ASPR TRACIE Technical Assistance Request

Requestor:
Requestor Phone:
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Request Receipt Date (by ASPR TRACIE): 27 June 2017
Response Date: 29 June 2017
Type of TA Request: Standard

Request:

[redacted] asked if ASPR TRACIE had guidance documents and other resources on hospital pharmaceutical stockpiling, specifically addressing how much stockpile and how long a hospital should have these pharmaceuticals.

Response:

The ASPR TRACIE team reviewed the existing Pharmacy Topic Collection for materials on hospital pharmaceutical stockpiling. We also reviewed previous responses to other similar technical assistance (TA) requests, which are listed below. Please note these TA responses are located on the ASPR TRACIE Information Exchange, which requires free registration. Contact ASPR TRACIE if you would like a PDF version.

- Hospital Disaster Supplies – This TA response document provides comments/ recommendations from the ASPR TRACIE Subject Matter Expert (SME) Cadre, and resources on hospital and healthcare supplies/ stockpiles.
- Hospital Stockpile – This TA response document includes resources, guidance, and best practices for hospitals regarding stockpiling, as well as comments from the ASPR TRACIE SME Cadre.

Resources and information gathered are listed in this document below. Section I includes the ASPR TRACIE SME Cadre comments and recommendations from the previous two TA responses mentioned above. Section II includes materials on hospital pharmacy stockpiling, and Section III provides other related resources.

NOTE: The new ASPR TRACIE Hospital Disaster Pharmacy Calculator tool is currently being developed and is expected to be released by the end of July 2017. This tool can be used to quantify hospital pharmacy supplies based on the hospital's size and role in the community. Based on the medication category and type, the calculator compares the amount of medications available to an estimate of that needed for 48 hours per patient and provides an assessment of surplus or deficit in that category.

I. ASPR TRACIE SME Cadre Comments/ Recommendations

- General guidance:
  - The planning for supplies needs to include both illnesses and injuries.
  - It is easier to calculate pharmaceuticals in terms of doses versus cases.
- For stockpiling disaster supplies:
  - The rule of thumb for hospital normal use is 96 hours and we typically add 20% surge use on top of that.
  - How much of one item is stockpiled depends on the material being stockpiled. Should know what the hospital uses on a daily basis, so during an emergency, ensure you have a stockpile of 3-4 days' worth of those items used daily/ regularly. Need to factor supply chain disruption, and other local stockpiles that can be used such as from the healthcare coalition (if applicable), state cache, other local caches from partner agencies, etc.

II. Hospital Pharmacy Stockpiling Resources

Adida, E , DeLaurentis, P. and Lawley, M. (2011). Hospital stockpiling for disaster planning. IIE Transactions, 43: 5, 348-362

The authors explore the issue with determining the stockpile quantity of a medical item at several hospitals. A game-theoretic framework is used to try and estimate how much each hospital would stockpile in a decentralized setting when minimizing its total cost. The following research questions are answered: What will be the hospital stockpile decisions in a decentralized and centralized decision-making settings? What are the public policy implications provided by the analytical solutions?

Association of State and Territorial Health Officials. (2012). Coping with and Mitigating the Effects of Shortages of Emergency Medications.

This guidance provides background into the scope and issues surrounding medication shortages and encourages use of a conventional, contingency, and crisis framework, which may be applied in disaster and non-disaster situations. It provides practical recommendations for hospital pharmacies and other stakeholders affected by medication shortages.

California Department of Health Services. (n.d.) Development of Standards and Guidelines for Healthcare Surge during Emergencies- Supplies, Pharmaceuticals, and Equipment.

This document includes the following: process for acquisition of supplies, pharmaceuticals, and equipment through conventional and unconventional sources to include guidance on types and quantities needed during surge; storage considerations; and staging and distribution, including liability, licensing, and regulatory implications. This tool helps create a baseline inventory for normal operations for 72-96 hours. Tool 3 on page 42 includes a detailed list of supplies and equipment that may be required during a surge.

DeLaurentis P., Adida, E., Lawley, M. (2009). Hospital Stockpiling for Influenza Pandemics with Pre-Determined Response Levels. Purdue University.

The authors review a regional network of hospitals that have mutual aid agreements to borrow or lend supplies from each other during a medical emergency to determine issues related to hospital stockpiling of critical supplies during influenza pandemic.

Healthcare Ready (formerly Rx Response). (2015). Stability of Refrigerated Drugs.

This chart details the stability of the most commonly dispensed refrigerated drug products (based on the U.S. top 200 prescription medications in 2014), and over-the-counter insulin products. The chart includes proper storage data, allowable temperature excursions and the length of time such excursions are permitted, and contact information for product manufacturers.

Hick, John. (n.d.). Drug and Pharmaceutical Supplies. Minnesota Department of Health. (See Attached).

This planning worksheet was used by the Minnesota Department of Health to determine the drug and pharmaceutical supplies needed for their hospitals. It includes a questionnaire for the planning phase and a list of required resources.

Hick, John. (2008). Sample Medical/ Surgical and PPE Supplies by Disaster Types & Category of Hospital Emergency Services. Minnesota Department of Health. (See Attached).

This planning tool provides guidance for hospitals on supplies they should have available based on different types of disasters: trauma, biologic, chemical, radiologic, and pediatric. The guidance is provided for hospital categories 1-4. Also includes core disaster formulary, pediatric formulary, and pediatric-specific emergency supply list.

State of Louisiana, Department of Health and Hospitals. (2008). HRSA Pharmaceutical Allocation.

This letter from the Pharmacy Director of the Department of Health and Hospitals/ Office of Public Health to Hospital Pharmacy Directors includes a calculation of the amount of antibiotic doses to be purchased to ensure they are readily available for patients, staff, and household contacts. It also includes a list of medications that should be considered by facilities.

III. Other Related Resources

Einav, S., Hick, J.L., Hanfling, D., Erstad, B., Toner, E., Branson, R. Kanter, R., Kissoon, N., Dichter, J., Devereaux, A., and Christian, M.D. (2014). Surge Capacity Logistics: Care of the Critically Ill and Injured During Pandemics and Disasters: CHEST Consensus Statement. Chest. 146(4_suppl):e17S-e43S.

The authors list 22 suggestions specific to surge capacity and mass critical care under the following topics: stockpiling of equipment, supplies, and pharmaceuticals; staff preparation and organization; patient flow and distribution; deployable critical care services; and using transportation assets to support surge response.

Rottman, S.J. (2008). Pharmaceuticals and Chronic Diseases in Disaster Preparedness. (Abstract only.) Prehospital and Disaster Medicine.

The authors conducted a study to identify the kinds of medications that might be needed during and after a disaster. They analyzed national ambulatory hospital data on the prescription medication needs of patients who visited emergency departments in non-disaster circumstances. Their findings can help pharmacies plan and stockpile medication.

Stergachis, A., Arnold, J., and Oberle, M. (2013). Creating Strong Partnerships: Local Health Departments and Pharmacy Work Together in Emergencies. (Requires free registration.) University of Washington, Northwest Center for Public Health Practice.

The speakers in this webinar discuss the importance of and tools for establishing partnerships between local health departments and healthcare organizations, such as pharmacies and hospitals, to dispense drugs, vaccines, and other medical countermeasures during public health emergencies. They address the roles of public health and pharmacy personnel with regards to emergency response, and share a novel mechanism for formalizing these relationships.

University of Washington, Northwest Center for Public Health Practice. (2013). Partnering for Medical Countermeasure Distribution in Emergencies.

This toolkit helps users work with key stakeholders to develop methods for the dispensing of medical countermeasures (e.g., antibiotics, antivirals, vaccines, and supplies) during public health emergencies. It includes multiple resources such as documents, videos, and slide sets that can be modified to meet individual needs during a variety of disasters.