The Roles and Experiences of Dietitians in Federal Shelters for Special Needs Residents*

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Introduction:

The hurricane season of 2005 will be remembered for the devastation it caused and the lives it claimed. Many officers of the United States Public Health Service Commissioned Corps (USPHS) provided heroic care for the victims of this hurricane. As the response continued in the Gulf, Hurricane Rita was becoming a new threat and was expected to make landfall along the Texas shoreline. In response to Hurricane Rita, the Office of Force Readiness and Deployment of the USPHS deployed eight dietitians to College Station, Texas where one of the nation's first federal shelters for special needs residents was established. The dietitians functioned in various roles including clinical dietitian, general health educator, and liaison officer. Upon arrival some of the dietitians were reassigned to work on shelter assessment teams (SATs) to assess the areas with direct damage from the hurricane. The remaining six dietitians worked alongside other medical professionals caring for evacuees with special needs from hospitals and nursing homes that had been evacuated. This 192 member medical team functioned as members of the Secretary's Emergency Response Team (SERT) by providing public health and medical services. Dietitians were an integral part of this medical team through use of their unique training and knowledge which helped to ensure that the nutritional needs of evacuees were met.

College Station, Texas Clinical Experience:

At College Station the dietitians found over three hundred residents with conditions such as diabetes, heart disease, hypertension, and dysphagia in addition to three hundred family members and staff. This special needs shelter had a variety of residents from nursing homes, hospitals, and chronically ill home-bound individuals. The initial goal for the dietitians was assessment of tube feeding residents and other high risk individuals and development of a procedure to assess and provide intervention for a large population.

Nutritional assessments were challenging because there was very little medical history to review. Residents had been rapidly evacuated from their locations and only the basic information was sent with them. Most residents had only names, birth dates, diagnosis, and a brief medical history in their medical folders. Some tube feeding residents had shortages of their normal tube feeding formula which required assessment by the dietitian to determine if there was an appropriate tube feeding alternative that was already available in the shelter. In some cases, area hospitals donated enteral nutrition products. Faced to work with limited data, dietitians had to use their best professional judgment in each

case. A calculator with nutrition software and measuring tapes (for height or knee-height determination) proved to be helpful tools. It was beneficial to have a variety of reference books on nutritional support for adult and pediatric age groups. In all, dietitians assessed and documented on many residents and provided recommendations for many consultations.

Since there was such a large resident population that reached over four hundred, the dietitians found it challenging to establish an effective screening tool. It was beneficial to identify a meeting location where dietitians could assemble and organize their strategy at the change of shift. During this short meeting time the dietitians were able to obtain and review resident rosters. Perhaps the most effective tool was simply rounding and observing the different resident locations and communicating with the nursing staff. This provided valuable feedback that was used to better screen residents.

College Station, Texas Food Service/Food Safety Experience:

The dietitians were given autonomy by their commanding officer to lead in the food service area. The initial goal from a food service/food safety perspective was possession of an adequate supply of food and water that could be delivered in a safe manner. Since these needs were met by the University and other donating organizations, it was then appropriate to initiate appropriate texture modifications and, as needed, dietary restrictions. The staff had set-up a classroom within the shelter as a way to store and distribute dry goods and food. The cooked meals were catered by area restaurants on the weekend and by the University's central kitchen during the week. The food, however, was not texture modified for patients requiring texture modified diets. The food selections could also be improved to help better serve individuals with diabetes and hypertension. The dietitians were able to work with the University staff to improve the nutritional content of the food. They were able to secure healthier options of fruits and vegetables to provide as part of the special diets such as renal, low sodium, low fat, high calorie/protein, and diabetic meals. Dietitians also obtained blenders from the nursing home staff that were used to produce puree and mechanical soft meals. Over 160 meals including texturally altered meals were developed and assembled by the dietitians. These meals contributed to more healthful and tolerable options for the residents.

Food safety was another concern throughout the deployment. Meals were prepared offsite and transported in a refrigerated truck or in heated carts. A refrigerated truck remained on premises in order to store leftover items for use at the next meal. While gloves and hairnets were used to prevent food contamination, food thermometers remained unavailable. On future deployments it is recommended that a supply of food thermometers be obtained where food is served to ensure safe food distribution. The use of institutional sanitizing solutions is also recommended for sanitizing utensils and dishes used to prepare and serve food. In the future it would be helpful to have these items in the Centers for Disease and Control (CDC) push packs.

In order to assess and provide appropriate nutritional interventions for this large resident population, the dietitians worked as a team and depended on the nursing staff to supply information about the resident's needs initially. These methods worked well and helped in the assembly of lists of residents requiring special diets that were used during meal preparation. It was helpful to have resource books on food production and food safety. In all, there were four dietitians working days and two working nights.

This federal medical shelter for special needs residents remained opened for about seven days. Residents were able to return to their nursing homes, hospitals, and homes after clearance was provided by the individual counties in areas that were evacuated prior to the hurricane. In College Station, Texas six dietitians provided nutritional care, food service, and served as experts on food safety.

Waco, Texas Clinical Experience:

Following completion of the College Station mission, the same dietitians were transferred to Marlin and Waco, Texas where two new federal shelters and a triage location were established. The team worked to set up these federal shelters in abandoned Veterans Affairs hospital buildings. Within hours of arriving at these buildings the shelters opened its doors to the first special needs patients.

The acuity level of residents at the Waco VA was lower than that seen in College Station. A large number of residents had mental health issues such as Alzheimer's and Schizophrenia. Other residents had chronic medical conditions such as heart disease, diabetes, obesity, and COPD. Many of the shelter occupants were family members of individuals with special needs and required no medical attention.

Between meals, the dietitians made rounds throughout the facility to take inventory of new residents and their nutritional needs. Nutritional assessments and interventions were completed for individuals with diabetes, infants, and a variety of other patients. It was challenging to keep up with new shelter residents without an accurate system for keeping track of new admissions and discharges. It was also challenging to ensure that individuals with special dietary needs were receiving the appropriate diet because many shelter residents were able to pass through the cafeteria line to pick their meals up. For confidentiality reasons, the dietitians could not provide dietary guidance for individuals passing through the line. In an effort to control carbohydrates and sodium for the more than thirty individuals who required these dietary restrictions, foods and standard serving sizes were used to make every meal appropriate for a low sodium/diabetic diet, which is healthful for all.

Waco, Texas Food Service Experience:

While patients had fewer nutritional needs at this facility, just providing the basic necessities of food and water proved difficult and the main focus of the dietitians quickly became procuring food and the means to safely store it. The Waco VA compound was very large and had other buildings on campus that housed mental health patients. Food for these patients was made at a satellite facility in Temple, Texas. Normally, the food is transported to the Waco, VA in refrigerated trucks and then re-thermalized in special food carts. There is a small kitchen at the Waco VA facility, but there is no working stove or oven and no food is prepared in the kitchen. The abandoned building that the shelter was set up in had no working refrigerators, no microwaves, and no blenders. All of the meals provided by the Temple VA were cold bag meals consisting of a sandwich, juice, fruit, cookies, and potato chips. Although the VA system agreed to provide meals for shelter occupants and staff, they were overwhelmed with the task and it was simply not feasible for them to provide hot, nutritious meals.

The day that the federal shelter in Waco opened, the three dietitians at the Waco site worked to procure 1000 bottles of water and they also worked to clean what was once a kitchen and obtain refrigerators, microwaves, blenders, a steam table, and a cold table. Within days after the shelter opened the room that once sat empty and dirty had been transformed into a working kitchen with a trayline, three refrigerators, a microwave, and a working sink. Two dining areas with tables and chairs were also set up so that residents and staff could eat their meals in a central location.

At Waco the dietitians served food to some of the shelter occupants. Meal times were established and residents formed lines outside of the new cafeteria. The work of the dietitians revolved around meal times. Two to three days after the shelter in Waco was set up, two more USPHS dietitians arrived and the following day two VA dietitians and one VA dietetic technician arrived. With the added staff, we were able to deliver food from door to door throughout the facility to bring food to individuals who were unable to come to the cafeteria to get their food. Three other nourishment areas were also set up on two of the floors in the shelter so that residents and staff could pick up snacks between meals.

While shelter residents were grateful to have food and water provided for them, they quickly tired of eating the same cold meals three times per day. The USPHS dietitians worked with supervisory dietitians at the VA in Waco and Temple to draft the specifications for a contract to provide three hot meals in addition to snacks and box meals for over 1500 meals per day. After four days at the Waco VA facility, the dietitians were able to procure a hot breakfast prepared by the on-site commercial “canteen”. Two days later, the dietitians were able to get a local restaurant to provide a catered dinner meal as well. In the meantime, several caterers were bidding on the contract created by the dietitians. Finally, the day that the USPHS completed the mission in Waco,

regular hot meals and snacks were provided for all staff and residents of the facility.

Marlin, Texas Experience:

While the Waco and Marlin federal shelters had some similarities, there were also many differences. The following section outlines some of the duties, challenges, and recommendations from the three dietitians at the Marlin VA federal shelter and the dietitian at the port of entry triage location in Waco.

The dietitian's duties included regular communication with VA administration on site and at the Temple, Texas headquarters in order to secure needed food, equipment, and enteral nutrition supplies. They also designated and set-up community dining rooms, nutrition stations and staff lounges with tables and chairs and other supplies as needed. The Marlin dietitians deemed it necessary to have two dietitians work the day shift and one dietitian work the night shift. On the day shift, one dietitian worked on logistics of the mission and the other conducted needs assessments of residents and staff. The night dietitian managed some clinical care of residents and assisted staff with other nursing and ancillary tasks. All dietitians managed to run food service operations for three meals and an evening snack for residents. They monitored residents' medical histories and provided modified meals when possible. The dietitians worked with the USPHS command and logistics to acquire necessary nutrition supplies for residents with special needs. At times personal cell phones were used to communicate with VA staff and potential food vendors for arrangement of meals for residents and staff. Other duties included orienting new staff to the facility, purchasing supplies for residents from stores when the VA was unable to provide them, and monitoring the safety of the food in accordance with the first in first out (FIFO) method of food storage and appropriate temperature monitoring.

The dietitian's challenges focused around using a facility that had been closed for three years prior to the arrival of the USPHS. The main kitchen was in the process of being demolished. It had two large walk-in refrigerators and one large walk-in freezer which were operational. The water system had not been purged and the chlorine levels were not suitable for human consumption, therefore bottled water needed to be procured for drinking. There were no means to prepare, hold and dispense any hot foods or to clean and sanitize surfaces and equipment used for food preparation. Communication was hindered because no phone, paging or computer systems were available. The food supply and equipment were limited and not appropriate for special diets. Much like the situation encountered in Waco, the cold breakfast items, sack meals and snacks were monotonous, unbalanced and of limited variety. They were not appropriate for therapeutic diets, such as diabetic and cardiovascular dietary needs. Initially, meals supplied by the VA system were not to be provided beyond seventy-two hours of USPHS' arrival to Marlin. There were no

local alternatives available under short notice and during weekend days in a very small town.

The experience was very beneficial and one that the team will remember for the rest of their lives. Although, the experience was a memorable one, there are steps that should be taken to ensure that missions in the future run more smoothly. The team learned that it is very important to have a chief dietitian in charge of overseeing clinical and food service duties. If a chief dietitian is not designated, then the most senior officer in the group or an individual who can lead effectively should be considered. Identification of one clinical dietitian and one food service dietitian per shift for up to a team of one hundred USPHS officers would be helpful.

Important recommendations for future deployments are listed below.

Dietitian Recommendations:

- Grant the chief dietitian with procurement authority to purchase emergency food, supplies, and necessary equipment.
- Include food thermometers, hairnets, sanitizing products, serving utensils, and some nutritional supplements as part of the push packs.
- A basic equipment list should be determined that would help provide necessary items for food production.
- Assign a car to the group to facilitate transportation and acquisition of essential supplies when necessary.
- Obtain cell phones or blackberries to aid with communication among members of the teams.
- Include copies of senior staff and chief category officers contact information in case of emergency.
- Communicate the needs of residents and staff effectively through the chain of command and/or administration.
- Bring reference resources, a calculator, measuring tools, surgical gloves, hairnets, and food thermometers.
- Schedule a time to exchange patient reports at change of shift.
- Obtain a copy of the resident and staff census each day.
- Assign appropriate duties to dietitians on the team based on expertise and experience.
- Create a buddy system so someone always knows where you are while in public locations.
- Encourage initiative and foster teamwork.
- Be prepared for anything by packing according to suggestions from the OFRD prepared lists.
- Keep the USPHS mission as priority during deployments.

Conclusion:

At the federal shelters in College Station, Waco, and Marlin, Texas, along with the triage location in Waco the dietitians of the USPHS played a key role in procuring food and water for staff and residents in these facilities. They were able to significantly improve the nutritional content of the food served. They also monitored food safety to prevent foodborne illness or the spread of disease. They worked to identify individuals with nutritional needs and to provide appropriate medical nutrition therapy for these individuals. Finally, in an uncertain environment amid great personal loss, the dietitians were able to have a beneficial impact and improve morale for residents and staff members working long hours to take care of those in need. It is clear that dietitians are extremely important to the mission of the USPHS and should be included in each and every deployment.

***** Please note that a portion of this article is planned to be published in the April 2006 Commissioned Officers Association Frontline issue. It may also be included as part of a future book by the Commissioned Officers Association.