

Use of Mental Health Services by Nursing Home Residents After Hurricanes

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Objective: A growing body of research supports the value of mental health intervention to treat people affected by disasters. This study used a mixed-methods approach to evaluate pre- and post-hurricane mental health service use in Florida nursing homes. **Methods:** A questionnaire was administered to 258 directors of nursing, administrators, and owners of nursing homes, representing two-thirds of Florida's counties, to identify residents' mental health needs and service use. In four subsequent focus group meetings with 22 nursing home administrators, underlying factors influencing residents' use of services were evaluated. **Results:** Although most nursing homes provided some type of mental health care during normal operations, disaster-related mental health services were not routinely pro-

vided to residents. Receiving facilities were more likely than evacuating facilities to provide treatment to evacuated residents. **Conclusions:** Nursing home staff should be trained to deliver disaster-related mental health intervention and in procedures for making referrals for follow-up evaluation and formal intervention. (*Psychiatric Services* 61: 74-77, 2010)

In 2005 the deaths of 139 nursing home residents in Hurricane Katrina, followed by 23 deaths in a bus accident during a nursing home evacuation from Hurricane Rita, dramatically highlighted the need for executable plans when sheltering and evacuating vulnerable, frail adults. In response to these tragic incidents, government agencies and health care organizations conducted investigations to evaluate adequacy of disaster plans, execution of response activities, and recovery efforts (1,2). Several reports documented that many evacuated nursing home residents experienced disaster-related psychological distress (2,3). However, the existing emergency response system emphasizes activities to promote the physical safety, and not emotional well-being, of residents. Although the physical safety of residents is paramount, mental health care should be included in nursing home disaster plans because general disruption of day-to-day routines, exposure to severe conditions of the disaster at hand, or evacuation to another facili-

ty can worsen existing psychiatric and medical conditions.

In normal conditions, transfer trauma occurs when a person experiences a decrement in functioning or health status as a consequence of being moved from one environment to another (4,5). The stress from relocating is associated with increased confusion, depression, anxiety, and apprehension and changes in eating and sleeping habits. Although it is unclear whether disaster-related evacuations produce adverse outcomes similar to those of transfer trauma, evidence suggests that evacuation is physically and emotionally demanding and results in increased rates of morbidity and mortality (6,7). Although residents who shelter in place are not subjected to the stressors experienced by their transported peers, it is highly probable that they also endure some degree of hurricane-related stress.

Despite a growing body of research supporting the value of disaster-related mental health intervention (8,9), little is known about the types of care provided to nursing home residents. In this study we examined the rates of pre- and postdisaster mental health service use in Florida nursing homes, identified barriers to care, and explored staff perceptions of resident need for intervention. In both 2004 and 2005, Florida nursing homes were threatened or affected by four hurricanes, which thus provided an excellent opportunity to learn from the experiences of Florida nursing home administrators and staff.

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Methods

The University of South Florida Institutional Review Board approved the study. A convenience sample was recruited at the 2006 Florida Health Care Association's (FHCA) annual Nurse Leadership Conference and its 2006 annual conference. FHCA is an association that represents 80% of Florida's free-standing nursing homes. FHCA members include owners, administrators, nurses, allied health professionals, and other support staff. A mixed-methods approach was used to conduct this study. At each conference, questionnaires (quantitative data) were administered, and face-to-face focus groups (qualitative data) were conducted.

People of age 18 and older were provided the questionnaire. Those who completed the questionnaires were invited to participate in a one-hour focus group, comprising five to six participants, that was conducted at the conference. The participants at the annual conference were administrators, owners, and nurses, whereas the participants in the focus groups conducted at the Nurse Leadership Conference were exclusively administrative nurses. Prompts were developed and used in the focus groups to examine barriers to providing disaster-related mental health services.

Questionnaire items were developed from a comprehensive review of the literature. A multidisciplinary team refined the initial pool of questions, which was then pretested with local nursing home staff to ensure that questions were understood, appropriate, and relevant. The final 25-item questionnaire requested information about hurricane experiences, staff perception of residents' disaster-related mental or emotional distress, identification of the types of mental health service providers, and the mental health needs and services offered to residents pre- and postdisaster. Descriptive analyses of item data from the questionnaire were conducted with SPSS, version 17.0 (10).

Focus group audio recordings were transcribed for computer-assisted qualitative analysis with Atlas.ti software (11). Coding used both inductive and deductive analysis. Transcripts were read to identify emer-

gent themes that were not assessed by the questionnaire. A codebook of all identified major themes was developed and used as a guide to code text. Text sorted by each major category was then printed out and reread by the authors to determine the most salient themes. Next, summary and interpretive statements of the text were formulated and reviewed.

Results

A total of 258 respondents completed a questionnaire about their respective residents and staff response to the hurricanes. The study sample included 122 administrators (47%), 89 directors of nursing (34%), and 47 owners and managers (18%). Respondents represented 40% of all Florida nursing homes and 42 (63%) of Florida's 67 counties. Because these key personnel direct all important functions related to disaster planning, response, and recovery, they are a well-qualified group to survey regarding their perceptions of the mental health needs of residents and the barriers to care. The number of licensed beds across nursing homes ranged from 37 to 462. The distribution of number of beds was bimodal, so we defined facilities with 110 beds or fewer as small nursing homes (N=87, 34%) and the remainder as large nursing homes. Most respondents (N=171, 66%) indicated that they work for a large facility.

More than half (N=150, 58%) of the respondents reported that they were not directly affected by the 2004 or 2005 hurricanes. Ten (4%) small and 24 (9%) large nursing homes reported that they evacuated residents at least once. Using the number of licensed beds as a proxy for residents, small facilities reported that they evacuated approximately 843 people and large facilities evacuated about 3,868 residents in response to one or more hurricanes. Twice as many respondents, 20 (8%) small and 52 (20%) large facilities, reported that they received residents who evacuated from threatened facilities. The discrepancy between the number of evacuating and receiving nursing home occurred because residents from one facility were evacuated to several receiving institutions.

Ninety percent (N=233) of the fa-

cilities reported that 50% or more of their residents were 65 or older (76, or 29%, small nursing homes and 157, or 61%, large nursing homes). Sixty-six percent (N=169) of the facilities reported that 50% or more of their residents had some type of cognitive impairment (56, or 22%, small nursing homes and 113, or 44%, large nursing homes). Facilities with a higher percentage of older or cognitively impaired residents were not more likely to evacuate than facilities with a higher percentage of younger and more cognitively intact residents. Table 1 presents the percentages of residents with disaster-related mental health problems by facility size and by evacuation or sheltering status.

Nearly all nursing homes reported that they routinely provided some type of counseling or psychotherapy during normal operation. Types of clinicians who provided mental health services to residents are detailed in a figure presented in an online supplement to this brief report, available at ps.psychiatryonline.org. Most facilities (N=128, 50%) reported that their residents had access to clinicians from at least two different mental health disciplines (such as a psychiatrist, psychologist, or social worker). Not unexpectedly, large facilities (N=36 of 171, 21%) more often than small facilities (N=11 of 87, 13%) provided residents with access to mental health services from clinicians representing three or more disciplines. Facilities that reported a high percentage of cognitively intact residents offered mental health services just as frequently as those with more cognitively impaired populations.

Professionals who provided disaster-related mental health services are detailed in a figure presented in an online supplement to this brief report, available at ps.psychiatryonline.org. Only one large nursing home reported that it used a marriage and family counselor for routine and disaster-related mental health services. Psychologists, psychiatrists, and social workers were the three professions most frequently identified as mental health care providers for pre- and postdisaster mental health care. Although the respondents indicated that psychologists most often provid-

Table 1Nursing home population with disaster-related mental health problems among 258 Florida facilities^a

Mental health problem	Large-facility nursing home population ^b												Small facility nursing home population ^c												
	None		1–19%		20–39%		40–59%		60–79%		80–100%		None		1–19%		20–39%		40–59%		60–79%		80–100%		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Evacuated facilities (N=34; 13%)																									
Anxiety	1	4	9	39	5	22	6	26	1	4	1	4	2	20	4	40	3	30	1	10					
Depression	2	8	7	29	8	33	4	17	1	4	1	4	2	20	5	50	3	30							
Emotional distress	1	4	10	42	5	21	3	13	2	8	2	8	1	10	5	50	3	30					1	10	
Anxious about next hurricane season	5	22	4	17	5	21	4	17	3	13	2	8	2	20	5	50	1	10	2	20					
Facilities that sheltered in place (N=72; 28%)																									
Anxiety	13	25	20	38	10	19	5	9			1	2	6	33	5	28	4	22	1	6	1	6	1	6	6
Depression	18	36	19	39	8	16	2	4	1	2	1	2	8	44	5	28	1	6	3	17	1	6			
Emotional distress	11	22	22	45	9	18	3	6	1	2	3	6	6	33	6	33	1	6	4	22			1	6	
Anxious about next hurricane season	19	37	16	31	7	13	4	8	1	2	2	4	5	28	6	33	4	22	1	6			2	11	

^a Total percentages may vary from 100% and counts may vary from total Ns because of a small number of missing values.^b Among large facilities (>110 beds), 23 nursing homes (9%) were evacuated and 49 (19%) sheltered in place.^c Among small facilities (≤110 beds), ten (4%) were evacuated and 18 (7%) sheltered in place.

ed pre- and postdisaster mental health care, social workers were identified as the profession most likely to implement resilience-building and psychological first-aid programs.

When respondents were asked about their interest in offering residents a pre-disaster, resilience-building intervention, 27 (11%) endorsed no interest and 25 (10%) responded that they were interested in doing so but did not have a person on staff who could deliver the program. Nursing homes that indicated an interest identified social workers (N=112, 54%), psychologists (N=52, 25%), and nurses (N=42, 20%) as the three professions most likely to be responsible for implementing this type of curriculum. Respondents who expressed a desire to provide residents with psychological first aid after a disaster selected social workers (N=142, 55%), psychologists (N=62, 24%), and nurses (N=55, 21%) as the three professions most likely to be responsible for implementing a postdisaster treatment program.

Receiving facilities were more likely to provide some type of disaster-related mental health services than those that evacuated residents. The relationships between size of the facility (number of licensed beds), pre- or postdisaster resident mental health

(depressed, anxious, or emotionally distressed) or cognitive status (specifically dementia), type of available provider (such as a psychiatrist, physician, psychologist, or social worker), hurricane status (not affected, evacuated, or received residents), and the facility's willingness to use disaster-related mental health services were not statistically significant.

A total of 22 people participated in the four focus groups. Because the general themes generated by the focus groups were remarkably similar, the findings are presented at the aggregate level. Focus group participants asserted that not only were most evacuated residents distressed, but a significant number of staff experienced high levels of stress as well. "You are running on no sleep, and staff is worried about family. You have been there during the whole event. Our staff was coming in weary and going home weary."

A consistent theme across focus groups was that in the days leading up to the hurricane, staff experienced increased levels of stress, which was attributed to personal worries about family and pets, concerns about adequately preparing their households and securing their homes, and an upsurge of work related to activating their facility's disaster plan and arranging for evacuation. "Getting the staff to

come in [was a challenge] because we were staying in place and we are not that far from the water. First of all, they had to get there before the bridge was closed. And then the staff who were coming across the bridge didn't want to come and leave their families, but then they didn't want to bring their families to a place that was closer to the water. That gave them a dilemma: Do I stay with my family, or do I go to one of our sister facilities and work and leave [my facility] without people?"

Most focus group participants supported the use of psychological first aid for staff and residents alike. Barriers to providing residents with disaster-related mental health services included the need for administrators to support staff training in psychological first aid and to have procedures in place to facilitate follow-up evaluation and more formal intervention if needed.

Discussion

This study revealed that residents who evacuated were most likely to receive disaster-related mental health services. As noted above, because a receiving nursing home is unlikely to have a sufficient number of unoccupied beds to accommodate all incoming residents and staff from a single facility, those that evacuate typically send their residents to several institu-

tions. Because the day-to-day functioning of the receiving facility has not been disrupted, the evacuating residents' behavioral and emotional problems stand out in marked contrast when compared with residents in the receiving facility, thus making it easier for host staff to detect and treat those who are distressed. Because most evacuating staff were stressed to some degree, distress among residents was generally considered a normal response and therefore not perceived or assessed as a potential mental health problem.

Administrators and directors of nursing play a key role in establishing facility culture and prioritizing how staff is trained to meet resident care needs. Because major disasters occur relatively infrequently, with one on average occurring somewhere in the United States each week (12), it can be difficult to justify the financial costs associated with training staff to use psychological first aid. However, the price of human suffering greatly exceeds the cost of training staff. Further, psychological first aid can be used during nondisaster times to reduce distress and enhance adaptive coping of residents who have experienced a traumatic event of a more personal nature (such as a change in health status or the death of a relative or close friend). Focus group participants noted that the intervention could be used to help anxious and upset staff feel better and remain productive and that they desired guidance about the best ways to calm and assist colleagues who are struggling emotionally.

Although our findings indicate that some residents received some form of psychological intervention to treat hurricane-related distress, our focus group participants conveyed that their staff had not received specialized training in disaster mental health. However, they may not be aware of training that their staff may have independently obtained through the American Red Cross or other continuing education programs. It is noteworthy that the *FHCA Disaster Preparedness Guide* now recommends that facilities provide psychological first aid and that the American Health Care Association posts the psychological first-aid materials on its Web site.

In 2004 Florida had 649 certified nursing homes with 76,394 beds, making it the seventh largest state in nursing home beds (13). The study's convenience sample represents 40% of all Florida facilities, and therefore the generalizability of the findings is limited. Although not all member nursing homes attended an FHCA conference and not all attendees completed the questionnaire, this is a large representative sample in a key state and provided important insights into the provision of mental health services to residents after a disaster. Despite its limitations, this study is the first effort to identify the major issues in providing mental health services to nursing home residents in a large state that experiences numerous natural disasters.

Conclusions

Although the nursing home associations and their partners (including transportation providers and emergency operations centers) have made meaningful progress to enhance resident safety, more attention needs to be focused on making mental health services available to disaster-distressed residents. Research should be conducted to obtain resident-level data on the effects of natural disasters, to evaluate the efficacy of interventions such as psychological first aid, and to further explore methods to increase adoption of evidence-based practices in nursing homes. In addition, the perspective of direct-care providers (including nurses and certified nursing assistants) and clinicians (physicians, psychologists, and social workers) on issues related to disaster mental health intervention should be solicited. Our questionnaire revealed that psychiatrists and physicians are involved in day-to-day routine resident mental health care but less so as primary providers of disaster-related mental health services. Additional research needs to address the role of psychiatrists and physicians in providing care to nursing home residents during disasters.

Given that the psychological effects of a disaster exceed effects of physical injury that directly result from a disaster, greater effort should be made to address the mental health needs of residents. The findings of this study high-

light an area that should be of national concern because older adults are the most rapidly growing segment of the population and disasters will continue to occur with relative frequency.

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