Continuing Care Risk Management

Executive Summary
Safety and Environmental 7

ECRI Institute
The Discipline of Science. The Integrity of Independence.

▶ VOLUME 2
May 2014

Action Plan

- Gather Information
- Coordinate with the Community
- Analyze Hazards
- Establish Command
- Create a Plan
- Prepare Facilities and Supplies
- Establish Communication
- Train Staff, Inform Residents
- Conduct Exercises
- Evaluate and Improve
- Facilitate Recovery

Supplementary Material

- Home Care Emergency Preparedness Policy
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- Topics to Address in Emergency Plans
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- Emergency Preparedness Checklist for Nursing Homes, Assisted Living Facilities, and Group Homes
- Toolkit for Developing Missing-Resident Procedures
- External Contact List for Emergencies
- Sample Disaster Plan and Information
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Route To

Administration, Director of nursing, Facilities/building management, Medical director, Occupational health, Resident safety officer, Risk manager, Security, Social services

Emergency Preparedness and Response

IN BRIEF

The many natural disasters and human-made incidents of the past decade have highlighted the challenges aging services organizations face in responding to emergencies. In some cases, they have also exposed the ruinous consequences that can result when organizations are underprepared—including deaths, lawsuits, and even the threat of criminal charges.*

Perils to resident safety are myriad. To give just a few examples, a sample of nursing homes that faced natural disasters between 2007 and 2010 reported that some residents experienced issues such as death, deterioration in their health conditions, injurious falls, skin problems such as pressure ulcers and tears, and emotional trauma, confusion, or anxiety related to the disaster (OIG "Gaps Continue").

Another concern is that incidents can pose challenges to staff health and safety and place tremendous amounts of professional and personal stress on them. For example, staff members who are already stressed from working extra hours and trying to provide excellent care in suboptimal conditions may also be worried about their family members and possible damage to their homes.

Aging services organizations have also faced civil lawsuits—especially, but not exclusively, related to evacuations or decisions not to evacuate. Individuals have even faced the threat of criminal charges.

Major emergencies can pose financial threats on several fronts. A single event can result in multiple insurance claims, and exclusions may apply. In addition, many other extra expenses—the need to buy bottled water, for example—are not the kind that are covered by insurance.

Aging services organizations are subject to at least some legal and regulatory requirements pertaining to emergency preparedness. Although current emergency preparedness Conditions of

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Participation (CoPs) for nursing homes are lean, the Centers for Medicare and Medicaid Services (CMS) has issued a proposed rule strengthening emergency preparedness requirements for providers and suppliers that participate in Medicare or Medicaid. In addition, state laws addressing the licensing of nursing homes and assisted-living facilities may specify emergency preparedness provisions. These often reference the National Fire Protection Association's (NFPA) *Life Safety Code™*, standard for healthcare facilities, or both, and they may adopt guidelines from the Facility Guidelines Institute (FGI) as a whole or in part. Local building codes may have provisions that bear on emergency preparedness. Accredited organizations are also subject to relevant standards.

Fortunately, aging services organizations can take many steps to prepare. Some of the most effective strategies are those that give structure to emergency preparedness and response. These strategies include communication and collaboration with internal and external partners, incident command, analysis of hazards and their potential impact, practical plans, training, exercises, and evaluation. This Risk Analysis discusses these and other core elements of emergency preparedness.

Emergency exercises and evacuation are discussed in the Risk Analyses "Disaster Drills" and "Evacuation," respectively, elsewhere in this section of the *Continuing Care Risk Management* (*CCRM*) *System*. This Risk Analysis focuses on emergency preparedness in nursing homes, assisted-living settings, and senior living communities, but many elements also apply to settings such as home care, hospice, and Program of All-Inclusive Care for the Elderly (PACE) programs. See the Risk Analysis "Home Care: An Overview," in the *Quality Assurance and Risk Management* section of the *CCRM System*, and "Home Care Emergency Preparedness Policy," in the "Sample Policies and Tools" section of the *CCRM* members' website, for further discussion of emergency preparedness in home care.

▶ ACTION RECOMMENDATIONS

- Form an emergency preparedness committee, and gather information.
- Coordinate emergency preparedness activities with the community.
- Perform a hazard vulnerability assessment.
- Adopt the Incident Command System.
- Develop an all-hazards emergency plan that includes procedures for specific incidents.
- Keep facilities, equipment, and supplies ready, in accordance with the emergency plan.
- Establish means of internal and external communication, including backup communication systems.
- Train staff on emergency preparedness, and inform residents regarding what to expect and what they can personally do to prepare.
- Conduct emergency preparedness exercises. Participate in community exercises if possible.
- After an exercise or real event, evaluate the organization's performance, and make changes to improve.
- Develop processes for recovery and restoration of services.

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THE ISSUE IN FOCUS

The 2005 hurricane season brought national attention to inadequate emergency preparedness among healthcare organizations, including aging services providers. In August 2006, the U.S. Department of Health and Human Services' Office of Inspector General (OIG) reported that although most nursing homes nationally satisfied federal regulations regarding emergency plans (94%) and emergency training (80%) during 2004 and 2005, many facilities had trouble following their plans during the 2005 hurricane season. A major reason, according to the report, was because federal regulations required all Medicare- and Medicaid-certified facilities to develop written policies and procedures for handling emergency situations and train employees regarding these procedures but did not specify what should be included in these plans.

OIG performed a focused analysis of 20 Gulf state nursing homes affected by the 2005 hurricanes, finding that all encountered difficulties. They all had emergency plans in place in compliance with federal regulations; however, when OIG evaluated the completeness of plans against a list of suggested provisions gleaned from state requirements, the literature, and interviews with experts, it found that the plans often lacked many suggested provisions. In addition, the Gulf state nursing homes often did not follow their plans because the plans were not updated or did not include important provisions (e.g., modification of plans to address residents' specific needs). (OIG "Nursing Home")

In response, CMS developed an emergency preparedness checklist for long-term care facilities (which the checklist calls "healthcare facilities"). CMS does not require skilled nursing facilities to use this checklist or implement any elements of it, but it is a useful tool. CMS also produced two other checklists, one for use by long-term care residents, family members, and ombudsmen and one for use by people with medical needs living at home and their families and caregivers. See "Resource List" for information on accessing all three CMS checklists.

When OIG conducted a similar analysis a few years later, it again found that most nursing homes nationwide satisfied the federal regulations regarding emergency plans (92%) and emergency training (75%), based on national survey data. But based on its visits to 24 nursing homes that experienced floods, hurricanes, or wildfires between 2007 and 2010; discussions with organizational and local stakeholders; and comparison of the 24 nursing homes' emergency plans with the CMS checklist, OIG saw many of the same gaps in preparedness that it identified in the 2006 report. Administrators from only 13 of the nursing homes were familiar with the checklist, and only 7 used them when developing their plans. On average, emergency plans included only about half the items on the CMS checklist, and no plan included all of them. Administrators of 17 facilities reported facing substantial challenges, such as difficulty following the emergency plan as written and logistical problems with communication. (OIG "Gaps Continue")

Challenges to aging services providers' preparedness continue. Hurricane Sandy struck in October 2012, half a year after the second OIG report was published. The Federal Emergency Management Agency's (FEMA) 2013 *National Preparedness Report* noted that during Hurricane Sandy, nursing homes faced difficulties with resident evacuation, backup generators, notification of family members, food and medical supplies, and medical records (FEMA *National Preparedness Report*).

Resident Safety

Emergencies can have profound effects on residents' physical and mental health. Of the 17 nursing homes that faced substantial challenges responding to disasters in OIG's 2012 analysis, administrators from 12 said that some residents experienced issues related to the disaster, such as the following (OIG "Gaps Continue"):

- Death
- Deterioration in health conditions
- Falls that resulted in injury
- Skin issues (e.g., pressure ulcers, tears)
- Emotional trauma, confusion, or anxiety

Some of the events occurred during or after evacuation, while others occurred at the nursing home (OIG "Gaps Continue").

The day the fertilizer plant in West, Texas, exploded in 2013, only 1 of the approximately 130 residents of the nursing home near the plant died. But by two months after the explosion, 14 had died—more than twice what the nursing home would have expected over that period of time under normal circumstances. Family members of several residents said that the incident exacerbated

residents' medical conditions, disrupted care, and may have hastened death. (Mervosh and Tarrant)

These are only examples experienced by a small number of nursing homes. Myriad other threats to residents' health and safety could arise.

Occupational Health and Safety

Staff can also face challenges to their health and safety during incidents, at home or at work. Emergencies can also place a great deal of personal and professional stress on staff. For example, staff members who are already stressed from working extra hours and trying to provide excellent care in suboptimal conditions may also be worried about their family members and possible damage to their homes.

Civil and Criminal Liability

Aging services organizations have faced civil lawsuits—especially, but not exclusively, related to evacuations or decisions not to evacuate. Individuals may even face criminal charges. For example, during Hurricane Katrina, two owners of a nursing home faced 35 counts of negligent homicide because they did not evacuate when both a local mandate and the facility's own evacuation plan called for evacuation, although they were ultimately acquitted (Nossiter). See the Risk Analysis "Evacuation," elsewhere in this section of the *CCRM System*, for more on this incident and another example.

Financial Risks and Insurance Claims

Emergencies can pose financial threats on several fronts. A single event can result in multiple insurance claims. For example, claims may arise in regard to general or professional liability, property, workers' compensation, vehicles, or a combination of these or other exposures. Aging services organizations should also check exclusions on their current policies and determine, using the results of hazard vulnerability analyses (see the discussion Analyze Hazards), the need to obtain coverage for each exposure. In addition, many other extra expenses—the need to buy bottled water, for example—are not the kind that are covered by insurance.

REGULATIONS AND STANDARDS

CMS

Currently, CMS has only two CoPs for nursing homes directly related to emergency preparedness, as follows, and the interpretive guidelines for them are brief (CMS "Appendix PP"):

1. The facility must have detailed written plans and procedures to meet all potential emergencies and disasters, such as fire, severe weather, and missing residents (42 CFR § 483.75[m][1]).
2. The facility 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 (42 CFR § 483.75[m][2]).

Other CoPs generally address life safety and emergency power. Emergencies could also expose deficiencies in meeting other CoPs, possibly leading to citations.

Further, more comprehensive requirements are coming. In December 2013, the agency issued a proposed rule to establish more comprehensive national emergency preparedness requirements for providers and suppliers that participate in Medicare and Medicaid (see "Resource List"). CMS proposed the rule because it believes that the current regulatory patchwork of federal, state, and local laws and guidelines falls short of what is needed.

Thus, the proposed rule seeks to establish a consistent, flexible, and dynamic regulatory approach to emergency preparedness and response. The proposed requirements would be "consistent and enforceable" for all Medicare and Medicaid providers and suppliers, with variations for each of the 17 provider types. Specifically, it would require all types of providers and suppliers to have an emergency plan that addresses the following four core elements (CMS "Medicare and Medicaid"):

1. Perform a risk assessment before establishing an emergency plan, using an all-hazards approach that focuses on capabilities that are critical to preparedness for a spectrum of emergencies
2. Develop and implement policies and procedures based on the emergency plan and risk assessment
3. Develop and maintain an emergency preparedness communication plan that complies with both federal and state law
4. Develop and maintain a training and testing program that includes annual training in emergency preparedness policies and procedures

Some specific proposed requirements for long-term care facilities are discussed in the Action Plan. For example, CMS is proposing more stringent

requirements regarding emergency power (see the discussion Prepare Facilities and Supplies). Home health agencies, hospice providers, and PACE programs should consult the proposed rule for proposed requirements specific to their settings.

Other federal agencies that have laws, standards, guidelines, or responsibilities that bear on emergency preparedness include FEMA, the U.S. Environmental Protection Agency (e.g., release of hazardous substances), the Occupational Safety and Health Administration (e.g., general worker safety, emergencies involving hazardous substances), and the Centers for Disease Control and Prevention (CDC) (e.g., preparedness for events involving infectious diseases, response to biological terrorism).

State, Regional, and Local Requirements

State laws addressing the licensing of nursing homes and assisted-living facilities may specify emergency preparedness provisions. These often reference NFPA's *Life Safety Code*, standard for healthcare facilities, or both and may adopt FGI guidelines as a whole or in part. Local building codes may also have provisions that bear on emergency preparedness. NFPA also has a general standard on disaster and emergency management. Although it is not mandatory for nursing homes, it is a helpful resource. Aging services organizations may also have roles outlined in regional or local emergency plans.

Accreditation

Accredited organizations are subject to the standards promulgated by their accrediting body. CARF International and the Joint Commission each have many standards addressing emergency preparedness. Risk managers should review applicable accreditation standards.

▶ ACTION PLAN

GATHER INFORMATION

Action Recommendation: *Form an emergency preparedness committee, and gather information.*

To facilitate preparedness and planning, aging services organizations can begin by forming an emergency preparedness committee and gathering information. Potential committee members include those who may serve on the incident management team, plus others in key positions or with expertise in relevant topics. Individuals and departments that may be involved include the administrator, the medical director, the director of nursing, the assistant administrator, the assistant director of nursing, a charge nurse, the lead aide, maintenance, housekeeping, dietary staff, activities staff, risk and quality management, business office staff, and media relations.

Information to gather, according to CMS's checklist, includes the following (CMS "Emergency Preparedness Checklist"):

- Copies of applicable regulations or requirements
- Contact information for staff and state and local emergency managers
- Building construction and life safety information
- Information about the characteristics and needs of residents or patients

COORDINATE WITH THE COMMUNITY

Action Recommendation: *Coordinate emergency preparedness activities with the community.*

Local and Regional Collaboration

Effective emergency preparedness and response requires coordination with the community. Activities to support this aim include the following:

- Invite local emergency planners and key partners to meetings of the emergency preparedness committee
- Assess the organization's surge capacity and resources the organization would need to host additional residents or patients
- Work with local emergency planners and key partners to determine the organization's potential roles and needs during events
- Identify sources—including backup sources—of utilities, staff or volunteers, provisions for residents and staff (e.g., food, water, personal and medical supplies), transportation, and other necessities
- Establish mutual-aid or unilateral-aid agreements
- Include information and procedures (e.g., contact information, Incident Command System [ICS] charts, communication systems) for continued collaboration during an incident
- Participate in community-wide preparedness exercises

The organization should also discuss the emergency plan with the area ombudsman program and give a

copy of it to the ombudsman. When an emergency occurs, the organization should notify the ombudsman where, when, and how residents will be sheltered. This can allow the ombudsman to have representatives visit residents and provide help to them and their families. (CMS "Emergency Preparedness Checklist"; OIG "Nursing Home")

NIMS

The National Incident Management System (NIMS) is a national, comprehensive approach to emergency preparedness and response that supports cooperation and interoperability among stakeholders, including government, infrastructure and other resources, and private sector organizations. It standardizes principles and processes for emergency preparedness to better facilitate a coordinated response. (FEMA "National Incident Management System")

An important component of NIMS is ICS; see the discussion Establish Command for more information on this standardized command system. More broadly, understanding NIMS and using a NIMS-based approach may improve an aging services organization's ability to coordinate with other stakeholders, as well as support its own preparedness. Further information on NIMS is available from FEMA (see "Resource List").

ANALYZE HAZARDS

Action Recommendation: *Perform a hazard vulnerability assessment.*

Aging services organizations should periodically perform a hazard vulnerability assessment to evaluate the probability of facing specific hazards, their potential impact, and response capabilities. This information can greatly improve the organization's ability to plan and prioritize.

The Wisconsin Department of Health Services has developed a tool to help long-term care facilities perform a hazard vulnerability assessment (see "Resource List"). See "Potential Hazard Scenarios" for a list of possible events. For each event type, the following factors are rated (Wisconsin Department of Health Services):

- Probability of occurrence
- Impact on human health and safety, the community, and the long-term care organization's services, property, and business
- Internal and external mitigation, preparedness, response, and recovery capabilities

The tool uses the ratings to calculate the relative risk. The state suggests repeating the analysis every two or three years and anytime there are major changes in the organization or community. (Wisconsin Department of Health Services)

When analyzing specific hazards, CMS's checklist suggests identifying the following in regard to each (CMS "Emergency Preparedness Checklist"):

- Actions to take
- Staff members responsible for executing the plan
- Staffing requirements and staff responsibilities

Potential Hazard Scenarios

Following are hazards that organizations may wish to consider when performing a hazard vulnerability analysis. This list does not include every possible hazard; the organization should consider its unique situation and add hazards as appropriate.

Natural Disasters

- Earthquake, landslide
- Hurricane, tornado
- Flash flooding
- Blizzard, ice storm, extreme cold
- Extreme heat
- Wildfire

Human-Made Events

- Fire, explosion, mechanical failure
- Attack involving explosives, radiologic incident, release or explosion of hazardous materials
- Airplane crash
- Communications disruption, computer system failure
- Power outage, water system failure, fuel shortage, supply disruption
- Flooding, contamination of municipal water system
- Civil demonstration
- Disease outbreak

Sources: Wisconsin Department of Health Services. Hazard vulnerability assessment (HVA): instructions for long term care facilities (LTCFs) [online]. [cited 2014 Feb 3]. http://www.dhs.wisconsin.gov/rl_dsl/emergency-preparedness/hva-handbook.pdf; Szpytek, Stanley J., Jr. (President, Fire and Life Safety, Inc.). Conversation with: ECRI Institute. 2014 Feb 19.

- Staff members' needs (e.g., transportation, shelter), as well as which staff members are critical
- Supplies and equipment needed to sustain operations for 3 to 10 days (through a combination of supplies on hand and agreements with suppliers)
- Communication procedures for receiving alerts and for communicating with staff, families, and residents before, during, and after the event

The committee should remember that a single event can cause many types of hazards at once. For example, during Hurricane Katrina, some nursing homes found themselves battling not just a hurricane, but flooding and civil unrest as well. In addition, even hazards that do not affect the facility directly could disrupt utilities, staffing, or supplies (CMS "Emergency Preparedness Checklist").

ESTABLISH COMMAND

Action Recommendation: *Adopt the Incident Command System.*

ICS is a standardized model for managing incidents. It is used by fire, police, and emergency medical services; other first responders; hospitals; and other private sector organizations, and its use is starting to spread into aging services. (Szpytek conversation)

In fact, ICS has been adapted for use in nursing homes and assisted living. See "Resource List" for information on accessing the Nursing Home Incident Command System (NHICS) and the Assisted Living Incident Command System; tools for each are available from the California Association of Health Facilities (CAHF) and the American Assisted Living Nurses Association, respectively.

ICS is flexible and can be used to manage incidents of any kind or size. Using ICS can help promote

- orderly, systematic planning;
- clear accountability, chain of command, and supervision;
- more effective management;
- more seamless, unified communication; and
- better integration and coordination among stakeholders (FEMA "Introduction").

In this system, an incident management team is formed, and predetermined responsibilities (along with necessary authority to carry out those responsibilities) are assigned to each of several functions. The five main incident management functions are as follows, as outlined in NHICS (CAHF et al.):

1. **Command.** The incident commander has overall responsibility for managing the incident. He or she sets objectives and plans strategies. This person staffs other functions and creates other positions as needed but may handle all management functions during small incidents.

   Other individual command positions that may be created include the medical director/specialist, safety officer, liaison officer, and public information officer.
2. **Operations.** People serving in this function direct tactical operations (e.g., resident services, cleanup) and resource utilization to achieve incident objectives.
3. **Planning.** People serving in this function collect and evaluate information to facilitate decision making, track the status of resources, and maintain incident reports.

   The planning function also develops the incident action plan at the onset of the incident and reviews and revises it as necessary as the incident progresses, with oversight by the incident commander and participation from other ICS functions.
4. **Logistics.** People serving in this function are "getters." They provide necessary equipment, supplies, and personnel.
5. **Finance/administration.** People serving in this function monitor costs related to the incident. Tasks include cost analysis, procurement, accounting, and time recording.

An important component of NIMS, ICS also facilitates coordination with other stakeholders. For example, consistent terminology allows better coordination with other stakeholders. The individuals who staff the command function are called the command staff. Those who staff the other four (or five) functions are called the general staff; the head of each of the general functions is called a chief.

The incident management team operates from a command center. This predetermined location is stocked with copies of the emergency plan, computers and communication equipment, office supplies and a wipe board, and lists of contact information. Many organizations create a kit for each ICS function and keep the kits in the command center. The kit includes things like a vest with the individual's ICS title, a chart of the incident management team, and job action sheets and

forms for that individual. It may also be worthwhile to give some key personnel hard copies of forms included in the kit in the event that the command center is inaccessible.

FEMA offers a course on ICS for healthcare providers, and CAHF has developed a toolkit for using ICS in nursing homes; the latter includes a guidebook, forms, job action sheets, planning and response guides, and training modules. See "Resource List" for information on accessing these resources. Several states offer ICS tools for aging services settings.

CREATE A PLAN

Action Recommendation: *Develop an all-hazards emergency plan that includes procedures for specific incidents.*

A core component of emergency preparedness is the emergency plan. CMS's proposed rule would require the long-term care facility's emergency plan to do the following (CMS "Medicare and Medicaid"):

- Be reviewed and updated at least annually
- Be based on and include a documented facility-based and community-based risk assessment, utilizing an all-hazards approach, including response to missing-resident incidents
- Outline strategies for addressing emergency events identified by the risk assessment
- Address the resident population, considering individuals at risk, the types of services the facility can provide in an emergency, and continuity of operations
- Include a process for collaborating with emergency preparedness officials, including documenting the facility's efforts to contact officials and participate in collaborative planning

To be practical in an emergency, the plan must be easy to use and understand. For ideas on how to accomplish this, see the Ask *CCRM* "Creating an Easy-to-Use Emergency Plan," in the "Web Columns" section of the *CCRM* members' website.

Generally, the plan should contemplate what the organization should do if it must go without support from the local community for at least a certain amount of time. For example, an element of performance (EP) for the Joint Commission standard requiring accredited nursing facilities to have an emergency plan states that organizations should prepare to manage emergencies lasting at least 96 hours (four days) without support from the local community. The standard does not require organizations to have 96 hours' worth of stockpiles or keep operating for 96 hours; rather, "the organization needs to monitor its capabilities and adjust its response procedures . . . to support an informed and proactive decision regarding how long the organization can deliver care safely," the EP states. (Joint Commission)

The main body of the emergency plan should outline core components of all-hazards preparedness; procedures for specific event types may be addressed in tabbed sections or appendixes. See "Topics to Address in Emergency Plans" for a list of topics to consider addressing in the emergency plan.

Infection prevention and control is of particular importance in aging services organizations, but it is often inadequately addressed in emergency plans. A 2008 survey found that more than half of nursing homes in two states did not address pandemic influenza preparedness in their emergency plans (Smith et al.). Pandemic flu planning checklists for home care and for long-term and residential care are available from CDC (see "Resource List"). In addition, even incidents that are not primarily infectious can pose infection risks. A group of researchers has suggested recommendations for infection prevention and control to consider including in emergency plans; for more information, see "Addressing Infection Prevention and Control in Emergency Plans."

The Wisconsin Department of Health Services, the Florida Health Care Association, and CAHF offer tools for creating and evaluating emergency plans in aging services settings. See "Resource List" for information on accessing these and other tools. Also see "Emergency Preparedness Checklist for Nursing Homes, Assisted Living Facilities, and Group Homes" and "Toolkit for Developing Missing-Resident Procedures," in the "Sample Policies and Tools" section of the *CCRM* members' website.

PREPARE FACILITIES AND SUPPLIES

Action Recommendation: *Keep facilities, equipment, and supplies ready, in accordance with the emergency plan.*

To facilitate smooth implementation of the emergency plan and mitigate damage, the organization should keep facilities, equipment, and supplies ready, in accordance with the plan.

Topics to Address in Emergency Plans

Topics to consider addressing in the emergency plan include the following. Many of these topics are addressed elsewhere in this Risk Analysis or in other *CCRM* Risk Analyses.

- Incident command
- Communication and coordination
- Access to residents' records
- Admission, triage, assessment, treatment (including management of injuries), transfer, and discharge (including temporary discharge to family when appropriate)
- Crisis standards of care
- Considerations for residents with dementia, disabilities, and obesity
- Mental health needs of residents and staff
- Considerations for individuals who have died
- Food, potable water, medications and medical supplies, and other necessities for residents and, in certain conditions, staff, including contingency plans in case provisions are not available from primary sources
- Utilities such as electricity, water, fuel for buildings and vehicles, and medical gas (if used), including alternate means of accessing them
- Staffing issues, such as ICS roles, resident care considerations, procedures for identifying the need for more staff, strategies for optimizing staff time (e.g., alternate shifts, child care), and personal preparedness for staff members
- Environmental safety considerations, such as use of materials to mitigate damages (e.g., plywood, sandbags), ongoing monitoring for damage, and steps to take in case of heating, ventilation, or air-conditioning failures
- Infection prevention and control
- Alternative procedures for activities such as cooking, cleaning, trash management, and laundering
- Sheltering in place, including criteria for deciding whether to evacuate or shelter in place
- Hosting
- Evacuation
- Transportation
- Security and access
- Financial issues, such as cash on hand, payroll, expenses and requests, and claims
- Documentation of ICS activities, objectives and assignments, staff time, volunteer registration (and modified credentialing processes, if necessary), information on hosted individuals, resources requested and used, expenses and claims, and tracking of evacuated residents
- Recovery

To begin with, the organization should also ensure compliance with all applicable building and NFPA codes, as required by state law. CMS's proposed rule also discusses facilities, equipment, and supplies. The rule would require long-term care facilities to have emergency preparedness policies and procedures, reviewed and updated at least annually, that address the following (CMS "Medicare and Medicaid"):

- The subsistence needs of residents
  - Food, water, and medical supplies
  - Alternate sources of energy to maintain temperatures safe for residents and the storage of provisions, emergency lighting, fire detection and extinguishing systems, and sewage and waste disposal
- A system for tracking the locations of residents and staff during and after the emergency
- Safe evacuation
- Means to shelter in place for residents, staff, and volunteers
- A system for secure medical documentation
- Use of volunteers or other staffing strategies
- Arrangements with other long-term care facilities and other providers to ensure continuity of services for residents
- The facility's role, under a declared waiver, in the provision of care at an alternate care site

CMS's proposed rule suggests having at least a two-day supply of food and potable water for residents and staff. Although CMS considered requiring long-term care facilities to maintain larger stockpiles, it expects that the organization would have agreements to receive supplies within 24 to 48 hours, receive supplies from mobilized national or regional stockpiles, or both. "A provider should have the flexibility to determine what is adequate based on the location and individual characteristics of the facility," it concluded. (CMS "Medicare and Medicaid")

Addressing Infection Prevention and Control in Emergency Plans

After reviewing the literature, a group of authors suggested disaster planning recommendations related to infection prevention and control for long-term care organizations.

The authors examined 22 peer-reviewed journal articles and 11 federal, state, or regulatory agency publications. The authors grouped the topics addressed into the following themes and developed recommendations based on the literature. The article focuses on nursing homes but states that the principles may be adapted for other settings, such as retirement homes and rehabilitation centers.

Infection transmission. Policies should reflect that during almost any kind of disaster, the risks of infection transmission increase for both residents and staff.

The infection prevention program. Policies should address how to allocate limited personal protective equipment (PPE) and medications, isolate many residents simultaneously, and restrict visitors during a disaster.

Infection prevention coverage. The organization must have a designated, formally trained or certified infection preventionist. The infection preventionist should determine which interventions to implement during disasters, such as enhanced environmental cleaning, isolation precautions, and PPE use.

The emergency plan. Organizations must develop an emergency plan that addresses all hazards and review it at least annually. At least one appendix should address response to disasters involving infectious disease (e.g., pandemic influenza, bioterrorism).

Coordination with external response agencies. Long-term care organizations can help regional disaster planners understand that long-term care residents are highly susceptible to infections, especially during disasters.

Assessment of the plan. Long-term care organizations tend to base exercises on natural disasters. The authors recommend occasionally using infectious-disease scenarios for exercises.

Education. Topics for staff education include self-screening for illness; screening or triaging of residents and visitors for infectious disease; medical management of victims; policies and procedures in the emergency plan that relate to infection prevention and control; external and internal communication; cleaning, disinfection, and sterilization; food and water safety; and waste management. The infection preventionist should develop educational materials for staff, residents, and visitors that can be distributed quickly in the event of a disaster.

Supplies. Long-term care organizations should be able to sustain themselves for at least 96 hours, experts estimate. CDC also recommends calculating the resources that would be needed over six weeks to allow the organization to develop plans for managing supplies (e.g., protocols for conserving resources) and obtaining more (e.g., memoranda of agreement with vendors or other healthcare organizations).

Source: Volkman JC, Rebmann T, Hilley S, et al. Infection prevention disaster preparedness planning for long-term care facilities. *Am J Infect Control* 2012 Apr;40(3):206-10. Also available at http://www.ajicjournal.org/article/S0196-6553(11)00318-X/abstract PubMed: http://www.ncbi.nlm.nih.gov/pubmed/21840086

Assurance should be obtained from suppliers and transportation services identified in the emergency plan that they would be able to fulfill their commitments in the event of a disaster affecting an entire area (e.g., they are not "overbooked") (CMS "Emergency Preparedness Checklist").

Emergency power is another critical element of emergency preparedness. According to EPs for a Joint Commission standard requiring accredited nursing facilities to have a reliable source of emergency electrical power, emergency power should be available for

- alarm systems,
- exit signs,
- emergency communication systems,
- elevators, and
- medical equipment that could cause resident or patient harm if it were to fail (Joint Commission).

CMS's proposed rule would require long-term care facilities to implement emergency and standby power systems based on their emergency plan. It proposes requirements regarding the system's location, inspection, testing, and documentation, as well as fuel stockpiles. (CMS "Medicare and Medicaid") These new requirements would necessitate much more testing and documentation. Of particular note, the organization would have to test the emergency power system under load for four hours every year, incurring significant fuel expenses and potential conflict with pollution control regulations. (Szpytek conversation)

The organization should take other steps to prevent and respond to emergency power failures. Even organizations that are not accredited by the Joint Commission should consult the accrediting agency's 2006 Sentinel Event Alert on the topic (see "Resource List").

ESTABLISH COMMUNICATION

Action Recommendation: *Establish means of internal and external communication, including backup communication systems.*

Reliable internal and external communication is vital to well-coordinated preparedness and response. Stakeholders the organization may need to communicate with include the following:

- Residents
- Family members
- Staff
- Volunteers
- The medical director and attending physicians
- The local emergency operations center and other emergency managers and responders (e.g., police, fire)
- Regional, state, and federal emergency managers and agencies
- The state licensing agency
- The long-term care ombudsman
- The public health department
- The organization's regional office, management company, and "sister" campuses
- Other healthcare and aging services providers
- Alternate care sites
- Vendors and utility companies
- Media

Aging services organizations should determine how, when, and with whom it will communicate. CMS's proposed rule would require the long-term care facility to have a communication plan, reviewed and updated at least annually, that includes the following (CMS "Medicare and Medicaid"):

- Names and contact information for staff, entities providing services under an arrangement, residents' physicians, other long-term care facilities, and volunteers
- Contact information for federal, state, and local emergency preparedness agencies; the state licensing and certification agency; the state long-term care ombudsman; and other sources of assistance
- Primary and backup means of communicating with staff and emergency preparedness agencies
- A method of sharing information and medical documentation with other providers as necessary
- Means to release resident information during an evacuation and provide information about the general condition and location of residents as permitted by federal law addressing release of information related to disaster relief
- A means of providing information to authorities about the facility's needs and ability to provide assistance
- A method of sharing appropriate information from the emergency plan with residents and family members

The plan may identify who will communicate with each stakeholder (name backup staff members in case the primary individual is unavailable), what purpose communication with each stakeholder is expected to serve, and what information is likely to be shared. A call tree may be included in the plan. (FHCA)

Communication with residents and family members can help the organization relay essential information and assuage anxiety. Residents and family members should be told the following (CMS "Emergency Planning Checklist"; CMS "Emergency Preparedness Checklist"):

- How family members should keep the organization updated regarding their location and contact information
- How family members should contact the organization or seek updates during an emergency
- How family members will be notified if the facility evacuates
- How residents and family members may be able to contact each other

Because communication systems can easily be disrupted or overwhelmed during an incident, it is important to have backups. Examples of backup communication systems are text messaging, e-mail, walkie-talkies, and ham radios. When identifying backup communication systems, the organization should consider which primary and secondary communication systems its local and regional partners plan to use. "External Contact List for Emergencies," in the "Sample Policies and Tools" section of the *CCRM* members' website, lists several external entities an aging services organization may need to contact, with prompts to identify multiple modes of communication for each.

Skillful use of social media before, during, and after incidents lets the public participate—by providing information, finding ways to help, or sharing the information with others, for example. The CDC manual *Crisis and Emergency Risk Communication* (see "Resource

List") includes a chapter on social media, plus a wealth of other guidance on crisis communication.

TRAIN STAFF, INFORM RESIDENTS

Action Recommendation: *Train staff on emergency preparedness, and inform residents regarding what to expect and what they can personally do to prepare.*

An excellent emergency plan is of little help if staff do not know how to use it. CMS's proposed rule would require the long-term care facility to have an emergency preparedness training and testing program, reviewed and updated at least annually. In regard to training, the organization would have to do the following (CMS "Medicare and Medicaid"):

- Hold initial training for all new and existing staff, individuals providing services under an arrangement, and volunteers
- Hold training at least annually thereafter
- Document training
- Ensure that staff can demonstrate knowledge of emergency procedures

CMS's checklist emphasizes that every staff member on every shift needs to be trained and be able to follow all the details of the emergency plan. Training for staff should also address the psychological and emotional impact on staff, families, residents, and the broader community. (CMS "Emergency Preparedness Checklist") The organization should train staff who may serve on the incident management team regarding the ICS and their individual roles, responsibilities, and tasks.

Residents need to know what to expect during emergencies and what they can personally do to prepare. Thus, the organization should also ensure that residents, family members, and personal caregivers are knowledgeable about the organization's emergency plan and should consider giving residents guidance on personal emergency preparedness. Issues these groups should be familiar with include the following (CMS "Emergency Planning Checklist"):

- Communication between families and the organization
- The alarm system (including modifications for people with hearing or visual impairment)
- Location of emergency exits
- Residents' roles during an emergency
- Provisions for medications, supplies, and personal possessions
- Ways residents and family members may help
- Evacuation plans

However, when determining whether and how residents may be able to help during an emergency, staff should know each resident and consider what skills the resident has that may be useful, whether the resident has the capacity to perform the task, and whether involving the resident will increase a sense of security or cause anxiety (CMS "Emergency Planning Checklist").

The organization may wish to give copies of CMS's checklist for residents, family members, and long-term ombudsmen to these groups and refer residents and families to CDC's website on emergency preparedness for older adults (see "Resource List"). In addition, "Sample Disaster Plan and Information," in the "Sample Policies and Tools" section of the *CCRM* members' website, is an excerpt from the resident handbook of one senior living provider.

CONDUCT EXERCISES

Action Recommendation: *Conduct emergency preparedness exercises. Participate in community exercises if possible.*

The organization should conduct exercises to allow leaders and staff to practice the emergency plan, facilitate coordination with the community, and identify opportunities for improvement. Exercises may be discussion-based or operations-based. Discussion-based exercises include the following (CMS "Health Care Provider"):

- Seminar (e.g., an informal discussion to orient participants to new or updated elements)
- Workshop (e.g., for drafting a plan or policy)
- Tabletop exercise
- Game

Operations-based exercises include the following (CMS "Health Care Provider"):

- Drill of a specific operation or function (e.g., evacuation drill)
- Functional exercise to test coordination among multiple agencies (without "boots on the ground")

- Full-scale exercise

CMS's proposed rule would require long-term care facilities to conduct drills and exercises to test the emergency plan, including unannounced drills. Specifically, long-term care facilities would be required to do the following (CMS "Medicare and Medicaid"):

- Participate in a community drill—or, if a community drill is not conducted, a facility-based drill—at least annually. (The organization would be exempt if it had experienced a real emergency that required plan activation in the past year.)
- Conduct a paper-based, tabletop exercise at least annually.
- Document and analyze the facility's response to all drills, tabletop exercises, and emergencies, and revise the emergency plan as needed.

More guidance is available in the Risk Analysis "Disaster Drills," elsewhere in this section of the *CCRM System*.

EVALUATE AND IMPROVE

Action Recommendation: *After an exercise or real event, evaluate the organization's performance, and make changes to improve.*

After an exercise or actual event, the organization should evaluate its performance and make changes to

Resource List

Agency for Healthcare Research and Quality
(301) 427-1364
http://www.ahrq.gov

- Special needs and potential roles: focus group discussions of disaster planning at nursing homes [includes a preparedness needs assessment]. http://archive.ahrq.gov/prep/nursinghomes/report.htm

American Assisted Living Nurses Association
(951) 677-8596
http://www.alnursing.org

- Assisted Living Incident Command System [available later in 2014]

American Health Information Management Association
(312) 233-1100
http://www.ahima.org

- AHIMA's long-term care health information practice and documentation guidelines [including information on managing medical records during and after a disaster]. http://ahimaltcguidelines.pbworks.com/w/file/fetch/66945303/LTCGuidelines_complete.pdf

American Health Lawyers Association
(202) 833-1100
http://www.healthlawyers.org

- Minimizing EHR-related serious safety events [including an emergency preparedness checklist]. http://www.healthlawyers.org/hlresources/PI/InfoSeries/Pages/MinimizingEHRSSE.aspx

Assisted Living Federation of America
(703) 894-1805
http://www.alfa.org

- Emergency preparedness toolkit. http://www.alfa.org/images/store/Emergency_Preparedness_Tool_Kit.pdf

California Association of Health Facilities
Disaster Preparedness Program
(916) 441-6400
http://cahfdisasterprep.com

- NHICS guidebook and tools. http://cahfdisasterprep.com/NHICS/GuidebookTools.aspx
- Planning templates and checklists. http://cahfdisasterprep.com/PreparednessTopics/AllHazardResourcesGuides/PlanningTemplatesChecklists.aspx
- Preparedness topics [guides, information, and other resources]. http://cahfdisasterprep.com/PreparednessTopics.aspx

Centers for Disease Control and Prevention
(800) CDC-INFO (232-4636)
http://www.cdc.gov

- Crisis and emergency risk communication. http://www.bt.cdc.gov/cerc/pdf/CERC_2012edition.pdf
- Emergency preparedness for older adults. http://www.cdc.gov/aging/emergency
- Home health care services pandemic influenza planning checklist. http://www.flu.gov/planning-preparedness/hospital/healthcarechecklist.pdf
- Long-term care and other residential facilities pandemic influenza planning checklist. http://www.flu.gov/planning-preparedness/hospital/longtermcare.pdf

Centers for Medicare and Medicaid Services
(877) 267-2323
http://www.cms.gov

- Health care provider guidance: emergency preparedness for every emergency [website with links to CMS's checklists and after-action report]. http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/HealthCareProviderGuidance.html

improve as necessary. To properly evaluate its performance when conducting exercises, the organization must plan for evaluation, conduct observation and collect data during the exercise, analyze the data, and report outcomes (HSEEP).

CMS has created a template and instructions for an after-action report and improvement plan for healthcare providers (see "Resource List"). Use of the form is not mandatory, but it is a helpful tool. The tool can be used to identify and document

- capabilities tested by the exercise,
- strengths,
- areas for improvement,
- evaluation of whether the exercise was successful or unsuccessful, and
- areas of focus for future exercises (CMS "Health Care Provider").

The CMS tool uses exercise evaluation guides available from the U.S. Department of Homeland Security's Homeland Security Exercise and Evaluation Program (see "Resource List").

These guides may be used to evaluate several capabilities in each of five broad categories: prevention, protection, mitigation, response, and recovery. For each capability, the organization identifies targets, plus

- Medicare and Medicaid programs; emergency preparedness requirements for Medicare and Medicaid participating providers and suppliers; proposed rule. https://www.federalregister.gov/articles/2013/12/27/2013-30724/medicare-and-medicaid-programs-emergency-preparedness-requirements-for-medicare-and-medicaid

Federal Emergency Management Agency
U.S. Department of Homeland Security
(202) 646-2500
http://www.fema.gov

- Hazus: the Federal Emergency Management Agency's (FEMA's) methodology for estimating potential losses from disasters. http://www.fema.gov/hazus
- National Incident Management System. http://www.fema.gov/national-incident-management-system
- NIMS courses. https://training.fema.gov/IS/NIMS.aspx

Florida Health Care Association
(850) 224-3907
http://www.fhca.org

- Defining emergency operations basic plan elements: modified for nursing homes from FEMA's Comprehensive Preparedness Guide (CPG) 101. http://www.fhca.org/images/uploads/pdf/EOP Elements Defined for LTC.pdf
- Emergency preparedness tools. http://www.fhca.org/facility_operations/emergency_preparedness_tools

Homeland Security Exercise and Evaluation Program
U.S. Department of Homeland Security
https://www.llis.dhs.gov/HSEEP

- HSEEP documents. https://www.llis.dhs.gov/HSEEP/documents

Institute of Medicine
(202) 334-2352
http://www.iom.edu

- Crisis standards of care: a toolkit for indicators and triggers. http://www.iom.edu/Reports/2013/Crisis-Standards-of-Care-A-Toolkit-for-Indicators-and-Triggers.aspx

Joint Commission
(630) 792-5800
http://www.jointcommission.org

- Sentinel Event Alert, issue 37: preventing adverse events caused by emergency electrical power system failures. http://www.jointcommission.org/sentinel_event_alert_issue_37_preventing_adverse_events_caused_by_emergency_electrical_power_system_failures

Michigan Department of Community Health
(517) 373-3740
https://www.michigan.gov/mdch

- Long term care disaster planning resources. https://www.michigan.gov/mdch/0,4612,7-132-54783_54826_64377_64378-297773--,00.html

Substance Abuse and Mental Health Services Administration
(877) SAMHSA-7 (726-4727)
http://www.samhsa.gov

- Psychosocial issues for older adults in disasters. http://store.samhsa.gov/product/Psychosocial-Issues-for-Older-Adults-in-Disasters/SMA99-3323

Wisconsin Department of Health Services
(608) 266-1865
http://www.dhs.wisconsin.gov

- Emergency preparedness for long term care and assisted living facilities. http://www.dhs.wisconsin.gov/rl_dsl/emergency-preparedness/emerg-prep-hva.htm

critical tasks for each target. The evaluator assesses whether the tasks for each target are:

- performed without challenges,
- performed with some challenges,
- performed with major challenges, or
- unable to be performed. (HSEEP)

Exercises and real events are not the only things that could signal a need for change. CMS's checklist indicates that the emergency plan may need to be updated if any of the following occur (CMS "Emergency Preparedness Checklist"):

- Identification of a need for changes following real emergencies, drills, or tests
- Identification of new hazards or changes to existing hazards
- Regulatory changes
- Infrastructure changes
- Funding or budget changes

FACILITATE RECOVERY

Action Recommendation: *Develop processes for recovery and restoration of services.*

The work is not done once the incident ends. Recovery will not simply happen on its own, but aging services organizations often fail to plan to recover (Szpytek conversation).

The organization should have processes for recovering and for restoring services, such as processes related to the following (CAHF):

- Assessing damage to the building and systems
- Prioritizing restoration of systems
- Restocking supplies and returning borrowed equipment, supplies, and staff
- Returning residents who were evacuated
- Confirming restoration to normal using predefined criteria
- Performing after-action review and reporting, ideally with local emergency managers and partners (see the discussion Evaluate and Improve)
- Reporting injuries, system failures, and long-term damage to licensing and regulatory agencies as required
- Submitting claims for insurance coverage and disaster relief

Clinical reassessment of residents may be warranted in some situations. In addition, the organization may wish to bring in mental health professionals to serve the needs of both residents and staff.

It is also important to thoroughly vet disaster recovery firms during the planning phase, not after an incident. After experiencing flooding due to monsoon rains, several long-term care providers in Mesa, Arizona, were "immediately inundated by uninvited, less-than-reputable companies that showed up at facilities claiming to be disaster recovery 'experts,'" writes one blogger. "Some of these companies appeared to be carpet cleaners and others were obviously general contractors that had a trash pump and squeegees and were clearly looking for work." (Szpytek "Disaster Recovery")

To vet a disaster recovery firm, aging services organizations can check whether the company

- specializes in disaster recovery;
- guarantees licensing, bonding, and insurance for disaster recovery work;
- has experience in healthcare and understands the sensitivity of disaster recovery in aging services; and
- performs background checks for all workers who would be on-site (Szpytek "Disaster Recovery").

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42 CFR § 483.75.

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