

A Pilot Study Evaluating the Feasibility of Psychological First Aid for Nursing Home Residents

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The objectives of the pilot study were to modify existing psychological first aid (PFA) materials so they would be appropriate for use with institutionalized elders, to evaluate the feasibility of using nursing home staff to deliver the intervention to residents, and to solicit feedback from residents about the intervention. The STORM

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Study (STORM is an acronym for “services for treating older residents’ mental health”) is the first step in the development of an evidence-based disaster mental health intervention for this vulnerable and underserved population. Demographic characteristics were collected on participating residents and staff. Program evaluation forms were completed by staff participants during the pilot test and nurse training session. Staff and resident discussion groups were conducted during the pilot test to collect qualitative data on the use of PFA in nursing homes. Results demonstrate the feasibility of the PFA program to train staff to provide residents with PFA during disasters. Future research should focus on whether PFA improves coping and reduces stress in disaster-exposed nursing home residents.

KEYWORDS psychological first aid, disaster mental health, nursing homes, older adults, trauma, training, intervention

INTRODUCTION

In contrast to community-dwelling elders, nursing home (NH) residents are at greater risk for disaster-related adverse psychological outcomes (Brown, Rothman, & Norris, 2007; Dosa et al., 2008; Laditka et al., 2008); yet during the recovery phase they are consistently underserved in regards to psychological intervention (Brown, Hyer, & Polivka-West, 2007; Brown, Hyer, Schinka, Frazier, & Mando, 2008; Centers for Medicare and Medicaid Services [CMS], 2006). Until the publication of several government reports that specifically noted that NH residents experienced adverse psychological consequences due to the 2005 hurricanes, the disaster mental health needs of this subgroup were generally not recognized (Administration On Aging, 2006; CMS, 2006; Department of Health and Human Services, 2006). These government investigations concluded that evacuated residents experienced disaster-related mental distress and recommended that NH facilities provide counseling services (CMS, 2006). Notably, CMS’ recommendations focused exclusively on those who evacuated and did not consider residents who sheltered in place, despite their vulnerability for adverse psychological outcomes from direct exposure to the event.

Consistent with the findings of these government investigations, a statewide survey of Florida NH directors of nursing and administrators also revealed a need for disaster mental health services for residents (Brown et al., 2008). Yet a review of facility disaster plans and NH regulations in 2006 showed that procedures for providing residents with disaster mental health interventions were not included as part of the recovery process. Few facilities provided residents with needed disaster mental health services and

most facilities did not have ready access to licensed social workers, counselors, psychologists, or psychiatrists to provide intervention when desired (Brown et al., 2008; Hyer, Brown, Berman, & Polivka-West, 2006).

A survey of 194 NHs in 30 states revealed that 91% of the long-term care health professionals felt they were “. . . ill prepared to deal with public health emergencies” and that “. . . their workforce lack[ed] the knowledge, skills, and abilities to recognize the impact of a disaster on residents' mental or emotional health.” Although 80% had received some type of disaster-related training (i.e., amount of supplies to store, safety issues) only 10% endorsed that they learned how to deal with cognitively impaired NH residents in emergency situations and only 8% were taught strategies to help residents cope (Mather LifeWays Institute on Aging, 2005, p. 2).

Disaster-related activities that are intended to ensure resident safety, such as sheltering in place and evacuating to another facility, disrupt daily schedules and degrade provision of routine care. In turn, the interruption in care exacerbates existing psychological and medical conditions that can potentially lead to further impairment in resident functioning (Brown, Cohen, & Kohlmaier, 2007; Laditka et al., 2008). Cognitive deficits in combination with other factors such as physical disability, psychiatric disorders, sensory impairment, and various acute and chronic medical illnesses place NH residents at high risk for experiencing disaster-related trauma (Brown, Rothman, & Norris, 2007; Rothman & Brown, 2007).

Although psychological first aid (PFA) is increasingly recognized as the intervention of choice for disaster-affected populations, it has not been used with NH residents. The PFA intervention was funded by the Substance Abuse and Mental Health Services Administration and the U.S. Department of Health and Human Services and developed by the National Child Traumatic Stress Network (NCTSN) and the National Center for PTSD (NCPTSD). PFA was designed to be used in the immediate aftermath of a disaster to reduce initial distress and promote adaptive functioning and coping. Lack of adoption of PFA by NHs, in part, is because the existing PFA materials need to be modified to meet the needs of residents living in institutional settings. The current PFA materials focus primarily on children, adolescents, and community dwelling adults. In this paper, we describe the development and pilot testing of an intervention to provide PFA to NH residents.

PFA is based on research that demonstrates that disaster survivors experience a broad range of physical, psychological, behavioral, and spiritual reactions that have the potential to interfere with adaptive coping and impede the recovery process. Each of the eight modules that comprise PFA is evidenced-based or informed. *The Psychological First Aid: Field Operations Guide*, Second Edition, describes the basic objectives of early assistance, provides detailed background information about each of the eight modules, and contains instruction about how to implement the core

TABLE 1 Psychological First Aid Core Components

Core component title	Description of contents
1. Contact and Engagement	To respond to contacts initiated by survivors, or to initiate contacts in a non-intrusive, compassionate, and helpful manner.
2. Safety and Comfort	To enhance immediate and ongoing safety, and provide physical and emotional comfort.
3. Stabilization	To calm and orient emotionally overwhelmed or disoriented survivors.
4. Information Gathering: Current Needs and Concerns	To identify immediate needs and concerns, gather additional information and tailor Psychological First Aid interventions.
5. Practical Assistance	To offer practical help to survivors in addressing immediate needs and concerns.
6. Connection with Social Supports	To help establish brief or ongoing contacts with primary support persons and other sources of support, including family members, friends, and community helping resources
7. Information on Coping	To provide information about stress reactions and coping skills to reduce distress and promote adaptive functioning.
8. Linkage with Collaborative Services	To link survivors with available services needed at the present time or in the future.

actions of the intervention (NCTSN/NCPTSD, 2006). Table 1 provides a brief description of each of the core components in *The Psychological First Aid: Field Operations Guide*, Second Edition.

Because PFA, like medical first aid, does not have to be delivered by a highly trained licensed mental health clinician, NH staff who provide direct care to residents could be trained to provide the intervention. A number of recent studies have demonstrated the benefits of training Certified Nursing Assistants (CNAs) to administer assessments and deliver interventions to NH residents (Burgio, Stevens, Burgio, Roth, Paul, & Gurstle, 2002; Fischer, Wei, Rolnick, Jackson, Rush, Garrard, et al., 2002; Fitzwater & Gates, 2002; Hutt et al., 2006; Mentes, Teer, & Cadogan, 2004).

The STORM Study, an acronym for “services for treating older residents’ mental health,” is the first step in the development of an evidence-based disaster mental health intervention for this vulnerable and underserved population. The STORM Study modified existing PFA materials by removing content that pertained exclusively to children and adolescents, and adding information that was specific to the needs of institutionalized elders. Next, we evaluated the feasibility of NH direct care staff to deliver the intervention to residents, and obtained feedback from residents who received selected modules of the modified intervention. In addition to feasibility, evidence of acceptability of the intervention and perceived ability of NH staff to train other staff to provide PFA was solicited.

INTERVENTION DEVELOPMENT

A pilot test using the modified PFA materials and training program was conducted with staff and residents from a local NH before proceeding with the larger evaluation, called the STORM Study, of the materials and training at the Florida Health Care Association (FHCA) Nurse Leadership Conference. FHCA represents 80% of the NHs in Florida. As a service to its members, this organization sponsors annual state meetings and trainings to enhance delivery of NH services and improve resident care. This study was driven by five elements that are commonly used for creating effective training programs: analysis, design, development, implementation, and evaluation (ADDIE) (Dick & Carey, 1996).

Analysis Phase

The analysis step was completed prior to initiating study activities. A state-wide needs assessment was conducted with NH personnel to learn what types of disaster mental health services were currently provided by facilities, if staff perceived residents needed disaster mental health intervention, and if staff would be interested in learning how to use PFA (Brown et al., 2008).

Design Phase

The design phase addressed how the learning objectives could be achieved with assessment instruments (i.e., pre- and post-course evaluation), class exercises, appropriate content matter for NH staff and residents in the modified PFA guide, and media support (i.e., Power Point presentation, handouts, and newsletters). A literature review was conducted to identify PFA content areas requiring adaptation and evidence-based material to potentially include in the modified version.

Development Phase

During the development phase, information in the existing *Psychological First Aid Field Operations Guide*, Second Edition (NCTSN/NCPTSD, 2006) that pertained to children and adolescents or was highly specific to treating community dwelling residents was deleted. For instance, the core action Linkage with Collaborative Services presumes that adult disaster survivors live independently in the community and will assume responsibility for seeking external assistance after a disaster. Another example is the Contact and Engagement core which is based on the fact that many relief workers come from outside the impacted area. This section provides instruction about how to approach or initiate contact with disaster affected people.

Given that NH staff are generally familiar with their residents, much of this core's information is not directly relevant.

An example of information that was added to the PFA guide is "Determine if the resident is experiencing difficulty with health-related issues or in performing daily activities (i.e., assistance with dressing, use of the bathroom, daily grooming, and feeding) that he or she was able to perform prior to the disaster" (Brown & Hyer, 2008, p. 26). A second example is "Residents having specialized needs such as ventilator and dialysis care may benefit from Psychological First Aid to address their fears associated with the threat of interrupted services as a result of the disaster" (Brown & Hyer, 2008, p. 18). Content in the modified PFA guide and instructional materials that were developed were reviewed for accuracy and clarity by the Principal Investigator and four research assistants with training in geriatric issues.

The modified PFA guide was titled *Psychological First Aid Field Operations Guide for Nursing Homes* (PFA Guide). Next, the modified PFA Guide was reviewed by a multidisciplinary team that was comprised of a social worker, nurse, CNA, and administrator who worked at a NH facility. They provided comments on the content and readability of the PFA Guide as well as the feasibility of use and delivery of the PFA intervention to residents. The revised materials were then reviewed by a panel of 14 national experts who served on the project's national advisory committee. Members of the national advisory committee were leading experts in geriatric medicine, nursing, gerontology, sociology, long-term care, public health, and social work. Additional revisions were made to the PFA Guide according to the feedback given. These changes were incorporated and a modified version of the PFA Guide, handouts, and related educational materials were printed and prepared for final review by FHCA Disaster Preparedness Committee. The FHCA Disaster Preparedness Committee is comprised of experts from diverse fields who have extensive experience with NHs and disasters. An iterative process was used to evaluate and revise the PFA Guide and instructional materials.

Implementation Phase

During the implementation phase, procedures for training PFA facilitators were developed. The facilitators' training included learning how to use course evaluations to inform delivery of the PFA program (i.e., pre- and post-course assessment), techniques to implement curriculum materials (i.e., PowerpointTM presentation, PFA Guide, handouts), and general information about methods of training. Train-the-trainer (TTT) and just-in-time (JIT) were the two approaches selected for delivering the PFA program to NH staff. Both of these training models have been used extensively in

non-disaster settings to train laypeople to provide a variety of services and programs.

A TTT approach has been used to teach end of life skills to NH staff (Kelly, Ersek, Virani, Malloy & Ferrell, 2008; Ersek, Kraybill & Hansen, 2006). For the STORM Study a TTT format required an expert to present the curriculum and training materials to NH nurses who in turn conducted trainings for direct care staff in their respective facilities. The goal was to teach select NH staff to become trainers by developing their knowledge of PFA and skills in delivering and teaching the intervention. Each nurse trainer was provided with materials (i.e., slides, handouts, manuals) that would be helpful in teaching others. It was expected that the TTT approach would be used to train NH staff prior to a disaster. For facilities who had not received training in PFA prior to a disaster, a JIT approach would be used to train staff. Nurses attending the training were asked if they would be willing to serve as TTT or JIT trainers.

Evaluation Phase

The evaluation phase consisted of formative and summative evaluations. Formative evaluation was used during each stage of the ADDIE process. Reviewers and participants had an opportunity to share their impressions, suggestions, or concerns about the PFA program during group discussions or in response to open ended questions placed on the questionnaire. Summative evaluation consisted of findings from a quantitative questionnaire that was designed to assess domain specific criterion-related items and administered to NH staff who pilot tested the materials. A second summative evaluation was completed during the STORM Study by nurses who participated in the PFA training at the annual FHCA nursing leadership conference.

Rationale for Pilot Testing the PFA Program

Once the extensive and multiple reviews of the PFA materials were completed, a local NH administrator provided access to staff and residents to pilot test the modified PFA training materials and intervention. Conducting a pilot test with a population (i.e., nurses and CNAs) that was as similar as possible to the target group prior to formal implementation, was a critical step in determining potential problems in delivering the program, evaluating the methods used to collect evaluation information, assessing potential logistical and practical problems in implementing a full-scale study, determining key issues that would hinder or facilitate adoption of the PFA program, and identifying resources needed to conduct the training and sustain use of the intervention overtime.

Pilot Test Participants

Three nurses and three CNAs agreed to participate in the training and then to practice administering select modules from the PFA intervention to four residents. To participate in the pilot test NH staff had to be 18 years or older, English speaking, and willing to provide informed consent. NH staff prescreened residents to exclude those with a psychotic disorder or significant cognitive, communication, hearing, or vision impairment that would preclude reliable participation in the pilot testing. The four residents who agreed to participate in the role-playing portion of the pilot test had to be English speaking and willing to provide informed consent. Demographic information was obtained from participating staff and residents.

Pilot Test

The research team facilitated a three-hour session to train staff to train others and use the modified version of PFA with residents. After seeing specific techniques demonstrated by the research team, NH staff participated in an observed role play where they administered select core modules to the residents. The modules chosen for the role play were selected based on their content. Because we wanted to avoid suggesting to residents that a disaster had actually occurred, one of the selected modules featured relaxation and stress-reduction techniques that could be implemented at any time in the NH. The objectives of the role play were to determine if NH staff were comfortable delivering portions of the PFA intervention, to see if residents were receptive to the material being presented, and to assess fidelity. Immediately following the administration of the selected modules, residents were asked to provide feedback about their experience.

At the end of the PFA training, NH staff completed a program evaluation questionnaire to assess the following: The PFA Guide, training presentation, handouts, classroom environment, the presenter, overall course, training outcomes, confidence in ability to train others to use PFA, and likelihood to use PFA now and in the future. Participants rated a total of 47 statements on a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Unsure, 4 = Agree, 5 = Strongly Agree). Then staff participated in a discussion group to further ascertain their comfort in using the intervention, intention to use PFA with residents, and confidence in training other staff to use PFA. Residents also participated in a discussion group and were asked to share their impressions of the PFA modules. Based on the feedback of staff and residents, minor refinements were made to the PFA program.

STORM Study

After the pilot test, the second stage, called the STORM Study, was conducted and 22 NH nurses who were attending the FHCA nurse leadership conference were trained using the TTT approach. The PFA training was offered as one of five concurrent programs during the three-hour morning session. The modified version of the PFA Guide, handouts, and related educational materials were printed and distributed to attendees. At the close of the session, the program evaluation questionnaire was administered and attendees were invited to participate in a future follow-up evaluation and to volunteer to serve as a TTT or JIT trainer.

Analyses

For both the pilot test and the STORM Study, standard descriptive statistical analyses, including calculation of means, standard deviations, and frequencies, were generated from the demographic forms and items assessed in the program evaluation questionnaires. In addition, open-ended questions on the questionnaire allowed for collection of qualitative data, which were analyzed for common themes. Themes identified from the pilot test focus group were compared with the answers they provided to the open-ended questions on the program evaluation questionnaire.

RESULTS

Pilot Test Participants

The four female residents who agreed to participate in the role play had been living in the facility for an average of 2.6 years, but the length of residency ranged from one month to five years. The residents had a mean age of 71.3 (± 14.3) and identified as White ($n = 2$) or African American ($n = 2$). Two participants had completed some college, one had earned a high school diploma, and one had received a GED.

The three nurses and three CNAs who evaluated the course training and participated in role-playing with the residents were females who identified as being African American or Black non-Hispanic. The mean age of these participants was 44 (± 10.2) and most ($n = 5$) endorsed high school as their highest level of attained education. On average, these participants had 23.5 (± 9.9) years of experience in long-term care with an average of 14.3 (± 5.8) of those years at the current NH.

STORM Study Participants

Twenty-two participants took part in the PFA training at the FHCA nurse leadership conference. This sample consisted mainly of female ($n = 21$)

nurses, with an average age of 42.9 (\pm 11.1) years. Most of these participants were White ($n = 17$) and had earned a degree from a junior or technical college ($n = 11$) or a four-year college ($n = 9$). These nurses had an average of 14.2 (\pm 6.4) years of experience in long-term care and had spent, on average 4 (\pm 3.3) years in their current position. Several participants had some experience responding to a hurricane as a NH staff member, including evacuation ($n = 6$), sheltering in place ($n = 6$), or both evacuating and sheltering in place ($n = 6$).

Pilot Test Evaluation of Training Materials

On average, participants responded to most statements on the program evaluation questionnaire with a rating of either 4 (Agree) or 5 (Strongly Agree). The PFA Guide and the presenter were most highly rated, with each statement in those categories receiving average ratings of 5. The participants strongly agreed that the guide was well organized, easily understood, readable, and comprehensive and that the presenter was knowledgeable about PFA, encouraged participation, clearly presented the course content, answered questions completely, and effectively used the instructional materials.

Although participants were given the opportunity to provide written comments, very few written comments were provided. In regards to the PFA Guide, the participants felt it was “helpful, educational,” and “very informative.” One participant felt the handouts could effectively be used with friends and family in addition to NH residents. In terms of the course training itself, participants recommended that “PFA should be taught to medical students” and “CEU credit should be provided.” All participants endorsed that the PFA training would improve resident care, is worth recommending to colleagues, and increased their knowledge about disasters. No written suggestions were made for additions, deletions, or modifications to the PFA Guide or the PFA training.

In general, the qualitative findings from the discussion group that followed the pilot training mirrored the positive responses endorsed on the questionnaire. Participants were enthusiastic about using PFA, but reticent about having to participate in an observed role play with residents. They also indicated that PFA would be useful with distressed elders during non-disaster times and that the skills they learned during the training would enhance overall care of residents. Staff especially liked the sections in the PFA Guide that provided specific examples of comments to use or avoid with traumatized people. For example, the section on Safety and Comfort includes a list of five statements to say and twenty phrases not to say to people who had experienced a death of a loved one or close friend. For example, three phrases that are not recommended are “I know how you feel,” “It was probably for the best,” and “He is better off now.” These

statements engendered considerable discussion about the potential negative effects these well intended comments could have on grieving people.

From the pilot test, the Principal Investigator realized the potential for dedicating too much time to the core components of PFA that included experiential learning. In response to this issue, a time guide was prepared with suggested times for completing each of the core components within a three hour training session. No changes were made to the content covered in the program evaluation questionnaire. Overall, participants indicated that the training was a very positive experience.

STORM Study Evaluation

Of the participants at the FHCA nurse leadership conference, 55% ($n = 12$) indicated their willingness to serve as a JIT trainer and 77% ($n = 17$) planned to train other staff members in their NH. Participants also completed the program evaluation questionnaire and provided demographic information. Consistent with findings from the pilot test, respondents rated most statements with a response of either 4 or 5 on average. All of the participants “strongly agreed” that they had the ability to provide PFA to residents and train other staff to use PFA. Again, the ratings of the PFA Guide received the highest scores, with all participants endorsing “strongly agree” in response to statements that the guide was well organized, readable, and comprehensive. All participants endorsed that they knew more about disaster-related psychological distress and PFA post-training. As with the NH pilot test sample, these participants did not offer written suggestions for additions, deletions or modifications to the program. Written statements evaluating the program highlighted how “good” or “useful” the information was, with one respondent indicating how “badly needed” this training is for NH staff.

DISCUSSION

The major finding of this pilot study is that PFA can be successfully tailored to fit the needs of NH residents. Currently, the emphasis during disasters is on physical safety and provision of medical care, not on the mental health needs of NH residents. While it is of paramount importance to keep residents safe and healthy during disasters, activities to ensure safety and physical well-being need not preclude delivery of disaster mental health interventions, like PFA. In recognition of residents’ disaster mental health needs, the FHCA disaster guide will include a recommendation for facilities to provide intervention.

Because nurses and CNAs are familiar with residents under their direct care, PFA training could enhance staffs’ ability to detect changes in mood or

cognition and intervene appropriately and quickly with those who are distressed. Moreover, because NH staff remain with residents and continue to provide direct care whether they are sheltering in place or evacuating to another facility, trained staff could use PFA at any phase of the disaster (i.e., preparing, responding, and recovering). For example, residents who are evacuated prior to an event might benefit from PFA if travel is difficult or prolonged.

Given that disaster mental health professionals may not be available immediately after an event because of travel issues and safety concerns, it seems both efficient and effective to train NH staff to provide PFA to residents. PFA trained NH staff would be able to immediately intervene after disasters and provide PFA to disaster distressed residents without waiting to make a referral for mental health care. Even if disaster relief workers might be available to help residents in NHs, it is unlikely that these workers would be familiar with NH regulations, or with older adults' health concerns. Specialty trained NH disaster workers would require intensive training in geriatric clinical issues and NH regulations in addition to PFA. It seems profitable to train NH staff who are familiar with their facilities' residents and their respective health concerns to provide PFA.

TTT training is provided prior to a disaster whereas a JIT approach would introduce the PFA intervention to facility staff in the immediate aftermath of a disaster. A JIT approach might be beneficial because recall of taught information and applied skills are at the highest level immediately after training (Harden, 2005). Although there are advantages to providing training at a time when it is most needed by staff, it is unknown if it is feasible for staff to learn needed skills during this phase of recovery. Research is needed to evaluate and compare JIT and TTT methods for delivering PFA.

There are a number of limitations to the STORM Study. Because the STORM Study involved NH staff exclusively from Florida, generalizability to NH staff located in other areas is limited. Further, the Principal Investigator for the STORM Study delivered the PFA training to interested NH staff who may recognize the need for training because Florida is prone to seasonal disasters such as hurricanes and wildfires. Staff who are not routinely exposed to threat of disaster or as invested in learning a new intervention may be less motivated to use PFA; and facilitators who are less experienced and knowledgeable about disaster mental health may not provide training that is as well received. Further, both the pilot test and nurse leadership participants had been employed in long-term care settings on average for nearly two decades. It is evident that participants in both groups are experienced professionals who because of the length of their service may not be typical of most NH employees.

Because residents who were willing to learn the PFA skills and provide feedback about the intervention were recruited, these study participants may not be characteristic of other NH residents, and their positive response

to the role-playing exercises may not reflect typical reactions during disasters. More than 70% of NH residents are estimated to have some type of cognitive impairment and approximately 47% of NH residents carry a diagnosis of Alzheimer's disease (Alzheimer's Association, 2007a; Alzheimer's Association, 2007b). The STORM Study focused exclusively on cognitively intact residents because of their ability to provide reliable feedback about their experience receiving the PFA modules.

Because the majority of NH residents require interventions that accommodate decline in cognitive function, future studies should focus on further modifications to PFA to accommodate those with cognitive impairment. Modification of the intervention to include those with dementia would enhance the quality of care provided to people with mild to moderate AD who have been impacted by a disaster.

Additional research has to be conducted to determine if the positive results produced by the PFA training program during the STORM Study can be replicated in other facilities. It is unknown if the PFA skills learned will be retained by staff and used appropriately when a disaster occurs, regardless of the time interval between training and an event. Delivery of PFA training using either the JIT or TTT approach will be adversely affected by attrition of trained NH staff over time, lack of owner or administrator support, and limited resources for continued trainings. Further, the initial and ongoing expense of printing and disseminating training materials; accessing space in which to conduct the training; obtaining sufficient time for direct care staff to attend the training; and locating motivated nurses who are willing to conduct the PFA training are a few of the potential problems that need to be addressed to facilitate widespread adoption of the intervention. Despite these limitations, JIT and TTT programs provide potentially effective ways to quickly, efficiently, and relatively inexpensively expand the number of NH direct care staff who can provide the PFA intervention to residents in need.

A randomized clinical trial should be conducted to demonstrate the efficacy of PFA as an intervention to decrease distress and increase adaptive coping. PFA has eight core components which make it difficult to identify the "active ingredients" in the treatment. Further, it is challenging to measure the efficacy of the PFA intervention because it is delivered to residents as needed by all trained staff while providing direct care services, and not by a single therapist who closely adheres to a manualized treatment protocol and provides a series of six, 50-minute cognitive behavioral therapy sessions. Despite these difficulties, randomized clinical trials are needed to provide reliable evidence of the benefit of using PFA with distressed NH residents, the ability of trained staff to deliver PFA during disasters and the impact of the training and intervention on both staff and resident well-being.

People who require skilled nursing care are more vulnerable to the deleterious effects of a disaster (Dosa et al., 2008). This increased risk makes the disaster mental health needs of NH residents an important

emerging issue for clinicians, researchers, and authors of public policy (Elmore, & Brown, 2007). Approximately 1.3 million adults live in NHs and another million live in assisted living facilities nationwide (Harrington, Carillo, & LaCava, 2006; Spillman, Liu, & McGilliard, 2002). It is anticipated that between 2000 and 2030 the over 65 population will double to approximately 71.5 million older adults and comprise 20% of the total U.S. population (Federal Interagency Forum on Aging-Related Statistics, 2004). Although it is unknown if this change in population will be accompanied by a commensurate increase in the use of NH services, given the number of older adults living longer with chronic health conditions, it is reasonable to anticipate that use of such services will remain constant or increase during the next three decades. The rapidly growing number of older adults, the ongoing threat of hurricanes, and the fact that in the course of one decade, 541 officially declared disasters occurred in the United States—an average of slightly more than one disaster per week—raises concerns and underscores the need to make available disaster mental health services to institutionalized elders who require intervention (Federal Emergency Management Agency, 2008). The STORM Study is a critical step toward improving access to disaster mental health services and the development of an evidence-based intervention for NH residents.

NOTE

1. The Psychological First Aid Field Operations Guide for Nursing Homes is in the public domain. To obtain a copy of the Psychological First Aid Field Operations Guide for Nursing Homes, please refer to the web page at <http://amh.fmhi.usf.edu/pfanh.pdf>

REFERENCES

- Administration on Aging, (2006). Transfer trauma: Minimizing the impact on community based and institutionalized elders. Retrieved May 31, 2008, from http://www.aoa.gov/Prof/Disaster_Assist/07DISITRAN.pdf
- Alzheimer's Association (2007a). Alzheimer's Disease Facts and Figures. Retrieved April 19, 2008, from http://www.alz.org/national/documents/PR_FFfactsheet.pdf
- Alzheimer's Association (2007b). People with Alzheimer's disease and dementia in assisted living. Retrieved April 19, 2008, from http://www.alz.org/national/documents/prevalence_Alz_assist.pdf
- Brown, L. M., Cohen, D., & Kohlmaier, J. (2007). Older adults and terrorism. In B. Bongar, L. M. Brown., L. Beutler, P. Zimbardo, & J. Breckenridge (Eds.), *Psychology of terrorism* (pp. 288–310). New York: Oxford University Press.
- Brown, L. M., Hyer, K., Schinka, J., Frazier, D., & Mando, A. (2008). Mental health services in nursing homes after disasters. Paper presented at the 25th Academy Health Annual Research Meeting, Washington, DC.

- Brown, L. M., Hyer, K., & Polivka-West, L. M. (2007). A comparative study of laws, rules, codes and other influences on nursing homes' disaster preparedness in the Gulf Coast states. *Behavioral Sciences & the Law*, 25(5), 655–675.
- Brown, L., M. Rothman, M., & Norris, F. (2007). Issues in mental health for older adults during disasters. *Generations*, 31(4), 25–30.
- Burgio, L. D., Stevens, A., Burgio, K. L., Roth, D. L., Paul, P., & Gerstle, J. (2002). Teaching and maintaining behavior management skills in the nursing home. *The Gerontologist*, 42, 487–496.
- Center for Medicare and Medicaid Services (CMS). (2006). Draft: Survey and certification, emergency preparedness & response health care provider after action reporting form. Baltimore: Author.
- Department of Health and Human Services (DHHS). (2006). Nursing home emergency preparedness and response during recent hurricanes (OEI-06-06-00020). Washington, DC: Author.
- Dick, W., & Carey, L. (1996). *The systematic design of instruction* (4th ed.). New York: Harper Collins College Publishers.
- Dosa, D. M., Hyer, K., Brown, L. M., Arntstein, A. W., Polivka-West, L. M., & Mor, V. (2008). The controversy inherent in managing frail nursing home residents during complex hurricane emergencies. *The Journal of the American Medical Directors Association*, 9, 599–604.
- Elmore, D. L., & Brown, L. M. (2007). Emergency preparedness and response: health and social policy implications for older adults. *Generations*, 31(4), 59–67.
- Ersek, M., Kraybill, B. M., & Hansen, N.R. (2006) Evaluation of a train-the-trainer program to enhance hospice and palliative care in nursing homes. *Journal of Hospice and Palliative Nursing*, 8(1), 42–49.
- Federal Emergency Management Agency (2008). Declared disasters by year or state. Retrieved June, 5, 2008 from http://www.fema.gov/news/disaster_totals_annual.fema
- Federal Interagency Forum on Aging-Related Statistics (2004). Older Americans 2004: Key indicators of well-being. Retrieved November 4, 2007, from http://www.agingstats.gov/chartbook2004/OA_2004.pdf
- Fischer, L. R., Wei, F., Rolnick, S. J., Jackson, J. M., Rush, W. A., Garrard, J. M., et al. (2002). Geriatric depression, antidepressant treatment, and healthcare utilization in a health maintenance organization. *Journal of the American Geriatrics Society*, 50(2), 307–312.
- Fitzwater, E., & Gates, D. M. (2002). Testing an intervention to reduce assaults on nursing assistants in nursing homes: A pilot study. *Geriatric Nursing*, 23(1), 18–23.
- Harden, R. M. (2005) A new vision for distance learning and continuing medical education. *The Journal of Continuing Education in the Health Professions*, 25, 43–51.
- Hart, B. D., & Wells, D. L. (1997). The effects of language used by caregivers on agitation in residents with dementia. *Clinical Nurse Specialist*, 11(1), 20–23.
- Harrington, C., Carillo, H., & LaCava, C. (2006). *Nursing facilities, staffing, residents and facility deficiencies, 1999 through 2005*. San Francisco: University of California Press.
- Hutt, E., Ruscin, J., Corbett, K., Radcliff, T., Kramer, A., Williams, E., Liebrecht, D., Klenke, W., & Hartmann, S. (2006). A multifaceted intervention to implement

- guidelines improved treatment of nursing home-acquired pneumonia in a state veterans home. *Journal of the American Geriatrics Society*, 54(11), 1694–1700.
- Institute of Medicine (2008). *Retooling for an aging America: Building the health care workforce*. Washington, DC: The National Academies Press.
- Kelly, K., Ersek, M., Virani, R., Malloy, P., & Ferrell, B. (2008) End-of-life nursing education consortium geriatric training program: improving palliative care in community geriatric care settings. *Journal of Gerontological Nursing*, 34(5), 28–35.
- Laditka, S. B., Laditka, J. N., Xirasagar, S., Cornman, C. B., Davis, C. B., & Richter, J. V. (2008). Providing shelter to nursing home evacuees in disasters: lessons from Hurricane Katrina. *American Journal of Public Health*, 98(7), 1288–1293.
- Lombardo, N. E. (1994). *Barriers to mental health services for nursing home residents*. Washington, DC: American Association of Retired Persons.
- Mather LifeWays Institute on Aging. (2005) Prepare: Learning modules & teacher's guide to prepare specialists.
- Mentes, J., Teer, J., & Cadogan, M. (2004). The pain experience of cognitively impaired nursing home residents: Perceptions of family members and certified nursing assistants. *Pain Management Nursing*, 5(3), 118–125.
- Molinari, V., Hedgecock, D., & Branch, L. Brown, L. M., & Hyer, K. (in review). Mental health services in nursing homes: A survey of Florida nursing home administrative personnel.
- National Child Traumatic Stress Network (NCTSN) and National Center for PTSD (NCPTSD), (2006). Psychological first aid: Field operations guide, 2nd Edition. Retrieved May 31, 2008, from <http://www.nctsn.org> and <http://www.ncptsd.va.gov>.
- Norris, M. P., Molinari, V., & Ogland-Hand, S. (2002). *Emerging issues in psychological practice in long-term care*. New York: Haworth Press.
- Spillman, B. C., Liu, K., & McGilliard, C. (2002). Trends in residential long-term care: Use of nursing homes and assisted living and characteristics of facilities and residents. Washington, DC: U.S. Department of Health and Human Services. Retrieved March 27, 2008, from <http://aspe.hhs.gov/daltcp/reports/rltct.htm>

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