treatment in children with neurologic disorders](#)
- [Public Health Emergency Planning for Children in CBRN Disasters](#)
- [Clinical guidance for smallpox vaccine use in a postevent vaccination program](#)

National Pediatric Readiness Project

The National Pediatric Readiness Project: Ensuring Emergency Care for All Children is a collaborative quality improvement initiative. The project involves HRSA/EMSC and professional associations such as AAP, American College of Emergency Physicians, and Emergency Nurses Association, to ensure that EDs are adequately ready to care for pediatric patients. Published in *JAMA Pediatrics* in April 2015, [A National Assessment of Pediatric Readiness of Emergency Departments](#) details the data findings from the National Pediatric Readiness assessment of over 4,000 EDs conducted in 2013-2014.

Factors Related to Safety Events and Errors for Emergency Medical Services

To identify factors related to safety events and errors for EMS professionals, NICHD-supported researchers conducted a national survey of more than 750 EMS providers, including participants representing 44 states, making it one of the largest nationwide surveys of its kind. In November 2015, they published [Patient Safety Perceptions in Pediatric Out-of-Hospital Emergency Care: Children's Safety Initiative](#). These results showing the key factors contributing to pediatric safety events included airway management skills, personal anxiety, limited pediatric care skill and experience, and family members leading to delays or interference with care. Medication errors and team member communication

factors ranked lower than similar studies for in-hospital settings, suggesting that out-of-hospital settings may be useful for training EMS providers to prevent medical errors in providing emergency care for children.

Child Care, Child Welfare, and Human Services

Background

The 2010 NCCD Report noted the lack of laws and regulations requiring licensed child care providers to develop written disaster plans for addressing general evacuation processes, reunification efforts, and accommodation of children with special needs. HHS continues to make significant progress in addressing this particular issue. HHS-supported collaboration and activities are below.

Collaboration

The following activities involved significant collaboration across HHS and/or non-federal stakeholders to promote the integration of child care, child welfare, and human services into disaster preparedness, response, and recovery.

Strategic Planning Work Group

The NACCD formed the Strategic Planning Work Group in June 2015 to explore the dynamic national landscape that encompasses child wellbeing in public health emergencies including programs, policies, and stakeholders. The workgroup began identifying the barriers to providing adequate human services to children affected by disasters by reviewing lessons learned to date, a gap analysis, funding solutions, and future research agendas needed to improve child welfare in and after disasters. The workgroup plans to develop a children and disasters current issues and future challenges summary statement.

Healthy People 2020 Preparedness Topic Area

ASPR/ABC and CDC/OPHPR co-led the Healthy People 2020 Preparedness Topic Area Working Group and introduced four new objectives related to children and preparedness with supporting data from CDC, DHS/FEMA, and a nongovernmental organization. Healthy People provides science-based, 10-year national objectives for improving the health of all Americans by establishing benchmarks and monitoring progress over time. The [new Healthy People 2020 preparedness objectives](#) monitor activities related to children in a variety of settings:

- School districts requiring schools to include specific topics in their crisis preparedness, response, and recovery plans
- Parents/guardians aware of the emergency or evacuation plan in their child(ren)'s school including the evacuation location
- Adults residing with children and have household discussions regarding their emergency plan
- States requiring regulated child care providers to have evacuation plans, reunification plans, and plans for children with access and functional needs including disabilities

Post-Disaster Child Care Needs and Resources

ACF/OHSEPR led an interagency coordinated effort to create the [Post-Disaster Child Care Needs and Resources](#) document following a recommendation from the ACF Superstorm Sandy After Action Review. The working group membership included both federal and non-federal partners including ACF, FEMA, CDC, ASPR, and a nongovernmental organization. As over 700 child care providers were closed post

Superstorm Sandy, the workgroup sought to establish a detailed list of resources that would support and promote rapid recovery and restoration of critically needed child care services post disaster. States, territories, tribes, and local communities implement this document in the preparedness, response, and recovery phases of a disaster. It addresses the challenges that families and child care providers (including centers, in-home, and family child care providers) may experience following a disaster.

Programs and Activities

The activities listed below detail HHS activities promoting the integration of child care, child welfare, and human services into public health preparedness and response.

Child Care and Development Block Grant Reauthorization

In November 2014, Congress reauthorized the Child Care and Development Block Grant to include several provisions related to emergency preparedness. As part of the health and safety requirements and training section noted in Section 658E(c)(2)(I)(VII) and (XI)⁵, states must have requirements concerning emergency and response planning for emergencies resulting from a natural disaster or other events, such as violence at a child care facility, within the meaning of those terms under section 602(a)(1) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.⁶ States must also require the completion of training on this topic pre-service or during an orientation period in addition to ongoing training appropriate to the provider setting. Further, the new law requires that states shall develop and implement a statewide child care disaster plan.⁷ The disaster plans must be effective no later than September 30, 2016. ACF Office of Child Care (OCC) published the draft rule in 2015 and the final [rule](#) in 2016.⁸ The plan preprint of the ACF/OCC Child Care and Development Fund (CCDF) block grant application requires that these plans must include:

- Guidelines for continuing CCDF assistance and child care services after a disaster, which may include provision of temporary child care, and temporary operating standards for child care after a disaster.
- Requirements that child care providers have in place procedures for evacuation, relocation, shelter-in-place, lock-down, communication and reunification with families, continuity of operations, accommodation of infants and toddlers, children with disabilities, and children with chronic medical conditions.
- Requirements that child care providers have in place procedures for staff and volunteer emergency preparedness training and practice drills.

Training on the Intersection of Domestic and Disaster

ACF's grantee, the National Domestic Violence Hotline, in collaboration with The New York State Coalition against Domestic Violence and the New Jersey Coalition for Battered Women developed

⁵ See 42 U.S.C. 9858c(c)(2)(I)(VII) & (XI)

⁶ See 42 U.S.C. 5195a(a)(1)

⁷ See 42 U.S.C. 9858c(c)(2)(U)

⁸ On September 30, 2016, ACF/OCC published a rule that became effective on November 29, 2016 putting forward regulations to implement this new law.

[Training on the Intersection of Domestic Violence and Disaster](#). Designed for disaster response and preparedness personnel, this training curriculum informs on domestic violence in disaster response situations and provides linkages to appropriate services. This training focuses on protocols and referral procedures, accessing domestic violence services, recognizing the warning signs of domestic violence, safety planning, and maintaining ongoing health and wellness initiatives during the crisis response and recovery phase.

EVD Fact Sheets to Reduce Stigma

ACF/OHSEPR created a series of fact sheets about EVD to help reduce the stigma of EVD in early childhood settings, and help parents and caregivers deal with the possibilities of exposure. ACF developed the following resources to provide Head Start and Early Head Start programs, parents, guardians, and child care providers with information that can help them stay healthy and answer their concerns about EVD.

- [Understanding Ebola: For Parents of Young Children](#)
- [How Do I Talk to My Child about Ebola?](#)
- [Understanding Ebola: Information for Head Start and Early Head Start Parents](#)
- [Understanding Ebola: Information for Child Care Providers](#)
- [Ebola: The Facts for Head Start Programs](#)
- [Ebola: Planning Considerations for Human Services Programs](#)

Measles Guidance for Early Childhood Providers

During the measles outbreaks in 2014, ACF/OHSEPR collaborated with the Early Childhood Development group in ACF to release [guidance for early childhood providers to deal with the measles outbreak](#) and prevent the spread of the virus. Human services programs encouraged the use of the fact sheets to support staff, clients, and communities.

Emergency Preparedness and Response Resources for Child Care Programs

In September 2014, ACF/OCC published [Resource Guide: Emergency Preparedness and Response Resources for Child Care Programs](#), which provides emergency preparedness and response resources for child care programs. Natural disasters and emergencies can be emotionally devastating and cause property damage that can be costly to repair. Child care programs should plan and prepare for any events (minor as well as catastrophic) that may disrupt the day-to-day operations of their child care businesses. Emergency plans help child care program staff react in a manner that protects the safety of children and staff when an emergency occurs. Emergency plans also establish mechanisms to help programs return to business as soon as possible, thus promoting continuity of care and reducing the risks of clientele and income loss. This guide provides resources to help child care programs develop emergency plans or update their current plans and is also available in Spanish.

Website of Emergency Preparedness, Response, and Recovery Resources for Child Care Providers

ACF/OCC created a [website providing child care providers with emergency preparedness, response, and recovery resources](#) to help with planning and recovery efforts. Emergency plans help ensure child care

programs and staff are prepared to react in a manner that protects the safety of children and staff when an emergency occurs. Emergency plans also establish mechanisms to help programs during the recovery phase and get businesses “up and running” as soon as possible, which promote continuity of care and reduces the risks of clientele and income loss.

Emergency Preparedness and Response Webinars

ACF/OCC released six webinar sessions regarding emergency preparedness and response:

- [Creating a Plan for Child Care Services: Coordinating with Key Partners and Emergency Management Agencies](#)
- [Subsidy Issues: Planning for Continuation of Child Care Services](#)
- [Licensing Regulations and Policies for Emergency Planning and Response](#)
- [Training and Technical Assistance Supports for Child Care Providers](#)
- [Response, Recovery, and Rebuilding](#)
- [Recovery- Responding to Trauma](#)

CCDF Agency Emergency Preparedness Planning Tool

The [CCDF Agency Emergency Preparedness Planning Tool](#) helps states and territories begin or expand their emergency preparedness planning efforts to include other key partners in the state or territory.

Head Start Emergency Preparedness Website

The [Office of Head Start created an emergency preparedness website](#) to host resources for preparedness, response, and recovery efforts as they relate to Head Start. Early childhood programs and families face the challenge of preparing for emergencies. An emergency can occur suddenly, with little or no warning. It can deprive people of even the most basic necessities, including food and shelter. Emergencies also may have significant social and emotional impacts that linger long after the event. The site includes tip sheets, checklists, and resources that offer guidance and techniques to cope with emergencies and disasters.

Head Start Emergency Preparedness Manual

The [Head Start Emergency Preparedness Manual](#) provides programs with the latest tools and resources to guide their planning process. An emergency may be a catastrophic natural event, like a hurricane, flood or wildfire, or a man-made disaster, such as a shooting. No matter the crisis, Head Start programs need to be ready with impact, relief, and recovery plans. [Tip sheets](#) accompanied the Emergency Preparedness Manual for use with Early Head Start and Head Start families and staff affected by a crisis or tragic event.

HHS Disaster Human Services Concept of Operations

The March 2014 [HHS Disaster Human Services Concept of Operations](#) (CONOPS) provides the conceptual framework for coordination and guidance of HHS federal-level human services for preparedness, response, and recovery for disasters and public health emergencies. The CONOPS describes how HHS transitions from normal operations of human services program delivery to a coordinated, department-

wide response to the human services elements of a public health and medical emergency. Many, if not most, of these human services programs serve children. The CONOPS explain how ASPR coordinates HHS-wide response and recovery activities on behalf of the Secretary in concert with the specific authorities and responsibilities of the department. This ensures that the human services requirements in response and recovery are fully integrated into a “One HHS” emergency enterprise that includes the public health and medical, behavioral health, human services, environmental health, and responder health and safety missions.

Superstorm Sandy Evaluations

The Office of the Inspector General conducted an evaluation that examines the needs of children in disasters. [The Response to Superstorm Sandy Highlights the Importance of Recovery Planning for Child Care Nationwide](#) evaluates factors that impeded or enhanced the emergency preparedness in the provision of child care services for states impacted by Superstorm Sandy. It also describes emergency response and recovery experiences of states and child care providers during and after Superstorm Sandy and characterizes emergency planning for child care in all states post Superstorm Sandy.

Pregnant and Breastfeeding Women and Newborns

Background

The 2012-2013 CHILD Report newly highlighted the demographic of pregnant and breastfeeding women and newborns. Pregnant women are specifically included within the definition of “at-risk individuals” in Section 2802(b)(4)(B) of the Public Health Service Act⁹. HHS continues to support collaboration and activities related to pregnant women and newborns.

Collaboration Across HHS

The following activities involved significant collaboration across HHS and/or non-federal stakeholders to promote the inclusion of pregnant and breastfeeding women and newborns into disaster preparedness and response.

HHS Preparedness for Pregnant Women Working Group

In 2015, ASPR launched the HHS Preparedness for Pregnant Women Working Group to integrate the needs of pregnant women across all disaster and public health emergency preparedness, response, and recovery activities. With coordination and support from the Coordinating Council on Women’s Health led by the Office on Women’s Health (OWH), the working group addresses the preparedness needs of pregnant and breastfeeding women and young children age 0-5. The working group focuses on opportunities to identify, develop, and update tools and resources within HHS including infographics, job aids, and other actionable products for dissemination and utilization by health care providers, public health practitioners, human services agencies, advocacy groups, and emergency management officials.

Emergency Preparedness for Little Ones Twitter Chat

On September 17, 2014, ASPR’s Web Communications Division and ABC hosted a Twitter chat, [Emergency Preparedness for Little Ones](#), in collaboration with several federal (ACF, ASPR, CDC’s National Center on Birth Defects and Developmental Disabilities (NCBDDD), Center for Faith-Based & Neighborhood Partnerships, NLM/DIMRC, NLM Caregivers, and SAMHSA), and non-federal partners. The Twitter chat provided information, resources, and tools to help keep children from birth to 5 years old healthy before, during, and after an emergency.

Emergency Preparedness for Moms and Little Ones Twitter Chat

During National Preparedness Month in 2015, ASPR’s Web Communications Division, ABC, and ACF co-hosted [#Prep4Moms Twitter Chat: Emergency Preparedness for Moms and Little Ones](#), in collaboration with several federal (ACF, CDC/NCBDDD, FEMA, OWH, SAMHSA, United States Department of Agriculture) and non-federal partners. The Twitter chat provided information, resources, and tools to help pregnant women and new moms keep themselves and their babies healthy before, during, and after an emergency. Three hundred and one unique authors participated in the #Prep4Moms chat, with 171,706 views of ASPR-originated tweets.

⁹ See 42 U.S.C. 300hh-1(b)(4)(B)

Health Indicators for Disaster-Affected Pregnant Women

CDC's Division of Reproductive Health (DRH), in collaboration with 23 nationwide partners, developed [Health Indicators for Disaster-Affected Pregnant Women, Postpartum Women, and Infants: A Guide for Assessment and Surveillance of the Health of Disaster-Affected Pregnant and Postpartum Women and Infants](#). This tool includes proposed indicators and questions for measuring them.

Programs and Activities

The activities listed below detail HHS activities promoting the integration of pregnant and breastfeeding women and newborns into public health preparedness and response.

Health Resources on Pregnant Women in Disasters and Emergencies

The [Health Resources on Pregnant Women in Disasters and Emergencies](#) is a new web compendium of resources related to medical and public health issues of pregnant and postpartum women in disasters and emergencies. Topics include natural disasters, psychological and behavioral health, CBRNE, emerging diseases, disabilities, breastfeeding/infant feeding, intimate partner violence, sheltering, etc. NLM/DIMRC developed this resource in partnership with ASPR/ABC as a cross-entity collaboration to reduce duplication of effort and improve access to resources about pregnant and post-partum women in disasters and emergencies.

Data on Birth Defects

CDC continues to collect, analyze, and make available data on birth defects through the [Centers for Birth Defects Research and Prevention](#). CDC uses these data to identify risk factors and potential causes of birth defects. In the event of a disaster, there may be a need for up-to-date, reliable evidence-based information on the teratogenic risk of specific medications (e.g., post-exposure antibiotic prophylaxis). This information will be vital to effectively treating pregnant women and addressing any resulting birth defects.

Pregnancy Risk Assessment Monitoring System

CDC/DRH developed a comprehensive question on emergency preparedness among pregnant and postpartum women to be available for the [Pregnancy Risk Assessment Monitoring System](#) (PRAMS). PRAMS is an ongoing, population-based state surveillance system that collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. PRAMS surveillance currently covers about 83 percent of all U.S. births. In a public health emergency PRAMS data is a resource for tracking impact.

EVD and Maternal Health

CDC/DRH collaborated with partners to address maternal health issues during the EVD epidemic. CDC activated the Maternal Health Team (MHT) from October 18, 2014 – February 22, 2015 to support the largest international outbreak response in its history. Key response activities of the MHT included the development of guidance documents, responding to inquiries from health care providers, partners, or general public regarding maternal health issues and providing subject matter expertise. As of December

2015, DRH completed 40 deployments in the U.S. and internationally, including airport quarantine stations, Dallas, Texas, Sierra Leone, and Liberia. From October 2014 through December 2015, DRH staff contributed over 10,000 hours to the response.

In 2014, MHT published [What Obstetricians-Gynecologists should know about Ebola](#). These guiding principles described the susceptibility to the EVD virus and risk for severe illness among pregnant women, as well as fetal and infant effects. The document also included special considerations for maternal treatment and prophylaxis, and other public health pertinent issues related to infection control guided the development of response recommendations and epidemiologic studies. Additionally, DRH collaborated with internal and external partners to develop two guidance documents on maternal health and EVD. CDC posted guidance documents to its website, and disseminated them to 45,225 GovDelivery subscribers.

National Repository of Blood Collection Cards

In addition to the Routine and Special Newborn services reported in the 2012-2013 CHILD Report, the Association of Public Health Laboratories in partnership with CDC maintains a national repository of blood collection cards, which serves to provide additional supplies during emergencies.

Accreditation and Dissemination of Pediatric Disaster Triage Module

In partnership with IHS/CSC and the Continuing Education Coordinating Board of Emergency Medical Services, the EMSC program provided accreditation for and supported dissemination of an on-line training module on Pediatric Disaster Triage: Doing the Most Good for the Most Patients in the Least Time. Developed in 2013 by a Connecticut EMSC Targeted Issue grantee, this course targets prehospital providers and contains five narrated modules addressing the following: Recognizing a Disaster, Disaster Triage Rationale, Pediatric Triage Considerations, Triage Methodologies, and Special Triage Decisions. Physicians, nurses, and EMS providers who successfully complete the training received one hour of continuing education credit.

Cooperative Agreement on Newborn Health Screenings

The Newborn Screening Data Repository and Technical Assistance Center, awarded in FY 2014 as a cooperative agreement, provides technical assistance on the implementation of state-based public health newborn screening (NBS) through resource development, state education and training, policy initiatives, disorder surveillance, evidence-based data collection, evaluation, and collaborative efforts with stakeholders. Activities support the collection of data to increase awareness and understanding of NBS, facilitate harmonization of NBS activities, and improve the quality of NBS and related genetic services across the United States through innovations and advancements in technology. As part of their data repository, the grantee collects emergency/disaster plans and support information from states and shares best practices in emergency preparedness to ensure all infants continue to get a NBS. In addition, the grantee reports results to the appropriate health care provider despite any emergencies that may be occurring within the state.

Regional Genetics Collaboratives

Since 2004, each of the seven Regional Genetics Collaboratives (RC) serve as a regional center to expand and improve NBS and genetic services for individuals affected or at risk for heritable disorders and their families. Four million babies undergo NBS every year for up to 33 conditions for which early detection and intervention can prevent serious health outcomes. In 2014, four of the seven RCs had activities to ensure that state NBS laboratories are prepared to continue processing NBS samples in the event of a disaster.

- In the Southeast Region, Florida offered to be the NBS backup laboratory and five of the 10 states and two territories (Georgia, Louisiana, North Carolina, South Carolina, and Tennessee) discussed a plan to work with Florida.
- In the New York/Mid-Atlantic region (seven states and the District of Columbia), four states of the seven states and District of Columbia (Delaware, West Virginia, New Jersey, and New York) successfully exchanged laboratory specimens. Other resources and Emergency Information Cards were available for families and clinicians in all states.
- The Midwest Region engaged all seven state NBS laboratories (Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio, and Wisconsin) in creating profiles and supported state matching and site visits.
- The Heartland Region completed NBS back-up testing trials among all of their states (Arkansas, Iowa, Kansas, Missouri, Nebraska, North Dakota, Oklahoma, and South Dakota).

Research

HHS and HHS-funded entities collaborated to address the needs of pregnant and breastfeeding women and newborns through research.

Clinical Guidance for Smallpox Vaccine Use

In February 2015, CDC published [Clinical Guidance for Smallpox Vaccine Use in Postevent Vaccination Program](#). This guidance provided specific recommendations for pregnant women, children, those with HIV infection, and those with eczema.

Pregnancy and Smallpox Vaccine

In June 2015, CDC published [Risks Associated with Smallpox Vaccine in Pregnancy: A Systematic Review and Meta-analysis](#) in *Obstetrics and Gynecology*.

Guidance for Anthrax Prophylaxis and Treatment for Pregnant and Postpartum Women

CDC/DRH [developed guidance for anthrax prophylaxis and treatment for pregnant and postpartum women](#) in *Emerging Infectious Diseases* in February 2014. The article discusses obstetric health care planning to reduce risks for infant health, such as preterm delivery in an anthrax emergency.

Publications on Maternal and Child Health Issues

CDC/DRH published several peer-reviewed journal publications on maternal and child health issues including:

- [2009 H1N1 Influenza and Pregnancy – 5 Years Later](#)
- [Post-Disaster Health Indicators for Pregnant and Postpartum Women and Infants](#)
- [Preparedness Planning for Emergencies Among Postpartum Women in Arkansas in 2009](#)

Publications on EVD and Maternal and Child Health

CDC/DRH published several peer-reviewed articles on EVD and the emergency preparedness and response.

- [Recommendations for Breastfeeding/Infant Feeding in the Context of Ebola Virus Disease](#)
- [Guidance for Screening and Caring for Pregnant Women with Ebola Virus Disease for Healthcare Providers in U.S. Hospitals](#)
- [US Hospital Preparedness for Obstetrics Patients with Possible Ebola](#)
- [Ebola Virus Disease: Focus on Children](#)
- [Bodies Don't Sleep, Neither Do Babies: Experiences at the Only Maternity Hospital Isolation Unit in Sierra Leone During the 2014 Ebola Epidemic](#)
- [A Pregnant Patient with Ebola Virus Disease](#)

Children at Heightened Risk

Background

The 2012-2013 CHILD Report noted children constitute an at-risk population in disasters and public health emergencies. In addition, the Public Health Service Act specifically mentions children in the definition of the term “at-risk individual.” The report highlighted that some children may be at additional heightened risk due to access or functional needs. In 2015, the Centers for Medicare & Medicaid Services [enrolled over 44 million children](#) through Medicaid and the Children’s Health Insurance Program (CHIP). Medicaid and CHIP policies and programs support disaster-related services and coordination that occur on the ground level. The following are other HHS-supported activities from 2014-2015.

Programs and Activities

The activities listed below detail HHS activities promoting the inclusion of children at heightened risk into public health preparedness and response.

Tool to Stimulate Planning for Clinical Care to Individuals Experiencing Homelessness

In 2015, ASPR/ABC, in conjunction with other HHS partners, developed the [Disaster Response Guidance for Health Care Providers: Identifying and Understanding the Health Care Needs of Individuals Experiencing Homelessness](#), a tool to stimulate planning for clinical care to individuals experiencing homelessness in advance of a disaster. The document includes resources for children and youth, and will be part of a larger toolkit developed in collaboration with the VA and the Department of Housing and Urban Development.

Disaster Planning Manual for Runaway and Homeless Youth Programs

The [Ready for the Anything: A Disaster Planning Manual for Runaway and Homeless Youth Programs](#) teaches the "Ps and Rs" (prevention, preparedness, response, and recovery) of disaster planning. Created by ACF, this manual includes worksheets and checklists to guide youth-serving agencies with a systematic process of creating an emergency preparedness plan for their agency.

Lessons Learned in the Aftermath of Superstorm Sandy

The [New York Children's Issues Task Force Report](#), led by the New York State Office of Children and Family Services and the ACF Region 2 Office, details lessons learned in the aftermath of Superstorm Sandy. ACF/OHSEPR facilitated a Lessons Learned review session where approximately 40 participants reported their unique perspectives. The report describes task force formation, meeting logistics, challenges and issues tackled, outcomes, and the six take-home messages in the conclusion, which applies to establishing a similar task force pre- or post-disaster.

Family Assistance After Typhoon Soudelor

In August 2015, Typhoon Soudelor caused widespread damage to CNMI. The CNMI Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program alerted the HRSA Maternal and Child Health

Bureau Project Officer of the situation and sent a copy of the Disaster Declaration. The damage from the typhoon resulted in many families experiencing homelessness, including the majority of families served by the MIECHV Program. MIECHV assisted with relief activities that related directly to the six MIECHV Benchmarks, which included outreach and family engagement to identify and support affected families. The MIECHV Program staff spent weeks locating families and providing support where possible, including providing drinking water, diapers, and formula if needed. MIECHV approved a budget revision of \$2,000 in order for the program to help meet the needs of their families. At the time of this report, of the 55 families served by MIECHV, all but nine families were located and connected to the appropriate services.

Unaccompanied Children: Health Information for Public Health Partners

In 2014, CDC drafted a [fact sheet regarding primary health issues for UAC](#) arriving at the United States borders. This resource includes some of the interventions, illnesses, and relevant websites for the UAC. The fact sheet explains that while children arriving from Central America pose a low risk, they could spread infectious disease and therefore recommends precautions to public health officials on medical screenings and surveillance. The fact sheet provides a simple list of risk factors and related tools to address these issues and prevent the introduction or re-introduction of infectious diseases to local communities.

Conclusion

This report summarizes HHS activities in 2014-2015 that enhanced how HHS provides and facilitates care to address the disaster-related health and human service needs of children before, during, and after disasters or public health emergencies. The activities highlighted in this report underscore HHS's commitment to policy coordination and response planning that integrates children's needs into disaster preparedness, response, and recovery activities. The working group encourages readers to follow the links to learn more about all the efforts described in this report.

While we have come a long way in addressing the needs of children since the creation of ASPR and the CHILD Working Group, more work remains. In 2016, the Flint, Michigan, water crisis and the Zika virus outbreak threatened the health of children in particular, reminding planners of the importance of preparing not just for natural disasters, but also for public health emergencies. These emergencies highlighted the challenges in preparedness for children with special health care needs and children with disabilities. ASPR, ACF, and the CHILD Working Group continue to play a critical role in promoting the integration and coordination of children's needs across HHS activities during disasters so that we can better protect children's health when disaster strikes.

HHS anticipates a continued emphasis on addressing the needs of children into disaster preparedness, response, and recovery. These activities remain crucial to fulfill the HHS mission to enhance and protect the health and well-being of *all* Americans.

Appendix A: List of Acronyms

AAP – American Academy of Pediatrics

ABC – Division for At-Risk Individuals, Behavioral Health, and Community Resilience (ASPR)

ACF – Administration for Children and Families

ADS – Analytic Decision Support

ARS – Acute Radiation Syndrome

ASPR – Assistant Secretary for Preparedness and Response

AVA – Anthrax Vaccine Adsorbed

BARDA – Biomedical Advanced Research and Development Authority (ASPR)

BBN – Bounce Back Now

BLA – Biologics License Application

CBRN – Chemical, Biological, Radiological, and Nuclear

CBRNE – Chemical, Biological, Radiological, Nuclear, and Explosives

CCDF – Child Care and Development Fund (ACF)

CDC – Centers for Disease Control and Prevention

CERSI – Center of Excellence in Regulatory Science and Innovation (University of Maryland)

CHEMM – Chemical Hazards Emergency Medical Management

CHILD – Children’s HHS Interagency Leadership on Disasters

CHIP – Children’s Health Insurance Program

CNMI – Commonwealth of the Northern Mariana Islands

CONOPS – Concept of Operations

CPU – Children’s Preparedness Unit (CDC)

CSC – Clinical Support System

DBH – Disaster Behavioral Health

DHS – Department of Homeland Security

DIMRC – Disaster Information Management Resource Center (NIH)

DOJ – Department of Justice

DPAC – Disaster Preparedness Advisory Council (AAP)

DRH – Division of Reproductive Health (CDC)

ED – Emergency Department

EMS – Emergency Medical Services

EMSC – Emergency Medical Services for Children (HRSA)

EUA – Emergency Use Authorization

EVD – Ebola Virus Disease

FDA – Food and Drug Administration

FEMA – Federal Emergency Management Agency (Department of Homeland Security)

HCPWG – Health Care Preparedness Work Group (NACCD)

HHS – Department of Health and Human Services

HIPC – Human Immunology Project Consortium

HPP – Hospital Preparedness Program (ASPR)

HRSA – Health Resources and Services Administration

IHS – Indian Health Service

IPT – Integrated Program Team (PHEMCE)

MCHB – Maternal and Child Health Bureau (HRSA)

MCM – Medical Countermeasure

MDE – Major Depressive Episode

MHT – Maternal Health Team (CDC)

MIECHV – Maternal, Infant, and Early Childhood Home Visiting (HRSA)

MMWR – Morbidity and Mortality Weekly Report (CDC)

NACCD – National Advisory Committee on Children and Disasters

NBS – Newborn Screening

NCBDDD – National Center on Birth Defects and Developmental Disabilities (CDC)

NCCD – National Commission on Children and Disasters

NGO – Non-Governmental Organization

NIAID – National Institute of Allergy and Infectious Diseases

NIH – National Institutes of Health

NIMH – National Institute of Mental Health

NLM – National Library of Medicine

OB – Obstetric

OCC – Office of Child Care (ACF)

OEM – Office of Emergency Management (ASPR)

OHS – Office of Head Start (ACF)

OHSEPR – Office of Human Services Emergency Preparedness and Response (ACF)

OPHPR – Office of Public Health Preparedness and Response (CDC)

OWH – Office on Women’s Health (HHS)

PAHPRA – **Pandemic and All-Hazards Preparedness Reauthorization Act**

PBS – Project BioShield

PedsOB IPT – Pediatric and Obstetric Integrated Program Team (PHEMCE)

PEP – Post-exposure prophylaxis

PHEMCE – Public Health Emergency Medical Countermeasures Enterprise

PRAMS – Pregnancy Risk Assessment Monitoring System

PTSD – Post-Traumatic Stress Disorder

RAMPART – Rapid Anticonvulsant Medication Prior to Arrival Trial

RC – Regional Genetics Collaboratives

RMSF – Rocky Mountain spotted fever

SAMHSA – Substance Abuse and Mental Health Services Administration

SCWG – Surge Capacity Work Group

SME – Subject Matter Expert

SNS – Strategic National Stockpile (CDC)

SPROC – State Partnership Regionalization of Care

SUD – Substance Use Disorder

TRACIE – Technical Resources, Assistance Center, and Information Exchange

UAC – Unaccompanied Alien Children

UNM – University of New Mexico

U.S. – United States

VA – Department of Veterans Affairs