

LESSON 5-6

PHARMACY

Lesson: Pharmacy

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Intended Audience of Learners

A broad range of health professionals who may work with the older adult population.

Competencies

This lesson supports learning related to the following competencies, with regard to *special considerations for the geriatric population in disasters in the pharmacy setting*:

Core Competencies and Subcompetencies from [Walsh L, Subbarao I, Gebbie K, et al. Core competencies for disaster medicine and public health. *Disaster Med Public Health Prep.* 2012;6\(1\):44-52. doi: 10.1001/dmp.2012.4.](#)

Core Competency 11.0 “Demonstrate knowledge of short- and long-term considerations for recovery of all ages, populations, and communities affected by a disaster or public health emergency.”

Learning Objectives

At the end of this lesson, the learner will be able to:

- 5-6.1 Describe the effects a disaster can have on medications and medical devices commonly used by the elderly population.
- 5-6.2 Describe the role of the pharmacy staff in caring for the elderly population in a disaster.
- 5-6.3 Describe the role of health professionals in assisting the pharmacy staff in caring for the elderly population in a disaster.

Estimated Time to Complete This Lesson

30 minutes

Content Outline

Module 5: Setting: Special considerations for older adults
Lesson 5-6: Pharmacy

Objective 5-6.1

- I. Describe the effects a disaster can have on medications and medical devices commonly used by the elderly population.
 - a. The continuity of medication therapy is a major problem for elderly in disaster settings. In the event of a disaster, it is crucial for these patients who commonly have comorbid conditions to have an adequate medication supply.¹ In past disaster events it was observed that those evacuees who did bring some medication often did not have enough to last throughout the evacuation process.² Educating these patients on how to prepare their emergency packs properly will relieve some of the burden from healthcare volunteers and medical teams so they can focus on more emergency situations. The medical teams that volunteer during these emergency events found that medication refills were among the top health and health-related issue at evacuation centers. The term *medications* is not limited to the pill form but may also include¹:
 - i. Routine medications
 - ii. List of allergies
 - iii. Medical records
 - iv. Devices needed for specific care
 - v. Devices needed for daily life
 - vi. Emergency medications
 - vii. Other health-related items
 - b. During the 1995 Earthquake in Japan, most elderly patients had obstacles to eating because they lost their dentures because the disaster occurred early in the morning. As healthcare professionals, it is our role to educate these patients on how to develop a proper medication pack to have during an emergency situation as recommended by the American Red Cross.³ Some patients may think that the answer is to create their own stockpile of medication. However, they should be educated on proper storage and disposal of expired medication. A good practice would be to encourage these patients to carry the emergency pack as they would their wallet or purse. It is possible that electricity may be interrupted, which limits the use of the electronic medical record. Patients should have an updated, comprehensive list of all current medications to ensure the continuity of therapies. It is imperative that the patient understands that disruption of their medication therapy can lead to serious adverse events, hospitalization, and even death.⁴

Objective 5-6.2

- II. Describe the role of the pharmacy staff in caring for the elderly population in a disaster.

- a. Health professionals who work in a pharmacy should realize that older adults might have difficulty understanding the importance of the disaster. As a result, the geriatric population has a higher likelihood of being less prepared than the average adult to deal with an event. Also, diminished hearing and vision can increase risk and difficulty in patients. Communications with loved ones and caregivers may be limited in disaster situations. This could cause multiple problems for the elderly population, because they may not be completely aware of the type or types of treatment they normally receive. With many elderly patients using prescription and nonprescription medications to treat a variety of medical conditions, access to medication and care may be extremely limited. Elderly patients are more vulnerable to disaster-related repercussions such as dehydration, hypothermia, hyperthermia, and infectious disease. This can severely affect frail elderly patients with acute and chronic medical conditions.
 - i. Pharmacist - The pharmacist in charge or appointed pharmacist should prepare for limited medication availability and the possibly increased need for therapeutic substitution. Because supply may be limited in a disaster, therapeutic substitution of the available supply of medication should be made. The patients should be counseled on any expected adverse effects. Because of the increased risk of polypharmacy during a disaster, the pharmacist must conduct a drug utilization review of the patient's medication to identify any potential duplicate or discontinued therapies.
 - ii. Pharmacy Technicians - The pharmacy technician provides the first line of communication in the process of receiving refills or ordering new medications during a disaster. The pharmacy technician is responsible for collecting all necessary information to identify the correct patient and the correct drug requested. In the event of limited refills, the technicians may offer to call the physician for refills.
- b. Common issues pertaining to elderly populations and disasters that the pharmacy staff members should consider planning for include the following:
 - i. There may be an inability to store certain medications properly. Medications such as insulin products are commonly used in the elderly population.
 - ii. The water supply may be inadequate for mixing solutions. Patients should be counseled on how to properly mix the medications if necessary.
 - iii. There may be an inability to sterilize medical devices. Maintaining a sterile environment may be difficult for patients requiring injections.

- iv. Patients should be counseled on how to properly dispose of damaged or expired medications.

Objective 5-6.3

- III. Describe the role of health professionals in assisting the pharmacy staff in caring for the elderly population in a disaster.
 - a. When dealing with elderly patients, one of the main things to take into consideration is dementia, which is a group of behavioral, cognitive, and emotional disorders.⁵ Signs of patients suffering from dementia include memory loss, difficulty communicating, paranoia, agitation, hallucinations, and disorientation to time and place.⁶ Elderly patients require special care, but those with dementia require even more careful treatment. Because you cannot depend on infrastructure to be available during an emergency, certain steps need to be taken beforehand to help ease a disaster situation.⁷
 - i. It is very important to communicate to elderly patients or their caregivers that they need to keep a copy of their conditions and medications (as well as the actual drugs) so that they can receive proper care in an emergency situation. These patients can benefit from using medication reminder devices such as pill sorters that sort by days and even up to dosage regimens of three times a day.
 - ii. Other important items for these patients and elderly in general are proof of insurance and personal identification. Patients with dementia may experience memory loss issues that can be worsened by the stress of a disaster.⁶

Suggested Learner Activities for Use in and Beyond the Classroom

1. Develop a template for patients to list their current medication therapy and medical devices.
2. Develop a protocol addressing emergency refills and refill authorization requests.
3. Develop a flyer or brochure with common therapeutic substitutions and adverse effects.
4. Develop a protocol for therapeutic substitution for the most commonly prescribed medications among the elderly.

Readings and Resources for the Learner

- Required
 - <http://www.cdc.gov/phpr/stockpile/stockpile.htm>
 - <https://www.fema.gov/faq-details/Medications-in-an-emergency-kit-1370032125843>

- Supplemental Resources
 - Dyer C, Festa NA, Cloyd B. *Recommendations for Best Practices in the Management of Elderly Disaster Victims*. Baylor College of Medicine. <https://www.bcm.edu/pdf/bestpractices.pdf>. Published 2012. Accessed February 6, 2015.
 - Marshall I, Matthews S. Disaster preparedness for the elderly: an analysis of international literature using symbolic interactionist perspective. *The Journal of Aging in Emerging Economies*. 2010;2;79-92.
 - Healthcare Ready website. <http://www.healthcareready.org/>. Accessed August 24, 2015.

Learner Assessment Strategies

1. Students should work with a partner, with one partner being a health professional who works in a pharmacy and the other being a health professional who works outside the pharmacy. They should create a disaster plan about pharmacy and geriatric patients, highlighting services the pharmacy will offer and special precautions that should be taken.

Readings and Resources for the Educators

- Required
 - None
- Supplemental Resources
 - None

Sources Cited in Preparing Outline and Activities Above

1. Ochi S, Hodgson S, Landeg O, et al. Medication supply for people evacuated during disasters. *J Evid Based Med*. 2015;8;39-41.
2. Brodie M, Weltzien E, Altman D, et al. Experiences of hurricane Katrina evacuees in Houston shelters: implications for future planning. *Am J Public Health*. 2006;96(8):1402-08.
3. Get a survival kit. American Red Cross website. <http://www.redcross.org/prepare/location/home-family/get-kit>. Accessed May 21, 2015.
4. Tomio J, Sato H, Mizumura H. Interruption of medication among outpatients with chronic conditions after a flood. *Prehosp Disaster Med*. 2010;25(1):42-50.
5. Chapman DP, Williams SM, Strine TW, Anda RF, Moore MJ. Dementia and its implications for public health. *Prev Chronic Dis* [serial online].

2006;3(2):A34. http://www.cdc.gov/pcd/issues/2006/apr/05_0167.htm. Accessed August 5, 2015.

6. Norris M. Assessing nursing homes' responses to Katrina. NPR website. <http://www.npr.org/templates/transcript/transcript.php?storyId=4854893>.
7. Ford ES, Mokdad AH, Link MW, et al. Chronic disease in health emergencies: in the eye of the hurricane. *Prev Chronic Dis*[serial online]. 2006;3(2). http://www.cdc.gov/pcd/issues/2006/Apr/05_0235.htm. Accessed August 5, 2015.
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