
Effects of Green House[®] Nursing Homes on Residents' Families

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A longitudinal quasi-experimental study with two comparison groups was conducted to test the effects of a Green House (GH[®]) nursing home program on residents' family members. The GH[®]s are individual residences, each serving 10 elders, where certified nursing assistant (CNA)-level resident assistants form primary relationships with residents and family, family is encouraged to visits, and professionals adapted their roles to support the model. GH[®] family were somewhat less involved in providing assistance to their residents although family contact did not differ among the settings at any time period. GH[®] family were more satisfied with their resident's care and with their own experience as family members, and had no greater family burden. Issues in studying family outcomes are discussed as well as implications for roles of various personnel, including social service and activities staff in a GH[®] model.

EFFECTS OF GH[®] NURSING HOMES

This article presents results of a quasi-experimental study that examined how a dramatically changed small-house nursing home model affected behavior and outcomes for residents' family members. The model of nursing home care developed in the GH[®] in Tupelo, Mississippi, created

opportunities and challenges for family members, and was expected to result in more positive family interactions with residents, and greater family engagement with and satisfaction with the nursing homes.

BACKGROUND

Family members are instrumental to the psychosocial well-being of nursing home and assisted living residents, and provide the major means for residents to retain their social affiliations and relationships outside the nursing home (Kane, 2004). Families typically are integrally involved in the decision of older people to move to a residential setting, and their choice of facility (Reinardy and Kane, 1999; 2003). If reformed models of nursing homes do not meet with family approval, they are unlikely to be chosen. Further, family members are also a major source of emotional support to elderly people receiving long-term care in all settings, including group residential settings such as nursing homes and assisted living (Gaugler, Kane, and Kane, 2002; Gaugler and Kane, 2007). Family members continue to provide both tangible and emotional support to residents after so-called institutional placement (Kane et al., 1999). Family members also often take on a watchdog role, looking after their relatives' interests and promoting their quality of care (Bowers, 1988). However, the roles of family members in relationship to the nursing home are sometimes ambiguous, fraught with poor communication and misunderstandings

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between nursing home personnel and family members about mutual expectations (Friedemann et al., 1998).

Although family members typically remain engaged with their members who are nursing home residents, nursing home visits can be difficult and stilted experiences. The setting appears medical and unnatural, engendering uncertainties about what relatives are permitted to do. Also family members may feel guilty and sad because they felt the need to encourage a nursing home admission. Visits may, therefore, become brief and limited to a few relatives, with children and extended family members reluctant to visit or to risk taking the nursing home resident out of the setting to participate in community life.

The movement toward culture change and individualized services in nursing homes has led to new configurations of nursing homes that are more normalized and utilize household models (Weiner and Ronch, 2003). Little is known about how family members perceive the safety and care of the residents and the demands or benefits for themselves, when their relatives live in nursing homes with transformed housing arrangements. This article examines how family members of GH[®] nursing homes (compared to families of residents in conventional facilities) reacted to their relatives' moves to a radically changed nursing home.

Intervention

GH[®]s are self-contained dwellings for 7-10 residents needing nursing home levels of care. The physical environment is residential, offering residents opportunities for privacy (with private rooms and full bathrooms) and participation in community life, with a residential-style kitchen where meals are prepared on site, a dining area with a large communal dining

table, a living room with a fireplace (collectively known as the hearth area), a sun room, and accessible patio and outdoor space. The GH[®] avoids nurses' stations, medication carts, and public address systems. The frontline care staff members, who are CNAs assigned to a single GH[®], have broadened roles, including, cooking, housekeeping, personal laundry, personal care to residents, implementation of care plans, and assisting residents to spend time according to their preferences. This CNA with an expanded role is called a Shabbaz in GH[®] parlance, a Persian term meaning royal falcon that William Thomas used "... to connote the importance of the role of the individuals who watch over the elders [Rabig, 2008]."

All professional personnel mandated in nursing home regulations (e.g. nurses, physicians, social workers, dietician, pharmacist, therapy staff, and activity personnel) form visiting clinical support teams that provide specialized assessments and order and supervise care within their spheres of expertise. The elder assistants report to an administrator (called a guide) rather than to a nurse. Philosophically, the GH[®] model emphasizes individual growth and development and a good quality of life under normal rather than therapeutic circumstances. A group of GH[®]s on a campus or scattered in a residential neighborhood operates under a nursing home license and within a State's usual Medicaid reimbursement amounts, though a redistribution of expenditures could occur.

The first GH[®]s in the U.S. were built in Tupelo, Mississippi, on the campus of a faith-based non-profit retirement complex, comprised of independent housing, assisted living, and a nursing home (Cedars) licensed for 140 beds. In June 2003, the first four GH[®]s were opened and occupied by residents from the sponsoring nursing home; two of these GH[®]s were

initially earmarked for residents in the locked dementia care unit (which was then closed) and the others were occupied by residents from the general nursing home population from residents volunteering to move in and chosen in order of the length of time that the residents had been on the campus. Vacancies arising in the GH[®]s after the initial move-in were similarly filled by residents already in the nursing home or on the campus, again in order of length of time on the campus. Training to become an elder assistant was offered to staff at Cedars, supplemented by new hires from the community; staff who assumed these new GH[®] roles varied in age and length of experience in long-term care, but on average had the same demographic characteristics as nursing home CNAs regarding sex, race, education, and prior experience as all CNAs in Mississippi. Fuller descriptions of the general model, its theoretical rationale, and its first implementation in Mississippi have been published (Thomas, 2004; Rabig et al., 2006).

We undertook a large-scale, multifaceted study of the GH[®] that included collecting outcome data from residents, family, and frontline staff; detailed post-occupancy evaluation observations of the GH[®]; and a case study of the implementation of the GH[®]. Here we report the results for family outcomes. Reported elsewhere are the results for residents; a followup study comparing resident outcomes over 18 months to residents in two comparison settings found that GH[®] residents had a better perceived quality of life on numerous domains, were more satisfied with the GH[®] as a place to live and a place to receive care, and had no negative effect on quality of care outcomes measured by the nursing home minimum data set (MDS) quality indicators as a result of the more resident-centered care model and their increased privacy and autonomy (Kane et al., 2007).

The GH[®] was conceptualized as a setting where family members would feel comfortable in visiting family members in their own private home-space, and in the community shared spaces. The families were meant to be welcomed into the GH[®] as visitors, as guests at meals, and as part of the small purposive communities created within each GH[®]. The elder assistants were expected to develop primary relationships with residents' family members. The study reported here aimed to determine whether the nature of family assistance and family contacts differed for GH[®] families, and how families appraised their GH[®] experience in terms of their view of their resident's well-being and their own well-being as family members.

METHOD

Design

Because randomization was unfeasible, a quasi-experimental design was used; two comparison sites were identified: the sponsoring nursing home (Cedars) and another nursing home of the same non-profit owner on a similar campus in a Mississippi community about 90 miles away (Trinity). Data came from in-person interviews with residents, family members, and line staff members, and from abstraction of the nursing-home MDS (the standardized resident assessment that is completed annually for all nursing home residents and updated quarterly on key parameters) for times preceding and most proximate to in-person data collection. This report utilizes data from family members of residents, and the method and measures described here largely are, therefore, limited to the family interview component.

The two comparison groups, Cedars and Trinity, each have strengths and limitations, and both were used for a stronger

design. The Cedars group was susceptible to contamination by having a shared administration with the GH[®], and was potentially influenced by the GH[®] planning and the ultimate goal of moving all residents to GH[®]s; this could have led to spin-off improvements in the Cedars group or poorer results at Cedars because of neglect of the traditional nursing home and concentration on the GH[®]. Although under the same ownership and experiencing similar local conditions, the two nursing homes differ in various ways. Built in 1995, Trinity is newer and smaller (65-beds) and has a small Medicare-certified unit (which was not included in the study). Cedars was built in 1975, had 140-licensed beds (120 of which were operating), had no Medicare certification, and had a 20-bed locked dementia unit. Both had adjoining assisted living settings. The nursing homes at Cedars and Trinity were both traditional in the sense that they were laid out with largely semiprivate rooms and typical units dominated by a nursing station. Both had interests in individualizing resident care. Cedars participated in Eden Alternative programs, and boasted a number of birds as pets. The non-Medicare Trinity comparison group was chosen as the best representation of the natural history of residents in a traditional nursing home setting in the same region and time period as the site of the GH[®] implementation. We hypothesized that family members in GH[®] would continue to assist their relatives, and (compared to the control settings) would be more engaged with the residents, would be more satisfied with the care of their relatives, would experience no greater family burden than in a traditional nursing home, and would perceive their own experience as family members more positively.

Sample

GH[®]

The GH[®] resident sample was comprised of the 40 people who were scheduled to move to the GH[®]s at baseline, and the current GH[®] census at each of the three followup periods—6, 12, and 18 months. All told, 53 GH[®] residents were eligible over the successive data collection periods, 52 of whom were in the sample. Ten of the GH[®] sample members died over the 18-month period and 2 were discharged. Seven of the new GH[®] residents moved from Cedars during the study and the remaining six moved either from the assisted living setting or the independent living setting on campus.

Cedars

During the study period, Cedars was run as a 120-bed nursing home so that the maximum census remaining at Cedars at any time was 80. At baseline, we sought a random sample of 40 residents, excluding residents who were comatose, vegetative, or in end-stage palliative care; 9 of the initial group approached declined to participate. In subsequent waves, in order to acquire as much baseline data as possible from residents who might later move to GH[®]s, we enlarged the Cedars sample with a goal of 70 per time period. The added sample at all followup waves was randomly selected. The final Cedars sample sizes were 67, 71, and 64 for the three followup waves, with refusals from 3, 0, and 1 persons, respectively. The only live discharges from Cedars were to GH[®]s, affecting 7 sample members; 22 of the Cedars sample members died at Cedars during the study period.

resident in situations where multiple family members were involved with the resident. In one instance at Trinity, the original family respondent, a daughter of the resident died. At each time interval, we attempted to identify a family member (and often succeeded) even if no family interview had been done during the previous wave.

DATA COLLECTION

Data collectors were recruited for the project and received at least 40 hours of training for the various data collection procedures. Family interviews were done in-person, supplemented when needed by telephone data collection for all or part of an interview. Family baseline data were collected in the 2 to 3 weeks before any residents moved the GH[®]s. When that proved impossible, family baseline data were collected a few weeks after the resident moved to the GH[®] but all questions for the GH[®] sample members were anchored with the phrase “before you moved to the GH[®].”

Measures

Family Satisfaction with Resident’s Care

Family satisfaction with the nursing home care and life was measured using 25 ratings developed for a national study of assisted living (Levin and Kane, 2006). Family members were asked to rate each aspect of nursing home care between 1 (the worst rating) and 5 (the best rating). A subsequent exploratory factor analysis grouped 22 of these 25 questions into 5 domains, namely general amenities, social environment, physical environment and privacy, autonomy, and health care. Each domain has between three and six items.

The general amenities, meals, and housekeeping domain was comprised of four rated items: a physical setting that was convenient for people with disabilities, high quality food and menus, the atmosphere and services at meal time, and the way house keeping was done (Cronbach’s alpha=0.7516) (Cronbach, 1951). The social environment domain was also composed of four rated items: the nursing home offered interesting things for residents to see and do, the nursing home helped with transportation, the nursing home provided access to religious program and counseling, and residents living here have things in common with my relative (Cronbach’s alpha=0.6971). The physical environment and privacy domain was comprised of three rated items: the nursing home provided privacy for the resident, the nursing home provided a comfortable and attractive room and bathroom, and the nursing home made it possible for residents to make use of kitchen or get food (Cronbach’s alpha=0.7454). The autonomy domain was composed of six rated items: resident say in the decoration and arrangement of his/her bedroom, resident say in how much or little care he/she got, resident say in who could come into room, resident ability to refuse care; staff members who know and like the resident; and residents liking the staff members (Cronbach’s alpha = 0.8494). The health care domain was composed of five ratings: access to professional nurses, access to physicians, ability to get help at night, help for taking medicine, and having the same people consistently providing help (Cronbach’s alpha = 0.8294). Summary scales were calculated for each domain with the theoretical score range varying from 5 to 15 (for privacy) to from 5 to 30 (for autonomy), depending on the number of items.

6 months before the interview using the following response set: everyday, more than once a week, about weekly, less than weekly but more than once a month, about once a month, or not at all. There were no differences in either in-person or telephone contact across study groups at baseline. The in-person visit frequency was used in the analyses.

Demographics and Functional Status

Also included in the data set was the sex of the family member, the type of relationship with the resident (i.e., spouse; adult child or child-in law, siblings, grandchildren and other [e.g., nieces and nephews, cousins]).

For case mix adjustment, activity of daily living (ADL) (bed mobility, eating, transferring, and toileting) and cognitive functioning were extracted from residents' MDS data, and calculated using methods developed by Morris and colleagues (1999; 1994; 1997).

Qualitative Views

At baseline all family members were asked if they knew what a GH[®] is and an open-ended question about their understanding of that concept. At each followup period, families, residents, and frontline staff at the GH[®]s and comparison settings were asked a number of open-ended questions about what they liked and disliked about the GH[®] (or their nursing home) and about their reactions to specific aspects of the program, such as meals, housekeeping and laundry, physical care, activities, and their room and bathroom. For the purposes of this article, we supplement the quantitative data with analysis of the qualitative responses from GH[®] families on their perspective on GH[®] at baseline and their followup responses to the two most general

questions: (1) As a family member, what do you like best about your ___'s current living situation and the help he/she gets in the GH[®] (in this nursing home)? (2) What do you like least about your ___'s current living situation and the help he/she gets in the GH[®] (in this nursing home)? Finally as part of the GH[®] case study, we made systematic observations at different times of day in each house, and noted, among other things, the presence and activities of outside visitors.

Analysis

The Stata Version 9 program was used for all data analyses (StataCorp LP, 2005). Selection effects were examined by comparing baseline characteristics in both independent and dependent variables for sampled family members of residents who went to the GH[®], remained at Cedars, or were in Trinity. Outcomes were analyzed with multivariate panel regression analyses using the random-effects Tobit regression models (Maddala, 1987) or random-effects ordered Probit models (Frechette, 2001), the choice based on the specific analysis. These analyses used data from all three followup periods over 18 months, with waves of data collection accounted for by dummy variables. The main independent variable was the resident's status as a GH[®], Cedars, or Trinity resident at the time of data collection. Data from the baseline were used only to check for selection effects. All analyses for family satisfaction, family involvement and overall satisfaction were controlled for wave of data collection, sex of family member, ADL and cognitive functioning of resident, sex of resident, and relationship with resident. Since we have repeated observations per individual and they were organized in three nursing homes, the random effects models allowed us to generate better parameter estimates

members were less involved in helping laundry for the residents than Cedar family members, and GH[®] families had a lower overall family assistance score than Cedars family members. Compared with Trinity family members, GH[®] family members were less involved in some specific tasks, such as shopping for errands, arranging health care, financial management, and laundry. However, there was no statistically significant difference between GH[®] and Trinity in the overall family involvement score.

Effects on Family Outcomes

Table 4 also shows the results of random-effects Tobit regressions (Maddala, 1987) on family satisfaction variables and random-effects ordered Probit regressions on global satisfaction ratings (Frechette, 2001). Compared with Cedars family members, GH[®] family members reported higher satisfaction in 4 out of the 5 satisfaction subscales: general amenities, meals, and housekeeping; physical environment and privacy; autonomy; and health care. GH[®] family members also reported higher satisfaction in 3 out of the 5 satisfaction subscales than Trinity family members: physical environment and privacy, autonomy, and health care. Compared with Cedars family members, GH[®] family members reported higher global satisfactions on all three global rating items. There was no statistically significant difference between GH[®] and Trinity family members in these global satisfaction ratings.

Qualitative Observations

At baseline, the 37 family members whose relatives were going to move to the GH[®] has some awareness of the concept of GH[®], and all but 2 offered some discussion of what they thought a GH[®] would

offer. Twenty-seven elaborated on the idea that the GH[®] would be a home rather than an institution. Typical responses: “It will seem more like home for him;” “It’s a home-type atmosphere away from institutional effects,” or “It’s as close to home as we will ever get.” One spouse who visited his wife daily at Cedars said at baseline: “We are looking forward to going to a home setting. Nobody wants to live in this setting, especially at this age, so we are looking forward to going to our home.” Eight respondents commented on the small scale and the advantages of private rooms and bathrooms. Ten family members elaborated on their understanding of an improved staff model—some said that staff would be more consistently assigned, or be more attentive. A few of those comments had elements of worry—one respondent was concerned about “...only 2 people in charge of the whole house.”

Table 5 categorizes responses of GH[®] families to selected qualitative questions at each followup time period. At 6 months, family members tended to be enthusiastic in their open-ended responses. Asked what they liked best, many said “Everything!,” but went on to specify positive aspects. The most common praise was the setting and program is like home, or it is home, and/or it is not institutional and like a nursing home. Many liked the individualized approach and kind, living attitudes of the CNAs, and many appreciated that a small core of permanent staff served the GH[®] so that they got to know the residents, and family members could also get to know the staff. Other things liked best included the private rooms, and the greater empowerment or freedom of the residents. Some family members mentioned that they personally liked to visit, and that they themselves could help their resident or help in the kitchen if they wanted to do so. These positive elements remained salient at 12

