Improving Disaster Planning in Nursing Homes and Home Health Agencies

Clinician Outreach and Communication Activity (COCA) Conference Call

May 8, 2012

Office of Public Health Preparedness and Response
Division of Emergency Operations

Objectives

At the conclusion of this session, the participant will be able to accomplish the following:

- **Discuss preparedness levels among nursing homes and home health agencies.**
- **Describe the unique obstacles facing nursing homes and home health agencies in responding to disasters.**
- **Identify opportunities to improve disaster preparedness planning for nursing home and home health agencies.**

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Improving Disaster Planning in Nursing Homes and Home Health Agencies

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This study was funded by a grant from the Centers for Disease Control and Prevention (CDC) [5-P01-TP000300] and the Rollins School of Public Health, Emory University. The contents of this presentation are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

EMORY ROLLINS SCHOOL OF PUBLIC HEALTH
Preparedness and Emergency Response Research Center

Industry profiles

- Nursing homes: ~15,000
- Number of beds: 1.5 million

- Home health agencies: ~11,000
- Persons served: 1.7 million – 2.8 million

St. Rita's

"The bottom line on it all is there is no evidence-based proof that you actually save lives by evacuating patients from nursing homes."

St. Rita’s

A few months before Katrina, the state's emergency operation plan was amended to require the state Department of Transportation and Development to "direct the evacuation and sheltering of persons with mobility limitations," including those at nursing homes.

Governor Blanco said the department's primary responsibility is building highways and bridges and that three months was not enough time to change gears and develop such an evacuation plan. She also said that St. Rita's never called the state for help.

Previous testimony revealed that Mabel Mangano had rejected St. Bernard officials' offer to send two buses to evacuate the residents less than 24 hours before landfall.

OIG Report 2012

Most nursing homes nationwide met Federal requirements for written emergency plans and preparedness training. However, we identified many of the same gaps in nursing home preparedness and response that we found in our 2006 report. Emergency plans lacked relevant information—including only about half of the tasks on the CMS checklist. Nursing homes faced challenges with unreliable transportation contracts, lack of collaboration with local emergency management, and residents who developed health problems.

OIG. GAPS CONTINUE TO EXIST IN NURSING HOME EMERGENCY PREPAREDNESS AND RESPONSE DURING DISASTERS: 2007–2010.

Qualitative Research

Purpose:

1) To examine the disaster preparedness planning and evacuation experiences of Nursing Home, Home Health and Personal Care agencies in Georgia and Southern California
2) To inform the development of a nursing home survey

Data Collection:

1) Semi-structured interviews with 17 nursing home administrators and 21 home health and personal care administrators via telephone and in person
2) Document reviews (disaster plans, MOUs, contracts)

Interview Domains

Informant Interviews addressed the following topics:

- Disaster preparedness policy development
- Disaster preparedness training
  - Administrator, staff, patients/clients
- Disaster preparedness planning & coordination with outside agencies (preparedness, public health, nursing homes, hospitals community partners)
- Disaster/Emergency experience
- Lessons learned

Analysis

- Interviews professionally transcribed; reviewed and cleaned by research team members
- Coding by two research team member began with a set of deductive codes and led to development of initial codebook
- Next, inductive coding produced additional codes and applied consistently to all data
- Descriptive analysis performed and initial results presented via case studies and thematic summaries
- Comparative case analysis

Findings: Nursing Homes

Pre-Disaster Policy Development

- All nursing homes have a disaster plan in place; most developed by internal senior staff and take an "all-hazards approach"; many adapted from corporate template
- Pre-disaster planning occurs with little input from outside agencies, such as emergency management officials, fire departments, public health

Training

- Most training occurs in form of drills (such as fire drills); some facilities reported taking part in table top exercises and other state or county-run trainings
- Provider associations conduct a lot of the training
- Government-affiliated nursing homes conduct more training than private nursing homes

Findings: Nursing Homes

Communication with Outside Agencies

- Nursing homes are more likely to have regular communication pre-disaster with fire and police departments. Less established relationships existed with emergency management officials
- Communication with other area nursing homes about disaster preparedness is hampered by competition and lack of opportunity to collaborate. Communication improved post-disaster (wildfires, hurricanes)
- Many nursing home administrators are not aware of outside resources

Communication with Staff

- Staff members are informed of disaster preparedness policies at orientation, through employment materials, and emergency /disaster drills
- Staff members are expected to report for duty during emergencies/ disasters but their own family /personal responsibilities or overall lack of availability during these events may prevent it
- Some facilities make provisions for staffs' families to stay in the facility during an emergency/disaster

Findings: Nursing Homes

Communication with Family

- Most nursing homes inform family members about their disaster preparedness policies upon admission
- Family members are expected to take residents during disaster/evacuation; less family involvement indicated in facilities that serve lower-income facilities

Transportation

- Most nursing homes contract with ambulances or school buses for transportation in case of evacuation; some have own facility vehicles
- Administrators acknowledged the potential to have ambulances and school buses either commandeered by the county or not available due to overlap in companies' commitments

Evacuation/Shelter-in-Place Experiences

- Informal relationships with other administrators/disaster preparedness officials played key role in evacuations that occurred
- Facilities in areas under constant threat of a disaster appear more prepared than those that are not

Evacuation Story: Georgia

Background: Spring 2007 Wildfire in South Georgia

- Wildfire started by tree falling on power line. Due to drought conditions, low humidity and high winds caused fire to spread quickly
- Wildfire burned for more than 2 months and destroyed over 100,000 acres of land, making it the largest wildfire in the history of the state
- Also the costliest, estimated at over $150 million
- Over 6,000 people were forced to evacuate, including residents, schools and businesses. One nursing home came within hours of having to evacuate

Nursing Home's Experience

- Notified by county EMA to review disaster plan and to "get ready"
- School buses and ambulances assured through agreements with county EMA were unavailable (buses commandeered by state to help bring school children home; 10-12 county ambulances held to help other community members). Only 1 ambulance was available to nursing home, to transport their 20 ambulatory patients
- Churches volunteered their buses and the nursing home hired moving trucks
- After complaints about EMA made by community and residents' families, ambulances brought in from nearby counties

Evacuation Story: California

Background: Fall 2007 Wildfire in San Diego

- Series of wildfires burned over 500,00 acres during one week in San Diego region
- Nearly 1 million people evacuated; 2,180 homes were destroyed; nine people died
- Costs of containing 2007 Wildfire estimated to be + $10 million

Nursing Homes' Experiences

- 14 nursing homes evacuated 1,200 residents
- Many of these medically fragile residents were evacuated to non-health facilities such as Qualcomm Stadium and Del Mar Fairgrounds, while unaffected nursing homes reported available beds and the ability to provide care and aid
- One nursing home forced to evacuate its residents had transportation agreement with private ambulance company, but vehicle was commandeered by county EMA. Personal relationships with other nursing home administrators guaranteed residents place to stay. Medical Operations Center (MOC) eventually contacted the nursing home and provided 8 ambulances
- Nursing homes that accepted transferred patients reported staffing challenges (shortages, staff ill-prepared to assist high-demand patients (Alzheimer's for example)
- Repatriation was a challenge and took time and money

San Diego Area Coordinator Model

Area Coordinator (AC) Model:

- Developed by San Diego Nursing Home Administrator after October 2007 Wildfires
- Initially developed as a bed tracking system; eventually formed to foster extensive communication and collaboration between nursing homes on emergency preparedness policies and procedures, particularly around mutual aid, evacuation and sheltering of nursing home residents
- Seven Area Coordinators represent between 10-17 nursing homes within their area, representing a total of 91 skilled nursing facilities in the greater SD region
- All ACs worked closely with the SD Office of Emergency Services (OES) and all ACs volunteer with the SD Medical Operations Center (MOC)
- The San Diego AC Model is currently being adapted to fit other models of care, such as residential care and assisted living

Findings: Home Health/Personal Care Agencies

Pre-Disaster Policy Development

- Most agencies did not have a formal disaster plan in place; home health agencies affiliated with a hospital were most likely to have one
- Little to no pre-disaster planning; policies more informal in nature

Training

- Little to no training occurs of agency staff
- Administrators of hospital affiliated agencies reported taking part in NIMS online training programs
- Agency representatives reported knowing about disaster preparedness from self-directed learning (online searches, articles)
- Desire for more, formal disaster preparedness training was expressed

Findings: Home Health/Personal Care Agencies

Disaster Preparedness Perspectives

- Home health care and personal care agencies view the concept of a "disaster" quite differently
- Home health agencies view a "disaster" as a highly unusual large-scale event that disrupts normal functioning of the agency
- Personal care agencies view a "disaster" as small-scale, personal-or-business related disruptions

Responsibilities and Expectations

- Home health agencies consider their role to be strictly about providing medical care and thus rely more on family members to be available to help during a disaster
- Personal care agencies are more likely to spend more time in a client's home on a daily or weekly basis, and therefore, are prepared to take a more active and first-hand role in assisting clients during a disaster

Nursing Home Survey

Characteristics of responders and non-responders			
	Responders	Non-responders	P-value
Total	296	202	
Linked to NH Compare	286	186	
Residents	99	99	0.983
RN Hours per Resident	0.54	0.56	0.474
			Ownership, N (%)
Non-Profit	99 (35)	46 (23)	
Profit	177 (62)	147 (75)	0.005
Government	10 (3)	3 (2)	
Hospital based, N (%)	34 (12)	8 (4)	0.002
Chain-Affiliate, N(%)	197 (69)	133 (68)	0.802

Nursing Home Survey

Characteristics of responders and non-responders			
	Responders	Non-Responders	P-Value
Nursing Home Compare Ratings			
Overall	3.0	3.1	0.517
Health Inspection	2.9	3.0	0.687
Nurse Staffing	2.7	2.8	0.290
Quality	3.2	3.3	0.228
Cited for "Actual Harm" N, (%)	57 (20)	33 (17)	0.374
Cited for emergency/ fire deficiencies N, (%)	6 (2)	12 (6)	0.039

Nursing Home Survey

Disaster drills and plans	
	Number (%)
Disaster drills per year	
1	12 (4)
2	190 (64)
3	25 (8)
4+	69 (23)
Use of a disaster plan template	
No	56 (27)
Corporate Office	114 (55)
State nursing home association	36 (17)

Nursing Home Survey

Disaster drills and plans	
	Number (%)
Discussed disaster planning	
Local/State Health Department	142 (48)
Local/State Emergency Management Office	220 (74)
Fire Department	167 (56)
Police Department	99 (33)
State professional or advocacy organization	93 (31)
Local/State Emergency Operations Center	85 (29)
Hospice facility	36 (12)
Local energy provider	54 (18)
Local hospitals	160 (54)
Discuss with families	176 (59)

Nursing Home Survey

Ability to shelter in place	
	Number (%)
Generator	240 (81)
Generator functions	
Resident critical care functions	190 (79)
Laundry facilities	68 (28)
Emergency lighting	220 (92)
Days food supply	
2 – 3	141 (48)
4 – 6	66 (22)
7+	87 (29)

Nursing Home Survey

Ability to shelter in place	
	Number (%)
Days water supply	
2 – 3	145 (50)
4 – 6	80 (27)
7+	67 (23)
Emergency water supply	
Bottled water (individual size)	109 (37)
Bottled water (gallon/gallon+)	243 (82)
Separate water tank	40 (14)

Nursing Home Survey

Evacuation plans	
	Number (%)
Transportation type	
Ambulance service	226 (76)
Non-emergency transport vehicle	184 (62)
Bus company (local schools)	68 (23)
Bus company (commercial)	38 (13)
Other facility owned vehicles	120 (41)
Other	42 (14)

Nursing Home Survey

Ambulance services are the most common form of ambulance transportation (76%), followed by non-emergency transport vehicles (62%), which may refer to the use staff members' cars and facility-owned vehicles (41%). Most facilities plan to evacuate to affiliated nursing homes within their corporate group (73%), but 17% listed hospitals as an evacuation destination. Only 17% of nursing homes have off-site access to residents' electronic medical records

Evacuation plans	
	Number (%)
Evacuation destination	
Nursing home (sister facility)	215 (73)
Nursing home (non-sister facility)	107 (36)
Assisted living facility	36 (12)
Hospital	49 (17)
Electronic medical records	67 (23)
Off site record access	51 (17)
Evacuated within the last 5 years	39 (13)

Nursing Home Survey

Determinants of preparedness plans and capabilities, probit regression					
	Dependent variable				
	>3 drills/ yr	Discussed plan w/ family	Shelter in place >3 days	Food supply >3 days	Water supply >3 days
	Marginal probability (SE)				
No. Residents (100s)	-0.045 (0.068)	-0.146 (0.070)**	0.007 (0.073)	<0.001 (0.080)	-0.014 (0.076)
Hospital-affiliated	-0.224 (0.066)**	-0.096 (0.105)	0.153 (0.101)	0.206 (0.092)**	0.097 (0.104)
Chain-affiliated	-0.019 (0.066)	0.081 (0.072)	-0.044 (0.072)	-0.029 (0.079)	0.010 (0.075)
For-profit	-0.071 (0.065)	-0.159 (0.068)**	0.035 (0.072)	0.055 (0.080)	-0.015 (0.075)

**p <0.05, *p <0.10

[a] Overall rating on Nursing Home Compare, Scale of 1 to 5

[b] Omitted state is Georgia, for comparison

Nursing Home Survey

Determinants of preparedness plans and capabilities, probit regression					
	Dependent variable				
	>3 drills/ yr	Discussed plan w/ family	Shelter in place >3 days	Food supply >3 days	Water supply >3 days
	Marginal probability (SE)				
Cited for "actual harm"	0.055 (0.078)	0.003 (0.080)	-0.115 (0.083)	0.106 (0.084)	-0.026 (0.085)
Emergency/fire deficiencies	0.280 (0.198)	0.255 (0.140)	0.080 (0.206)	0.064 (0.222)	0.142 (0.204)
Evacuated in last 5 years	0.018 (0.024)	-0.012 (0.026)	0.021 (0.027)	0.054 (0.029)*	0.022 (0.027)

**p <0.05, *p <0.10

[a] Overall rating on Nursing Home Compare, Scale of 1 to 5

[b] Omitted state is Georgia, for comparison

Nursing Home Survey

Determinants of preparedness plans and capabilities, probit regression					
	Dependent variable				
	>3 drills/ yr	Discussed plan w/ family	Shelter in place >3 days	Food supply >3 days	Water supply >3 days
	Marginal probability (SE)				
NH Compare Rating[a]	-0.041 (0.102)	-0.056 (0.119)	0.169 (0.112)	0.115 (0.149)	0.046 (0.129)
California[b]	-0.113 (0.067)	-0.076 (0.079)	0.026 (0.081)	0.340 (0.062)**	0.246 (0.071)**
Florida[b]	-0.203 (0.072)**	0.361 (0.068)**	0.360 (0.080)**	0.621 (0.043)**	0.535 (0.057)**

**p <0.05, *p <0.10

[a] Overall rating on Nursing Home Compare, Scale of 1 to 5

[b] Omitted state is Georgia, for comparison

Nursing Home Survey

Staff vaccination rates by site			
Facility	Influenza (%)	H1N1 (%)	N
1	14 (74)	14 (74)	19
2	60 (50)	48 (36)	133
3	27 (84)	11 (34)	32
4	4 (20)	5 (25)	20
5	6 (50)	3 (25)	12
6	29 (62)	9 (19)	47
7	29 (74)	27 (69)	39
8	16 (52)	9 (29)	31
9	23 (46)	12 (24)	50
10	27 (56)	26 (54)	48
11	6 (50)	3 (25)	12
Total	248 (56)	167 (38)	443

Conclusions and Lessons

1. Disaster plans are not enough
2. Set expectations
3. Be cautious about using nursing homes as alternate care sites or as spillover sites to create hospital surge capacity
4. Integrate nursing homes and home health/personal care agencies into community plans and recognize interconnectedness

“Paper” Plan Syndrome

The “paper” plan syndrome, defined by Quarantelli as the tendency to believe that disaster preparedness can be accomplished merely by the completion of a written plan, created an illusion of preparedness because (i) the planning assumptions were not valid; (ii) plans were not created based on an inter-organizational perspective; (iii) plans were not accompanied by the provisions of resources to carry out the plans; and (iv) end users were not involved in the planning process

Centers for Disease Control and Prevention
Atlanta, Georgia

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Thank you for joining!
Please email us questions at coca@cdc.gov

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Improving Disaster Planning in Nursing Homes and Home Health Agencies

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Overview:

CDC's Office of Public Health Preparedness and Response funds Preparedness and Emergency Response Research Centers (PERRCs) to examine the organization, function, capacity, and performance of components in the public health system in preparing for and responding to potential threats and hazards. The Emory University PERRC conducted a study examining disaster preparedness in nursing homes and home health agencies. Although nursing homes and home health agencies care for over 2 million patients, they typically have not been included in disaster planning efforts. Please join us for this COCA call where subject matter experts will share findings from their study and discuss strategies to incorporate nursing homes and home health agencies into community-wide disaster planning.

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