

Emergency/Disaster Plan for Food and Dining Services

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Emergency/Disaster Plan for Food and Dining Services

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Introduction

When a disaster strikes the outcome can be devastating. Most people who have survived a disaster agree that their chance for survival dramatically increased because they were prepared, knowledgeable, adaptable, and calm during their experience. This manual was written to help assist health care facilities survive a disaster safely, and to help them provide adequate food and water during and after an emergency event.

This document is intended to provide registered dietitian nutritionists (RDNs), nutrition and dietetic technicians, registered (NDTRs), certified dietary managers (CDMs), directors of food and nutrition services, and other food and nutrition services personnel with detailed information on planning for emergencies. This manual provides information on:

- How to be prepared for different types of disasters.
- How to train staff to be prepared for disasters.
- How to determine needed emergency supplies to have on hand.
- How to assure adequate and safe water supplies.

The manual contains:

- Sample policies and procedures.
- Safe food handling guidelines during a disaster.
- Sample emergency menus, recipes and supplies.

A disaster can strike anywhere and at any time. The key to successfully surviving and moving forward is planning in advance.

It is important to be familiar with the types of natural disasters that are common in different areas of the country. Hurricanes or snow emergencies usually allow for some preparation but some natural disasters such as earthquakes, tornados, or sudden flash floods come without much warning. Some disasters, including fires, terrorist attacks, or explosions can also occur unexpectedly. It is essential to have a plan of action that has been tested and evaluated and is ready to implement when a disaster strikes.

Because a disaster could happen at any time, it is imperative to have enough water and food in storage at all times. In the event of a power outage, contaminated water supply, or evacuation, food items should be as simple as possible to prepare and serve and water purification may be necessary.

In case of an unexpected disaster, take the following actions:

1. Remain calm.
2. Attend to anyone who needs immediate attention. If there are injuries sustained, advise staff where to receive medical attention.
3. Locate a working cell phone if phone lines are down.
4. Call 9-1-1 for assistance.
5. Contact the designated person in charge of emergencies in the department and/or facility to contact any and all appropriate authorities.
6. If immediate safety is in jeopardy, evacuate to a safer location.

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Recent Disasters in the United States

It is helpful to put disasters into perspective with some recent historical context. According to the National Fire Protection Association, U.S. fire departments responded to an estimated average of 5,650 structure fires in health care properties per year in 2009 to 2013. In 2009 to 2013, cooking was the leading cause of fires in all health care properties, accounting for 65% of fires. Almost half (46%) were at nursing homes, and almost one-quarter (21%) were in hospitals or hospices (1).

Natural Disasters

In the aftermath of the 2004-2005 hurricanes on the gulf coast, the U.S. Department of Health and Human Services Office of Inspector General evaluated emergency preparedness among area nursing facilities. According to their 2006 report, 94% of facilities nationwide met federal standards for emergency plans and 80% for sufficient training in 2004-2005 (2). A follow-up report released in 2012 (3) indicated that gaps continued to exist in emergency preparedness. In the follow-up report CMS was charged to revise the regulations for skilled nursing facilities to provide specific requirements for emergency readiness and training.

There are lessons to be learned with each disaster, and 2004-2005 were years to learn a lot. Within six weeks during August and September of 2004, four hurricanes battered Florida: Charley, Frances, Ivan and Jeanne. The storms had devastating effects. In 2005, hurricane season proved to be a major disaster for the states of Louisiana, Mississippi, Texas and Florida. Hurricanes Katrina and Rita hit the Gulf Coast in the summer and fall wreaking havoc, death and destruction in their wake. At the time, these two hurricanes were the most costly natural disasters in U.S. history – measured in human lives, and damaged and destroyed property.

Approximately one million people were ordered to evacuate the Houston/Galveston area. Freeways were jammed for hours stranding evacuees without needed food, water, gasoline and supplies. Frail, older adults evacuated from nursing homes sat on buses for up to 14 hours or more during the evacuation process. Many people were horrified to hear about a bus explosion that killed a number of assisted living residents trying to evacuate the area. Sadly, 34 nursing home residents who were not evacuated from a Louisiana nursing home died in the flooding.

Within a span of 12 days in September 2008, Category 2 Hurricanes Gustav and Ike made landfall in Cocodrie, Louisiana and Galveston Island, Texas. Hurricane Gustav forced the evacuation of 92 nursing homes in the coastal parishes of Louisiana. In March 2009, flooding of the Red River forced the evacuation of six nursing homes in North Dakota. Across the river in Minnesota, one nursing home was evacuated and the residents of another sheltered in place.

In 2011, a massive tornado outbreak hit the mid-western and southern U.S. spawning 358 tornadoes that devastated several cities and resulted in 348 deaths. In late 2012, severe flooding from Superstorm Sandy affected 24 states, including the entire eastern seaboard from Florida to Maine and west across the Appalachian Mountains to Michigan and Wisconsin, with particularly severe damage in New Jersey and New York.

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Superstorm Sandy's storm surge hit New York City on October 29, flooding streets, tunnels and subway lines and cutting power in and around the city. One hospital was evacuated due to loss of power.

In 2013, a sudden and unexpected ammonium nitrate explosion occurred in West Texas, killing 15 and injuring 160 people. The blast damaged the nearby West Rest Haven nursing home, and many residents were evacuated.

The spring and summer of 2017 brought major fires in the west, including Washington State, Oregon, and Montana. In the fall of 2017, fires in California claimed the lives of 17 people, as well as devastating property. People who fled had little warning and little time to evacuate.

In the summer of 2017, Hurricane Harvey created catastrophic events dumping approximately 27 trillion gallons (51 inches) of rain on Texas and Louisiana in 6 days. No one could have predicted the devastation: 72,000 people had to be rescued; 30,000 were in need of temporary shelter after the storm. People all over the country watched as nursing home residents sat in their wheelchairs waist deep in flood waters (<http://www.cnn.com/2017/08/27/us/harvey-impact-by-the-numbers-trnd/index.html>).

Hurricane Irma (H Irma) soon followed, breaking records for its size and force. At 70,000 square miles of storm force winds, it was larger than the 65,000 square miles of Florida; at 300 miles wide, it was double the width of the Florida peninsula. More than 20 million people in 3 states experienced at least 75 mile per hour winds with H Irma (at its peak, winds were 180 miles per hour) (<http://www.cnn.com/2017/09/06/weather/irma-hurricane-numbers-stats-trnd/index.html>). Sadly, once again, people all over the country watched the news as 8 nursing home residents (and later more) died of the effects of the extreme heat in the aftermath of the storm as large numbers of Florida residents were without power after the storm. This author learned firsthand what it was like to be an evacuee during H Irma.

In 2017 CMS issued a final rule to establish consistent emergency preparedness requirements for health care providers participating in Medicare and Medicaid, to increase patient safety during emergencies, and establish a more coordinated response to natural and man-made disasters. Refer to Chapter 2: Regulations Related to Emergency Preparedness on pages 10-24 for more information.

The enormity of these and other disasters involving tornadoes, flooding, mudslides, and large snow events take many by surprise. No matter how well prepared any healthcare facility is, there are many things that can't be predicted. However, these experiences can be used to learn how to cope with emergencies and how to be ready when disaster strikes.

Stories from Disaster Survivors

Food service includes a lot of paperwork - menus, recipes, production sheets, menu substitution logs, temperature logs, diet orders, meal counts, weekly flash reports,

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Day 1 Emergency Meal Plan - No Utilities

	REGULAR/NO ADDED SALT		MECHANICAL SOFT		PUREE		CARBOHYDRATE CONTROLLED		CARBOHYDRATE CONTROLLED PUREE	
B R E A K F A S T	Assorted Juice	6 oz	Assorted Juice	6 oz	Assorted Juice	6 oz	*Assorted Juice	6 oz	*Assorted Juice	6 oz
	Muffin	1	Soft Muffin, No Nuts	1	Hot Cereal	1 c	*Muffin or Toast	1	Cream of Wheat	1 c
	Dry Cereal	¾ c	Dry Cereal (soft)	¾ c	None		Dry Cereal	¾ c		
	Cottage Cheese (if available)	½ c	Cottage Cheese (if available)	½ c	Yogurt (smooth) (if available)	½ c	Cottage Cheese (if available)	½ c	*Yogurt (smooth) (if available)	½ c
	Bananas (if available) or Canned Fruit	¾ c	Bananas (if available) or Canned Fruit	¾ c	Applesauce, Smooth	¾ c	Bananas (if available) or SF Canned Fruit	¾ c	SF Applesauce, (smooth)	¾ c
Instant Breakfast	8 oz	Instant Breakfast	8 oz	Instant Breakfast	8 oz	SF Instant Breakfast	8 oz	SF Instant Breakfast	8 oz	
L U N C H	Canned Deviled Ham Spread	3 oz	Canned Deviled Ham Spread	3 oz	Pureed Canned Beef	#8s	Canned Deviled Ham Spread	3 oz	Pu Canned Beef	#8s
	Bread	2 sl	Bread	2 sl			Bread	2 sl		
	Canned 3 Bean Salad	¾ c	Canned 3 Bean Salad	¾ c	Pu Cnd Green Beans	#8+16s	Canned 3 Bean Salad	¾ c	Pu Cnd Green Beans	#8+16s
	Vegetable salad	¾ c	Soft Vegetable Salad	¾ c	Pu Canned Corn	#8+16s	Vegetable Salad	¾ c	Pu Canned Corn	#8+16s
	Canned Fruit	¾ c	Canned Fruit	¾ c	Pureed Canned Pears	#8+16s	SF Canned Fruit	¾ c	SF Pu Canned Pears	#8+16s
	Water	8 oz	Water	8 oz	Water	8 oz	Water	8 oz	Water	8 oz
	Milk	8 oz	Milk	8 oz	Milk	8 oz	Milk	8 oz	Milk	8 oz
D I N N E R	Canned Chicken Salad	3 oz	Canned Chicken Salad, (soft)	3 oz	Pureed Canned Chicken	#8s	Canned Chicken Salad	3 oz	Pu Canned Chicken	#8s
	Bread	2 sl	Bread	2 sl			Bread	2 sl		
	Cheese Puffs	1oz	Cheese Puffs	1 oz	Pu Canned Peaches	#8+16s	Cheese Puffs	1 oz	SF Pu Canned	#8+16s
	Canned Pickled Beets	¾ c	Canned Pickled Beets	¾ c	Pu Canned Beets	#8+16s	Canned Pickled Beets	¾ c	Pureed Canned Beets	#8+16s
	Mashed Potatoes	¾ c	Mashed Potatoes	¾ c	Mashed Potatoes	#8+16s	Mashed Potatoes	¾ c	Mashed Potatoes	¾ c
	Assorted Beverages	8 oz	Assorted Beverages	8 oz	Assorted Beverages	8 oz	SF Asst Beverages	8 oz	SF Asst Beverages	8 oz
	Nutritional Supplement	6-8 oz	Nutritional Supplement	6-8 oz	Nutr Supplement	6-8 oz	SF Nutr Supplement	6-8 oz	SF Nutr Supplement	6-8 oz
H S	Cereal Bar	1	Cereal Bar (soft)	1	Ready to Eat Pudding	½ c	Cereal Bar	1	SF Ready to Eat Pudding	6-8 oz
	Water	8 oz	Water	8 oz	Nutritional Supplement	8 oz	Water	8	SF Shelf Stable Supplement	½ c

SF = Sugar Free CCHO = Consistent Carbohydrate Pu = Pureed *Low in Simple Sugars Note: All liquids offered must be thickened to the ordered consistency

Note: Goal is a minimum of 2½ cups of vegetables and 2 cups fruit daily as per ChooseMyPlate guidelines if possible.

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Water Requirements

Policy:

In the event of a loss of utilities, water may be unavailable, or if available, it may be contaminated and in need of purification. In either case, the food and nutrition services department will need to have an adequate supply of water on hand. This water will be used for cooking, cleaning, drinking, and food preparation. Recognizing that suppliers may be unable to deliver immediately, a three to seven (3 to 7) day emergency supply of water is recommended. Water should be stored in a cool, dry area away from heat sources.

Procedure:

1. A minimum 3 day supply of water, and preferably a 7 day supply of water, should be available. The quantity of water that is needed can be determined by the following calculations:

Suggested Water Requirements:

Type of Water	Amount Needed	Formula	Example (7 day supply) for 100 People
Drinking Water	2 quarts (0.5 gallon) per person per day**	# of people* X 0.5** gallons X 3 days (or 7 days) = gallons of drinking water needed	100 people X 0.5 gallon X 7 days = 350 gallons of drinking water
All-purpose Water	1 gallon per person per day	# of people* X 1 gallon X 3 days (or 7 days) = gallons of all-purpose water needed	100 people X 1 gallon X 7 days = 700 gallons of all-purpose water

*Include residents/patients, staff, visitors, evacuees and rescue workers as appropriate in estimate of water needed. Include nursing needs as necessary (medication pass, etc.). A good estimate is number of residents/patients plus 50 to 100%.

**Hot climates can double the amount of fluid needed for drinking. If located in a hot climate area, increase the amount of drinking water to 1 gallon per person per day. Adjust the amount of all-purpose water accordingly as well. (Again, add extra as noted above in *.)

Note: Please check state regulations for specific quantities of water required.

Use of Stored Water Supplies

1. Bottled or distilled water for emergency purposes should be stored and labeled "FOR EMERGENCY USE ONLY".
2. The nursing department may want to designate a specific amount for nursing procedures such as flushes, sterile dressing uses, or any other nursing procedure needing distilled or sterile water.
3. Staff should be instructed not to use the emergency water supply for any purpose other than an emergency situation.
4. During an emergency, staff will be provided with bottled or canned beverages for drinking.

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Keeping Water Supplies Fresh

1. Rotate or discard water according to the manufacturer's expiration date on the container, then replace emergency water accordingly. Bottled water is expensive so a written plan to use, rotate and replace the water should be part of the disaster plan.

Preparing/Using Water Containers

1. Use food grade water storage containers made specifically for water storage.
2. Clean and sanitize containers prior to use.
3. Fill water containers with tap water from a source that has been commercially treated with chlorine from a water utility.
 - If the water is from a source not treated with chlorine (i.e. well water), add 2 drops non-scented household chlorine bleach to each 1 gallon of water being careful not to contaminate the inside of the cup.
4. Tightly seal the container (being careful not to contaminate the inside of the cup) and store for later use.
5. Date the outside of the container clearly.
6. Store in a cool dark place.

Source:

Federal Emergency Management Agency. Ready.gov Web site. Water. Updated 4/9/14. <http://www.ready.gov/water>. Accessed May 25, 2017.

How to Turn Off the Main Water Valves

Water already inside the facility will need to be protected from contamination in the event of broken water or sewage lines, or if local officials advise there is a problem. To close the incoming water source, locate the incoming valve and turn it to the closed position. Be sure key staff members know how to perform this important procedure.

1. To use the water in the pipes, let air into the plumbing by turning on the faucet at the highest level. A small amount of water will trickle out. Then obtain water from the lowest faucet in the facility.
2. To use the water in the hot-water tank, ask for assistance from the maintenance department as needed.
 - Be sure the electricity or gas is off.
 - Open the drain at the bottom of the tank.
 - Start the water flowing by turning off the water intake valve at the tank and turning on the hot water faucet.
 - Do not turn on the gas or electricity when the tank is empty.
 - Refill the tank before turning the gas or electricity back on. If the gas is turned off, a professional will need to turn it back on.