ASPR TRACIE Technical Assistance Request

Requestor:
Requestor Phone:
Requestor Email:
Request Receipt Date (by ASPR TRACIE): 11 October 2017
Response Date: 19 October 2017; updated 1 August 2018
Type of TA Request: Standard

Request:

[redacted] asked if ASPR TRACIE had pediatric resources (e.g., plans, tools, templates, and guidelines) specifically related to outpatient care, urgent care, and ambulatory care sites. He noted that specific topic areas of interest were surge, evacuation, and general pediatric emergency preparedness.

In July 2018, the requestor asked if ASPR TRACIE had any new or updated resources since we last provided a response in October 2017. The ASPR TRACIE team collaborated with Alicia Livinski, National Institutes of Health (NIH) Informationist/ Biomedical Librarian, to gather additional resources. New resources that have been added to this document are indicated by an asterisk (*).

Response:

The ASPR TRACIE team reviewed multiple existing ASPR TRACIE Topic Collections, which are a compilation of resources specific to a subject area. Topic Collections of particular relevance for this technical assistance (TA) request include, but are not limited to, the following:

- **Pediatric**
- Hospital Surge Capacity and Immediate Bed Availability
- Healthcare Facility Evacuation / Sheltering

For your reference and convenience, other Topic Collections that contain dedicated sections to pediatrics include the following:

- Access and Functional Needs
- Burn
- Disaster Ethics
- Explosives and Mass Shooting
- Radiological and Nuclear
- VHF/Ebola

The ASPR TRACIE team also reviewed existing TA response documents. This summary document provides a list of select ASPR TRACIE TA responses in alphabetical order. All of the redacted example responses can be found in the Information Exchange. **NOTE:** You must have a registered account (free) and sign in to the Information Exchange in order to access these. Please contact ASPR TRACIE if you would like us to send an attachment of any of these redacted TA

response documents. Please review the **Pediatrics** section of the summary document, as there are multiple references that may be helpful for your request.

Materials gathered for this TA request are provided in the following sections of this document. Section I includes pediatric-specific resources related to ambulatory care sites. Section II provides resources specific to pediatrics and surge. Section III offers pediatric evacuation and sheltering materials. However, please note that we were unable to identify materials explicit to the facilities noted in your request, and have included references primarily for hospitals. Section IV includes general pediatric resources for healthcare facilities. Finally, Section V provides general pediatric emergency preparedness videos, webinars, and training.

NOTE: ASPR TRACIE intentionally omitted any resources specific to hospitals (with the exception of evacuation resources as mentioned above) as the request was explicit to urgent care, outpatient care, and ambulatory care sites. However, there are resources included in this response that are generic to pediatric care medical specialists.

I. Ambulatory Care-Specific Resources Related to Pediatrics

Centers for Disease Control and Prevention. (2016). Planning Resources by Setting: Pediatric Offices and Hospitals.

These resources can help physician and pediatric offices plan for patient surge and other issues related to an influenza pandemic.

Chernak, E., Hipper, T., Kriun, H. et al. (2013). Integrating Community Pediatricians into Public Health Preparedness and Response Activities in Pennsylvania. Pennsylvania Department of Health.

This document provides a plan for building a sustainable network of pediatric medical providers in ambulatory settings who can deliver healthcare to children throughout all phases of the emergency management cycle in partnership with public health and other stakeholders. It is co-published with the Pennsylvania Chapter, American Academy of Pediatrics, and the Center for Public Health Readiness and Communication, Drexel University School of Public Health.

*Curry, M.D., Larsen, P.G., Mansfield, C.J, et al. (2001). Impacts of a Flood Disaster on an Ambulatory Pediatric Clinic Population. (Abstract only.) Clinical Pediatrics. 40(10): 571-4.

The authors of this article address the impacts of Hurricane Floyd that hit North Carolina in 1999. The authors interviewed parents who went to an ambulatory pediatric clinic (part of a medical school) in Pitt County for services, which served low income, minority families. Survey participants were asked about flood-related socioeconomic problems, barriers to medical care, and family health issues. Results indicated that the flood affected more than two thirds of the families that were part of this study.

*Dunnic, J., Olympia, R., Wilkinson, R., and Brady, J. (2016). Low Compliance of Urgent Care Centers in the United States with Recommendations for Office-Based Disaster Preparedness. (See attachment.) Pediatric Emergency Care. 32(5):298-302.

The authors of this study distributed an electronic questionnaire to 872 urgent care center administrators (as identified by the American Academy of Urgent Care Medicine directory) in order to determine the compliance of these facilities with published recommendations for office-based disaster preparedness. Areas for improvement were identified and include: developing an office disaster plan that is tested yearly at a minimum, having staff become familiar with designated emergency shelters and community evacuation plans, providing surveillance to help detect potential acts of terrorism, assisting community organizations in disaster planning, and putting together office emergency/disaster kits.

*Flores, G., and Weinstock, D.J. (1996). The Preparedness of Pediatricians for Emergencies in the Office. (Abstract only.) Archives of Pediatrics & Adolescent Medicine 150(3): 249-256.

The authors of this study conducted telephone surveys of pediatric offices in Fairfield County, CT to determine the number of emergencies in pediatric offices and assess the level of office emergency preparedness. Fifty-one (98%) of 52 offices participated, and represented 481 staff. Results indicated that most offices were not properly prepared and not enough effort had been devoted to increasing practitioner awareness of emergency preparedness issues. The authors suggest that increased awareness may be achieved by emphasizing practical instruction during residency and continuing medical education courses.

*Pendleton, A.L., and Stevenson, M.D. (2015). Outpatient Emergency Preparedness: A Survey of Pediatricians. (See attachment.) Pediatric Emergency Care. 31(7): 493-5.

The authors of this article conducted a study to determine the experience with and preparation for patient emergencies by outpatient pediatricians, and their awareness of the American Academy of Pediatrics (AAP) policy statement on outpatient emergency preparedness. The authors concluded that although emergencies occur regularly in general pediatric offices, pediatricians may not have adequate emergency equipment and training. The authors also identified the need for greater awareness of and compliance with the AAP policy.

* Pitts, S.R., and Kolla, I.S. (2000). The "Sherman Eeffect": Decreased Ambulatory Care Volumes in Atlanta during the 1996 Summer Olympic Games. (Abstract only.) The Medical Journal of Australia. 173(6): 309-11.

The authors of this study conducted a retrospective review of administrative data to estimate the effect that the 1996 Atlanta Summer Olympic Games had on the frequency of visits to community ambulatory healthcare facilities. The authors concluded that local ambulatory care sites did not encounter a significant rise in patient visits until after the closing ceremonies. They also suggest that facilities should plan for overtime staffing immediately following a planned mass gathering

*Simon, H.K., Stegelman, M., and Button, T. (1998). A Prospective Evaluation of Pediatric Emergency Care during The 1996 Summer Olympic Games in Atlanta, Georgia. (Abstract only.) Pediatric Emergency Care. 14(1): 1-3.

The authors of this article conducted surveys on patients presenting at two children's emergency departments and their satellite urgent care centers during the 1996 Summer Olympics. The objective of the survey was to determine the impacts of the temporary influx of millions of people on local pediatric and urgent care systems. The authors concluded that there was a relatively minor impact on the emergent care system for children.

*Ward, C., and Canares, T.L., (2017). Urgent Care as Intermediary Care: How Inbound and Outbound Transport Can Enhance Care of Community-Based Pediatric Emergencies. (See attachment.) Clinical Pediatric Emergency Medicine. 18(1):14-23.

The authors of this article address the transportation of pediatric patients to and from urgent care centers during mass casualty incidents and the potential impact on a health system. They discuss how urgent care centers can have a role in serving as a community-based solution for intermediate-level care.

*Wilkinson, R., Olympia, R.P. Dunnick, J., et al. (2016). Pediatric Care Provided at Urgent Care Centers in the United States: Compliance With Recommendations for Emergency Preparedness. (See attachment.) Pediatric Emergency Care. 32(2): 77-81.

The authors of this study distributed an electronic questionnaire to 872 urgent care center administrators (as identified by the American Academy of Urgent Care Medicine directory) to determine the compliance of urgent care centers in the U.S. with pediatric care recommendations for emergency preparedness as set forth by the American Academy of Pediatrics. The authors identified areas for improvement, which include: Areas for improvement in urgent care center preparedness were identified, such as increasing the availability of essential medications and equipment, developing transfer and transport agreements with community hospitals and EMS, and ensuring a structured quality improvement program.

II. Pediatric-Specific Surge Resources

*Anderson, M., Amparo, A., Kaplowitz, L., et al. (2015). Near-Term Strategies to Improve Pediatric Surge Capacity During Infectious Disease Outbreaks. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response.

This report summarizes the methods, limitations, gaps, key findings, and results of the National Advisory Committee on Children and Disasters Surge Capacity Work Group's assessment of current national pediatric surge capacity. The assessment focused on: the current state of readiness to transport large numbers of critically ill children; the current state of general emergency/ pediatric emergency surge capacity; the current readiness of children's hospitals to surge during an infectious disease outbreak; and the current state

of non-pediatric facilities to care for children in large-scale disease outbreaks. The report also includes a summary of potential mitigation strategies for identified gaps, a review of best practices, and a summary of practical tools that can help healthcare coalitions improve community readiness to care for children.

*ASPR TRACIE. (2018). Medical Surge and the Role of Urgent Care Centers.

ASPR TRACIE conducted a project to determine what role urgent care leaders believe their facility type can play in the nation's healthcare system preparedness and response activities. This report offers a snapshot of the experiences and perceptions from a sample of urgent care center leaders from across the country. This report is also accompanied by a Summary and Tip Sheet. **NOTE**: This report does not focus on pediatric issues, but may still be useful from an urgent care perspective.

California Neonatal/ Pediatric/ Perinatal Disaster Coalition. (n.d.). Pediatric-Neonatal Disaster and Surge Network. (Accessed 10/18/2017.)

This googlesite was formed to connect pediatric, neonatal, hospital, emergency department, perinatal, obstetric, and disaster professionals with ideas, information, resources, and strategies for supporting regional pediatric surge and disaster preparedness throughout California and the U.S.

*Campbell, C. (2010). The Benefits of Designing a Stratification System for New York City Pediatric Intensive Care Units for Use in Regional Surge Capacity Planning and Management. (Abstract only.) Journal of Community Health. 35(4):337-347.

The author describes her work designing a New York City pediatric intensive care unit (PICU) surge stratification system that can help physicians, hospitals, and city agencies with regional surge capacity planning for critical pediatric patients. This included identification of factors to be considered when developing a stratification system, and creation of a preliminary system of PICU stratification based on clinical criteria and resources.

Central Valley, CA. (2012). Regional Pediatric Disaster Surge Framework. California Hospital Association.

This document provides a framework for community collaboration to develop regional, comprehensive, integrated pediatric preparedness response plans. NOTE: This resource is regionally-focused, but may have some helpful concepts for your request.

Contra Costa Health Services Emergency Medical Services Agency. (2011). Contra Costa Pediatric/Neonatal Disaster and Medical Surge Plan and Preparedness Toolkit.

This toolkit was developed to facilitate disaster preparedness that involves the practice of including neonates and pediatrics in all county, provider agency, and hospital-based disaster exercises. It provides an example of implementing emergency medical services for children guidelines at the local level.

*Cruz, A.T., Tittle, K.O., Smith, E.R., et al. (2012). Increasing Out-of-Hospital Regional Surge Capacity for H1N1 2009 Influenza A through Existing Community Pediatrician Offices: A Qualitative Description of Quality Improvement Strategies. (Abstract only.) Disaster Medicine and Public Health Preparedness. 6(2): 113-6.

The authors of this article described initiatives taken by pediatricians in Houston, TX to increase their city's surge capacity for patients presenting with influenza-like illnesses during the 2009 H1N1 influenza A pandemic. Findings from this study indicated that effective communication and improved access to healthcare enabled children within the network to continue to be treated in their medical home.

*Frost, P., Upperman, J., Lubin, B., et al. (2010). Pediatric Surge Planning: Solutions Within Reach. Contra Costa County Health Services.

This document contains presentations from a September 2010 workshop about pediatric surge planning. The importance of community hospitals in planning for and managing pediatric surge is emphasized, as are some limitations of the current system based on data from the State of California.

Ginter, P.M., Rucks, A.C., Duncan, W.J., et al. (2010). Southeastern Regional Pediatric Disaster Surge Network: A Public Health Partnership. Public Health Reports. 125(Suppl 5): 117-125.

This article describes the development of the Southeastern Regional Pediatric Disaster Surge Network, comprised of over 40 agencies and institutions working together since 2005 to establish a regional pediatric disaster preparedness network across five states: Alabama, Florida, Louisiana, Mississippi, and Tennessee.

Illinois Department of Public Health. (2015). Pediatric and Neonatal Surge Annex.

This plan provides a detailed framework for various stakeholders involved in an emergency response within the State of Illinois and surrounding states in order to protect children and provide appropriate pediatric medical care during a disaster. The plan can be used to guide a state-level response and provides local medical services guidance on the care of children, including patient movement, system decompression, recommendations for care, and resource allocation during a surge of pediatric patients. It includes several tools such as transfer forms and algorithms. NOTE: This resource is not specifically focused on outpatient/ urgent care or ambulatory care facilities; however, it does touch on the roles and responsibilities these facilities have as a partner to the State. Refer to Section 3.2.9 (page 23-24) titled, “Pediatric Care Medical Specialists.”

Los Angeles County Emergency Medical Services Agency. (2012). Pediatric Surge Quick Reference Guide. California Hospital Association.

This document contains summaries of critical information for managing the care of children during emergencies or disasters, including vital signs; risks during disasters; signs of respiratory distress; equipment sizes; and fluid resuscitation.

Minnesota Department of Health. (2013). Minnesota Pediatric Surge Primer and Template Plan. St. Paul, MN: Minnesota Department of Public Health.

This primer provides planning guidance for healthcare facilities that do not typically provide pediatric inpatient or pediatric trauma services. The website provides links to additional pediatric surge resources.

Rucks, A., Baldwin, S., Beeman, K., et al. (2010). Multi-State, Multi-Organizational Solution to Limited Regional Pediatric Medical Surge Capacity in the Southeastern United States. Alabama Department of Public Health.

The speakers in this 90-minute webcast share strategies for addressing obstacles associated with pediatric surge.

Various Authors. (2009). Pediatric Surge Pocket Guide. California Hospital Association.

This pocket guide contains clinical checklists, guides, and just-in-time references to manage a surge of pediatric patients. It includes the following sections: Normal Values; Triage and Assessment; Treatment and Medications; Equipment; Decontamination; Mental Health; and Pediatric Safe Areas.

III. Pediatric Evacuation and Sheltering Resources

NOTE: The resources below are focused on hospitals as we could not identify any resources specific to evacuation and outpatient care, urgent care, and ambulatory care facilities.

Carbine, D., Cohen, R., Hopper, A., et al. (2014). Neonatal Disaster Preparedness Toolkit. California Association of Neonatologists.

This toolkit identifies major hazards faced by neonatal intensive care units in California and provides suggested mitigation and response planning strategies, including evacuation and sheltering in place. It also provides appendices with sample check lists, job action sheets, and information transfer sheets for specific hazards.

Femino, M., Young, S., and Smith, V. (2013). Hospital-Based Emergency Preparedness: Evacuation of the Neonatal Intensive Care Unit-The Smallest and Most Vulnerable Population. (Abstract only.) Pediatric Emergency Care. 29(1):107-13.

The authors describe a full-scale neonatal intensive care unit evacuation exercise and emphasize the importance of constant, clear communication.

Illinois Emergency Medical Services for Children. (2009). Neonatal Intensive Care Unit (NICU) Evacuation Guidelines.

These neonatal intensive care unit (NICU) evacuation guidelines were developed by professionals throughout Illinois. A multi-disciplinary committee was also convened to collate personal experiences, recommendations, and current literature on NICU

evacuations. This guide is intended to assist healthcare providers assess pre-event vulnerabilities and plan for the evacuation of medically fragile Level III NICU patients while addressing core components of incident management, in conjunction with the promotion of patient safety and evacuation procedures based on lessons learned from past disasters and experiences.

Illinois Emergency Medical Services for Children. (2013). NICU/Nursery Evacuation Tabletop Exercise Toolkit.

This toolkit provides various resources and tools developed specifically for exercises, and offers guidance on planning, conducting, and evaluating tabletop exercises focused on the neonatal intensive care unit and nursery population.

Lucile Packard Children's Hospital. (n.d.). Preplanning Disaster Triage for Pediatric Hospitals: TRAIN TOOLKIT. (Accessed 10/18/2017.)

The Triage by Resource Allocation for IN-patient (TRAIN) matrix is a tool for pediatric hospital disaster "pre-planning" and an in-patient triage system designed to facilitate evacuation in a major crisis. It categorizes pediatric inpatients according to their resource transportation needs. It can be implemented manually or within an electronic medical record.

IV. General Pediatric Resources for Healthcare Facilities

American Academy of Pediatrics. (n.d.). Newborn Screening during Emergencies. (Accessed 10/18/2017.)

This webpage contains information on newborn screening in emergencies and can assist pediatricians in expanding their office preparedness plans to include contingency planning for interruptions in the newborn screening process. In addition to other resources, there is a handout that details the newborn screening process and why such screening is important during emergencies.

American Academy of Pediatrics. (2013). Pediatric Preparedness Resource Kit.

This resource kit allows for pediatricians, public health leaders, and other pediatric care providers to assess what is already happening in their community or state, and help determine what needs to be done before an emergency or disaster. It promotes collaborative discussions and decision making about pediatric preparedness planning. It also contains a link to the Joint Policy Statement—Guidelines for Care of Children in the Emergency Department, as well as a Preparedness Checklist for Pediatric Practices.

American Academy of Pediatrics. (2013). Preparedness Checklist for Pediatric Practices.

This document offers checklists and steps that pediatricians or their practice staff can take to improve office preparedness. It allows for advanced preparedness planning that can mitigate risk, ensure financial stability, strengthen the medical home, and help promote the health of children in the community.

Children's National Health System. (2015). Pediatric Emergency Quick Reference Guide.

This free reference guide for Android or iOS was developed by physicians in the Children's National Health System Division of Emergency and Transport Medicine, and provides a quick reference for the vitals, equipment, and dosage guidelines for an emergency pediatric patient.

Committee on Pediatric Emergency Medicine. (2007). Preparation for Emergencies in the Offices of Pediatricians and Pediatric Primary Care Providers. Pediatrics. Volume 120 / Issue 1.

This resource addresses how pediatricians and pediatric primary care providers can prepare for emergencies when they become the entry point into the EMS system for a child.

Disaster Preparedness Advisory Council, Committee on Pediatric Emergency Medicine. (2015). Ensuring the Health of Children in Disasters. American Academy of Pediatrics. 136(5):e1407-e1417.

This policy statement addresses how pediatricians and others involved in the care and well-being of children can prepare for and mitigate the effects of disasters, encourage preparedness and resiliency among children and families and within communities, and ensure that children's needs, including those of children and youth with special healthcare needs, are not neglected in planning, response, and recovery efforts. It also contains a list of family disaster resources and provider education resources.

Heath, B.W., Coffey, J.S., Malone, P., et al. (2000). Pediatric Office Emergencies and Emergency Preparedness in a Small Rural State. Pediatrics. Volume 106 / Issue 6.

The authors of this study surveyed 37 primary care pediatric practices in the state of Vermont regarding office preparedness for emergencies and frequency of office emergencies. Results indicated that serious medical emergencies are rare events in the primary care pediatric office, occurring less than once per office per year. However, the most common emergency situations encountered are respiratory.

Hinton, C.F., Griese, S.E., Anderson, M.R., et al. (2015). CDC Grand Rounds: Addressing Preparedness Challenges for Children in Public Health Emergencies. Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. 64(35);972-974.

The authors discuss the integration of coordinated contributions from community-based healthcare providers, regional healthcare coalitions, state and local health departments, and federal agency initiatives necessary for an effective pediatric response to public health emergencies.

Loyola University Medical Center, Illinois Emergency Medical Services for Children. (2005). Pediatric Disaster Preparedness Guidelines.

This document was prepared by a multidisciplinary work group to help address the needs of children in any care setting, from acute care hospitals to community agencies serving children. This resource addresses the following: pediatric supplies, medication guidance, training resources, specific concerns for children with special health care needs in both community and institutional settings, staffing levels for pediatric patients, mental health needs, legal concerns, and security issues.

Markenson, D., and Redlener, I. (2007). Pediatric Preparedness for Disasters, Terrorism and Public Health Emergencies: A National Consensus Conference: Executive Summary and Final Report. Columbia University Academic Commons.

This document was developed following a 2003 conference and establishes the first national guidelines and recommendations for pediatric preparedness. These guidelines also served as the basis for discussion by the National Advisory Committee on Children and Terrorism.

Save the Children, U.S. Programs Domestic Emergencies Unit. (2007). The Unique Needs of Children in Emergencies: A Guide for the Inclusion of Children in Emergency Operations Plans.

This guide was created to help local and state emergency managers and coordinators in their efforts to include children in emergency planning.

V. General Pediatric Emergency Preparedness Videos, Webinars, and Training

Fargason, C., Johnston, C., and Wingate, M.S. (2014). Needs of Our Children: Pediatric Care Before, During and After Disasters. (Requires free registration.) South Central Preparedness and Emergency Response Learning Center.

This training provides information related to children's needs during emergency or disaster events from both a clinical care and a public health planning perspective. A brief overview of the needs of the pediatric population and the delivery system that specifically serves children, and experiences from recent disasters where resources for children were limited are discussed.

Federal Emergency Management Agency. (2010). IS-366: Planning for the Needs of Children in Disasters.

This 4-hour course provides guidance for emergency managers and implementers of children's programs to meet the unique needs that arise among children as a result of a disaster or emergency. At the conclusion of this course, students will be able to create, update, or revise an emergency operations plan for their community or organization to effectively address the unique needs of children in disasters. Printable versions of each lesson are available.

Krug, S. (2012). Disaster Preparedness: Are We Ready for Kids? (Requires Real Player or Windows Media Player to view.) Alabama Department of Public Health.

The speakers in this 90-minute webinar discuss how improved readiness can be achieved through collaboration between public health, emergency management leadership, and key pediatric care experts and stakeholders in the private sector. The target audience includes pediatricians, nurses, social workers, emergency medical response providers, healthcare providers, and disaster management personnel.

Peacock, G., Anderson, M., Chernak, E., et al. (2015). Addressing Preparedness Challenges for Children in Public Health Emergencies. Centers for Disease Control and Prevention.

Presenters discuss strategies to address the unique vulnerabilities of children in every stage of emergency planning. They also discuss the need for enhanced collaboration between public health professionals and pediatric care providers to improve the outcomes for children during emergencies.

Tennessee Emergency Medical Services for Children (TN EMSC). (n.d.) Pediatric Disaster Preparedness Educational Toolbox Online Courses. (Accessed 10/18/2017.)

This website provides several courses designed to help improve disaster response in the state of Tennessee. The courses are for families, and healthcare and other professionals who may be expected to respond in the event of large-scale disasters. Each course has a pediatric focus in keeping with the mission of TN EMSC, however much of the information applies equally well in non-pediatric situations. **NOTE**: Some of the videos on this website are also included in various ASPR TRACIE Topic Collections.

Various authors. (n.d.). Children in Disasters: PowerPoints. (Accessed 10/18/2017. Some presentations require login.) American Academy of Pediatrics.

This webpage provides links to presentations developed by American Academy of Pediatrics leaders for educational purposes. Members may review, use, or adapt these presentations as needed.

Yale New Haven Health System Center for Emergency Preparedness and Disaster Response. (n.d.). Small Victims, Big Challenges: Pediatric Triage, Treatment, and Recovery for Emergencies. (Accessed 6/5/2017. Requires login.)

This hour-long course introduces clinicians acting as first receivers to the unique challenges presented by pediatric disaster survivors.