Building a Regulatory-Compliant Emergency Nutrition Plan

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Are You Prepared?
Building a regulatory-compliant disaster nutrition plan

- **Objectives**
  - All-hazards approach to disaster meal planning
  - Dietary trends and best practices
  - Federal regulations
  - State regulations
  - Emergency meal options
  - Water storage options
  - UC Davis Medical Center panel will discuss their transition to a shelf-stable disaster plan
Major Disaster Declarations

- 2005 = 48
- 2006 = 52
- 2007 = 63
- 2008 = 75
- 2009 = 59
- 2010 = 81
- 2011 = 99
- 2012 = 47
- 2013 = 62
- 2014 = 45
- 2015 = 20 to date
12 highlighted states have an active disaster

As of Wednesday, Sept. 17, 2014

34 highlighted states have an active disaster

As of Wednesday, Sept. 17, 2014
Types of Disasters

- Plan to address potential disaster needs: *All-Hazards approach*
  - Fire or smoke
  - Severe weather
  - Loss of power
  - Earthquake
  - Explosion
  - Bomb threats
  - Armed individuals
  - Gas leak
  - Loss of heat
  - Missing resident
  - Loss of normal water supply

Types of Disasters (cont.)

- Wildfires
- Economic disruption
- Bioterrorism
- Civil unrest
- Construction failures
You Can Be Ready

- Plan
- Prepare
- Educate
- Practice

Plan and Educate

- Staff
- Volunteers
**Best Practices and Recommendations**

Guidelines from the Centers for Medicare & Medicaid Services (CMS)

1. Emergency supplies are on-site and rotated every 6 months - 1 year
2. Emergency menu has a nutrient analysis
3. Posted emergency policy and procedures
4. Yearly all staff in-service on emergency plan
5. Additional recommendations:
   - Have phone numbers available for the Red Cross, community emergency services.
   - Post evacuation route and floor plans. Place a copy with your plan in case the location is destroyed during the disaster.

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**Meet the Regulations**

- Regulatory requirements are subject to change. Be current on requirements for your:
  - City
  - County
  - State
Meet the Regulations (cont.)

- The Joint Commission (TJC)
- CMS
- CMS Proposed Rule
- California Title 22
- CDPH

Meet Hospital Regulatory Requirements

- The Joint Commission on Accreditation
  - 96-hour sustainability plan for emergency meals and water
    - Requires a detailed resource inventory
    - Plan must make provisions for:
      - Patients
      - Staff
      - Surge
    - Must in-service your plan annually
The Joint Commission Standards

- **Standard EM.01.01.01 – Planning Activities**
  - Organization keeps a documented inventory of the resources and assets it has on-site that may be needed during an emergency, including, but not limited to, personal protective equipment, water, fuel and medical, surgical and medication-related resources, and assets.

- **Standard EM.02.02.09 – Managing Utilities**
  - "As part of its emergency operations plan, the organization identifies alternative means of providing water needed for consumption and essential care activities ..."

- **Standard EM.02.02.11 – Managing Patients**
  - Discusses how the organization will manage a potential increase in demand for clinical services for vulnerable populations.

The Joint Commission Standards (cont.)

- **Standard TJC 02.01.01.3 – The Emergency Operation Plan**
  - Identifies the hospital’s capabilities and establishes response procedures for when the hospital cannot be supported by the local community in the hospital’s efforts to provide communications, resources and assets, security and safety, staff, utilities or patient care for at least 96 hours. Note: Hospitals are not required to stockpile supplies to last for 96 hours of operation.

- **Standards EM.03.01.01 & EM.03.01.03 – Effectiveness**
  - The organization conducts an annual review of its risk, hazards and potential emergencies as defined in its hazard vulnerability analysis.
The organization must have detailed written plans and procedures to meet all potential emergencies and disasters, such as fire, severe weather and missing residents.

The organization must train all employees in emergency procedures when they begin to work in the facility, periodically review the procedures with existing staff and carry out unannounced staff drills using those procedures.

A-0620 Interpretive Guidelines § 482.28(a):

The service director must be a full-time employee who has been granted the authority and delegated responsibility by the hospital’s governing body and medical staff for the operation of the dietary services. This authority and delegated responsibility includes the daily management of the service, implementing training programs for dietary staff, and assuring that established policies and procedures are maintained that address at least the following: emergency food supplies.

A-0701 Interpretive Guidelines § 482.41(a):

Specifies that supplies must be maintained to ensure an acceptable level of safety, and makes a distinction between supplies needed on a day-to-day basis and supplies that are likely to be needed during an emergency.
A-0701 Interpretive Guidelines § 482.41(a)

- The hospital must develop and implement a comprehensive plan to ensure that the safety and well-being of patients are assured during emergency situations and coordinate with federal, state and local emergency preparedness and health authorities to identify likely risks for their area (e.g., natural disasters, bioterrorism threats, disruption of utilities such as water, sewer, electrical communications, fuel, nuclear accidents, industrial accidents and other likely mass casualties, etc.), and to develop appropriate responses that will assure the safety and well-being of patients.

A-0701 Interpretive Guidelines § 482.41(a) (continued)

- The following issues should be considered when developing comprehensive emergency plans (modified to highlight dietary requirements):
  - The special needs of patient populations treated at the hospital (e.g., patients with psychiatric diagnoses, patients on special diets, newborns, etc.)
  - Security of supplies from misappropriation
  - Pharmaceuticals, food, other supplies and equipment that may be needed during emergency/disaster situations
A-0701 Interpretive Guidelines § 482.41(a) (continued)

The following issues should be considered when developing comprehensive emergency plans (modified to highlight dietary requirements):

- Qualifications and training needed by personnel – including health care staff, security staff and maintenance staff – to implement and carry out emergency procedures
- Identification, availability and notification of personnel that are needed to implement and carry out the hospital’s emergency plans, and identification of community resources, including lines of communication, and names and contact information for community emergency preparedness coordinators and responders
- Provisions if gas, water, electricity supply is shut off to the community
CMS Emergency Preparedness Checklist (cont.)

- **Analyze Each Hazard:** Analyze the specific vulnerabilities of the facility and determine the following actions for each identified hazard:
  - Specific actions to be taken for the hazard
  - Identified key staff responsible for executing plan
  - Staffing requirements and defined staff responsibilities
  - Identification and maintenance of sufficient supplies and equipment to sustain operations and deliver care and services for 3-10 days, based on each facility’s assessment of their hazard vulnerabilities. (Following experiences from Hurricane Katrina, it is generally felt that previous recommendations of 72 hours may no longer be sufficient during some wide-scale disasters. However, this recommendation can be achieved by maintaining 72-hours of supplies on hand, and holding agreements with suppliers for the remaining days.)
  - Communication procedures to receive emergency warning/alerts, and for communication with staff, families, individuals receiving care, before, during and after the emergency
  - Designate critical staff, providing for other staff and volunteer coverage and meeting staff needs, including transportation and sheltering critical staff members’ family

CMS Proposed Rule

- **The proposed rule would require participating providers and suppliers to meet these four standards:**
  - Emergency plan — based on a risk assessment, develop an emergency plan using an all-hazards approach focusing on capacities and capabilities
  - Policies and procedures — develop and implement policies and procedures based on the plan and risk assessment
  - Communication plan — develop and maintain a communication plan that complies with both federal and state law. Patient care must be well-coordinated within the facility, across health care providers, and with state and local public health departments and emergency systems
  - Training and testing program — develop and maintain training and testing programs, including initial and annual trainings, conducting drills and exercises, or participate in an actual incident that tests the plan
Would require that facilities provide for subsistence needs for staff and patients, whether they evacuate or shelter in place, including but not limited to, food; water; sewage and waste disposal; non-medical supplies; alternate sources of energy for the provision of electrical power, the maintenance of temperatures to protect patient health and safety, and for the safe and sanitary storage of such provisions; gas; emergency lights; fire detection; and extinguishing and alarm systems.

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All-hazards approach to disaster meal planning

These written procedures should include plans for the availability of:

- Basic utilities and supplies
- Food – must consider special needs of the patients/residents/clients and mirror the nutritional adequacy of the meals routinely served at the facilities
  - Age (e.g., pediatrics)
  - Therapeutic diet (e.g., renal, diabetic)
  - Mechanically altered diets (e.g., mechanically chopped, puree)
- Water

Disaster menu plans should be mobilized in the event of the lack of essential utilities (e.g., gas, electricity, water) and can be easily served by disaster response personnel.
California Title 22

- **Section 70277**
  - Specifies that at least a one-week (7 days) supply of staple foods (nonperishable) and two-day supply of perishable food shall be maintained on the premises. These food supplies are to be appropriate to meet the requirements of the menu and interpreted to mean to meet patient dietary needs and restrictions (e.g., regular, low sodium, liquid, diabetic, Infant, etc.).

- **Section 70741**
  - Further specifies that each hospital shall have a disaster and mass casualty program that includes provisions for the availability of adequate basic utilities and supplies, including gas, water, food and essential medical and supportive materials. As each hospital's services and situation are different, the definition of adequate is subject to those differences.

California Hospital Association
Emergency Food Supply Planning Guidance & Toolkit

- Created by an interdisciplinary team of health care professionals to guide hospitals in planning and navigating the regulations
  - Includes:
    - Regulatory references
    - Sample planning calculations
    - Resources
### Estimating Population to be Served (who hospital will feed)

<table>
<thead>
<tr>
<th>Assumption Number</th>
<th>Staffed Hospital Beds</th>
<th>Licensed Hospital Beds (% of Total)</th>
<th>Essential Staff Ratio to Patients</th>
<th>Total Emergency/Surge Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Basic Needs (For Inpatients)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>B. Surge Targets: Inpatient - Emergency Department</td>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Surge Targets: Optional Populations to Be Fed</td>
<td></td>
<td>0</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

#### Ambulatory Care

- Ambulatory Surgery
- Infusion
- Dialysis
- Other (Identify)
- Ambulatory Care Staff Ratios

- Staff Family/Dependent Ratios (e.g., 1 per staff)
- Visitors (e.g., 30 per patient)
- Rooming In Patient Family Members (e.g., pediatrics, ICU, OB)
- Physicians - Hospital (ED, hospitalist, Rad, Intensives)
- Physicians
- Volunteers (e.g., 10 per patient)
- Others (Identify set ratio to patients)
- Total Others

#### D. Surge - Emergency Planning Population

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Total Patients</th>
<th>Total Staff</th>
<th>Total Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff Family/Dependent Ratios</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visitors</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rooming In Patient Family Members</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians - Hospital (ED, hospitalist, Rad, Intensives)</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteers</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Patient Meal Requirement Assumptions

#### A. Patient Nutritional Needs per Day

<table>
<thead>
<tr>
<th>Age/Stage</th>
<th>% of Total</th>
<th>Number</th>
<th>Calories</th>
<th>Protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (2-12)</td>
<td>4%</td>
<td>2,489</td>
<td>1,400</td>
<td>31</td>
</tr>
<tr>
<td>Pregnant/Parturiting</td>
<td>5%</td>
<td>18</td>
<td>2,000</td>
<td>71</td>
</tr>
<tr>
<td>Infants (0-1)</td>
<td>8%</td>
<td>328</td>
<td>1,800</td>
<td>54</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>335</td>
<td>3,778</td>
<td>129</td>
</tr>
</tbody>
</table>

#### B. Patient Requirements - Meal Type (% must add to 100%)

<table>
<thead>
<tr>
<th>Group</th>
<th>% of Total</th>
<th>Number</th>
<th>Common</th>
<th>Meal Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic</td>
<td>12%</td>
<td>67</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Low Sodium/Low Calorie</td>
<td>12%</td>
<td>67</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Fluid Fluid</td>
<td>9%</td>
<td>51</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Renal</td>
<td>2%</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>335</td>
<td>335</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Emergency Food Plans should address how patient menu requirements for each category of patients will be met from emergency food supplies. If WICs will be used, then describe how patient needs will be accommodated (e.g., ground, puréed, etc.)
The Challenges

Who Will You Be Serving?

- Patients
- Residents
- Staff
- Volunteers
- Community
Where Will You Be Serving From?

Considerations in Emergency Meal Options

- Care quality
- Passing survey
- Storage space
- Saving money
Considerations in Emergency Meal Options (cont.)

1. Can you meet the needs of therapeutic diets?
   - Renal
   - Low sodium
   - Diabetic
   - Heart healthy

2. Can you meet the needs of altered textures?

3. Can your food plan be safely implemented?
   - Time as a public health control, pre-cooked
   - Temperature as a public health control, traditional

4. Do you have enough to meet the needs of:
   - Residents
   - Staff
   - Visitors
   - Surge potential

5. Is the plan easy to implement?
   - Utilities disrupted

Pre-Survey Compliance Assessment

- Does facility have a written emergency nutrition plan?

- Are you confident the plan will pass survey?

- Does facility have a complete emergency meal inventory?

- Does facility have emergency water?

- Does your plan include patients, staff, visitors and surge potential?
Hidden Costs of Emergency Preparedness

- **Direct Cost**
  - Food cost
  - Storeroom shelves, locking cage or racks

- **Indirect Cost (program-dependent)**
  - Man hours to inventory monthly
  - Man hours to order and reorder
  - Man hours to rotate
  - Emergency preparedness training

- **Potential Cost**
  - Survey infractions
    - Case study
    - Public relations

When to Use the Plan

- **Evaluate emergency**
  - Disaster vs. emergency
  - Use existing menu whenever possible

- **Inventory and use perishable foods first**
1. Traditional canned supplies
2. MREs (meal, ready-to-eat)
3. Emergency food bars
4. Liquid supplements
5. Dehydrated and freeze-dried meals

What’s to Eat? (cont.)

Traditional Food Supply

- Sandwiches
- Soup and crackers
- Cold cereal
- Prepared canned foods

- Pro
  - Familiar food
  - Mirrors the regular diet
  - Infrastructure is in place to prepare

- Cons
  - Many items cannot be rotated into regular meal supply
  - Requires trained staff to prepare
  - Required constant management and rotation
What’s to Eat? (cont.)

MRE

- **Pro**
  - 3- to 7-year shelf life
  - No rotation
  - Single servings
  - High calorie
  - Easy to store

- **Cons**
  - Requires patients to open and prepare their own meals
  - Not consistent with therapeutic diets or modified textures
  - Does not mirror a regular diet
  - Designed for needs of active field soldiers
Meal Replacement Bar

**Pro**
- 5-year shelf life
- Single servings
- High calorie
- Easy to store

**Cons**
- Not consistent with therapeutic diets or modified textures
- Does not mirror a regular diet
Liquid Supplements

**Pro**
- Easy to store
- Can supplement a disaster plan

**Cons**
- Not consistent with therapeutic diets or modified textures
- Does not mirror a regular diet
Freeze-Dried and Dehydrated Foods

Not all plans are equivalent or suitable for health care

What's to Eat? (cont.)

Pro

- Can meet the needs of therapeutic diets
- Specially created for health care
- Long shelf life
- Mirrors the regular diet
- Easy to store
- No rotation
- Easy to prepare
- High nutrient quality
What’s to Eat? (cont.)

“DM&A success coaches believe the dehydrated and freeze-dried meal concept will become best practice for disaster meals in health care.”

What Plan is Best for You?

1. Traditional canned supplies
2. MREs
3. Emergency food bars
4. Liquid supplements
5. Dehydrated and freeze-dried meals
Water – Water – Water

- Drinking – hydration
- Personal sanitation
- Food preparation
- Nursing procedures

Best Practices For Potable Water

- American Red Cross:
  - 1 gallon/person/day

- Trade associations:
  - 1 gallon/person/day

- FEMA:
  - 1 gallon/person/day

- Dehydrated and freeze-dried
  - *Meals for All* requires one-third gallon/person/day to rehydrate

- Operations
  - Facilities may have additional requirements; be sure to work with your interdisciplinary team
Pre-Survey Compliance Assessment

✓ Does facility have a written emergency nutrition plan?

✓ Are you confident the plan will pass survey?

✓ Does facility have a complete emergency meal inventory?

✓ Does facility have emergency water?

✓ Does your plan include patients, staff, visitors and surge potential?

✓ Have you trained all staff to implement the plan?
University of California Medical Center
Sacramento, California

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Hazards that impact the ability to receive and produce food
- Infrastructure failure
- Delivery failure

- Flooding
- Earthquake
- Fire
- Tornado
- Hurricane
University of California Medical Center
Challenges meeting the regulations

- Identify who are you feeding
  - Patients, staff, visitors/families and surge
  - Establish medical needs and nutritional requirements
  - Allergies
- Storage space
- Money
- Shelf life

University of California Medical Center
Transitioning to a shelf-stable disaster plan

- UC Davis Surgery and Emergency Services Pavilion
- Opened October 2010
- CMS licensing survey evaluated disaster plan, summer 2010
  - Evolution of CMS expectations from existing to dedicated inventory
  - Were able to use existing formularies
University of California Medical Center
Previous disaster plans

1. Initially did not need a separate plan and were going to use food in-house items

2. Snack packs – cheese and crackers
   - $100,000
   - 1-year shelf life
   - Labor

3. MREs to meet the needs of 3,000 persons for 4 days
   - Saved $280,000 with a 3-year shelf life
   - Labor intensive to adjust for all diets
   - Increased storage space

4. Meals for All
   - Saved $422,419
   - Labor-saving
   - No labor needed to adjust diets
   - Further increased storage space
   - Limited dietary supplements for disaster meals to meet the standards

University of California Medical Center
Identifying storage for a disaster nutrition plan

- Must be within the licensed footprint of the facility
- Footprint has decreased as the plan has evolved
  - MRE – 33 pallets
  - Meals for All – 17 pallets
- Storage has been mobile since a disaster plan has been created
  - Constant challenge
University of California Medical Center
Current disaster nutrition plan

- 4 days, 10-year shelf-stable disaster plan - Meals for All
- Used California Hospital Emergency Food Planning Tool to evaluate population:
  - 631 licensed beds
  - 2,500 staff
  - 379 visitors/families
  - Percentage of patients on modified diets

University of California Medical Center
Current disaster nutrition plan (cont.)

- Therapeutic diets
  - Regular 32%
  - Diabetic 12%
  - Low sodium/cardiac 15%
  - Renal 5%
  - Mechanical soft 4%
  - Puree 3%
  - Clear liquid 5%
  - Full liquid 2%
  - Children 11%
University of California Medical Center
Water and water transportation

- 1 gallon per person per day in bottled water rotated through café, events and catering
- UC Davis has access to on-site licensed potable well water
- Proposed plan to move to storage 1 gallon per person per day for 2 days and switch to well water for the remaining days
- Transportation - emergency power for the facility elevators

Questions?
Thank you

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