Nursing Home Involuntary Relocation: Clinical Outcomes and Perceptions of Residents and Families

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Objectives: To examine the physical and mental health characteristics of 120 residents 3 months following their discharge from 1 transferring nursing home to 23 facilities, to compare these characteristics to their pre-transfer status, and to describe resident and family perceptions of the transfer.

Design: Secondary analysis of a longitudinal, prospective quasi-experimental intervention and a qualitative description of resident and family views.

Setting: The setting was 23 nursing homes in the Philadelphia metropolitan area.

Participants: Participants included 120 nursing home residents and 56 family members.

Measurements: Minimum Data Set (MDS) and data from the Centers for Medicare and Medicaid Services (CMS) Nursing Home Compare Web site

Results: There was a statistically significant increase in the number of residents who fell during the post-transfer (76.9%) compared to the pre-transfer (51.2%) period \( (P = 0.0001)\): 76.3% of those with a history of falling prior to transfer fell during the post-transfer period while 77.4% of those without a history of falling prior to transfer fell. Residents were 3.78 times more likely to fall if they required more than supervision while walking (95% confidence interval [CI] 1.57–9.06) and 2.65 times more likely if they required more than supervision while transferring (95% CI 1.09–6.44). Logistic regression demonstrated that the mobility was also associated with falls (odds ratio 1.15, 95% CI 1.05–1.26). Residents did not demonstrate any other significant physical or mental health changes during the 3 months following the involuntary transfer when compared with their pre-transfer status. Residents and family members clearly voiced their dismay over the process of involuntary relocation.

Conclusion: Relocation is a stressful event; however, a move to a higher quality care environment does not result in any significant physical or mental health changes. The high incidence of falls post-transfer in both those with and without a fall history points to the need for extra fall precautions in newly admitted residents. In particular, frequent reorientation reminders for the cognitively intact and a high level of staff surveillance for all new residents is indicated during the first few weeks of admission. (J Am Med Dir Assoc 2006; 7: 486–492)

Keywords: Nursing home; relocation; falls

Disclaimer: The opinions set forth in this manuscript express the views of the authors, not the views of the United States Attorney’s Office for the Eastern District of Pennsylvania or any other entity or person associated with the United States Department of Justice.

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When nursing homes close, residents are involuntarily relocated to other facilities. Negative outcomes associated with such transfers have been referred to as “nursing home transfer trauma,” or “relocation stress syndrome (RSS).” RSS is defined as “physiologic and/or psychosocial disturbances as a result of transfer from one environment to another.” Reported consequences of RSS include increased confusion, depression, anxiety, apprehension, loneliness, falls, mortality, and morbidity, as well as reduced immunocompetence and psychosocial functioning. It is postulated that these negative effects in frail elders are the result of the psychological tasks associated with adjusting to new surroundings and routines.

In November 2002, a large nursing home in Philadelphia announced it would close because of financial losses and multiple sanctions levied against the facility from state regulators. This 538-bed nursing home was associated with a large hospital system and will be referred hereafter as the “transferring nursing home.” Between December 2002 and March 2003, 392 residents were discharged from the transferring nursing home to 69 long-term care facilities. As a result of a settlement agreement between the transferring nursing home (as part of a hospital system that owned and operated the nursing home), and the United States Attorney’s Office for the Eastern District of Pennsylvania, an intervention project aimed at reducing relocation stress among transferring residents was initiated in March 2003.

The purpose of this study is to examine the physical and mental health effects of an involuntary transfer from the transferring nursing home to 23 facilities in the Philadelphia metropolitan area. This study compares physical and mental health characteristics during the immediate (within 3 months) post-transfer phase to those in the pre-transfer phase. A secondary purpose of this study is to analyze resident and family perceptions of the transfer to garner how relocation stress may affect both individuals and their support networks.

METHODS

This is a secondary analysis of a longitudinal, prospective quasi-experimental intervention study. The primary study tested the effect of an advanced practice nurse intervention on physical and mental health outcomes of involuntarily relocated nursing home residents.

Sample/Setting

There were 392 long-stay residents who were discharged from one Philadelphia nursing home to 69 facilities between December 2002 and March 2003. Residents and their families were given a list of facilities that had beds available so that they could indicate their preferences. Although many (166 or 42%) were discharged to 1 of 27 Philadelphia facilities, most (208 or 53%) were discharged to 1 of 30 facilities located in the 4 suburban counties surrounding Philadelphia and another 18 (5%) were discharged to 12 nursing homes out of state. Philadelphia facilities were on average 6.2 miles from the transferring nursing home while suburban homes were an average of 13.9 miles away.

A consent procedure for the receiving nursing home facilities to participate in the project was approved by the United States Attorney’s Office of the Eastern District of Pennsylvania and the Pennsylvania Department of Health Division of Nursing Care Facilities. All 57 Pennsylvania nursing homes were sent letters describing the project and requesting facility consent to participate in the project. Of those 57 facilities eligible to participate, 23 (40%) agreed to participate, representing approximately 65% (n = 295) of all transferred residents and 78% of all residents transferred to Pennsylvania facilities. Of these 295 transferred residents, 124 (42%) residents or their proxy consented to participate in the study. Most refusals were because of negative perceptions of the transferring facility and a deliberate decision not to participate in anything that would remind the resident of the negative transfer experience. Four residents did not have pre-transfer data available, thus the sample was reduced to 120 resident participants.

Procedure

The informed consent procedure for transferred nursing home residents was approved by the Pennsylvania Department of Health, the Philadelphia Department of Public Health Institutional Review Board, and New York University Committee on Activities Involving Human Subjects. Following informed written consent from the resident-participants or their proxy (in cases of cognitive impairment), the advanced practice nurses conducted a comprehensive assessment of the resident. Data from the first quarterly Minimum Data Set (MDS) post-transfer was obtained for physical and mental health characteristics. These data were supplemented by interviews with the resident, the resident’s primary nurse assistant, and the resident’s primary contact (proxy), usually a family member. Copies of the last 3 months of the resident’s stay in the transferring nursing home were used to extract pre-transfer MDS data. A trained research assistant obtained facility data from the Centers for Medicare and Medicaid Services (CMS) Nursing Home Compare Web site for the time period closest to the resident’s transfer date. All data was entered and analyzed using SAS Version 8.0 (SAS Institute, Cary, NC).

Measures

Nursing home characteristics were obtained from the CMS Nursing Home Compare Web site based on the Online Survey, Certification, and Reporting (OSCAR) database. National comparison data for both facility and resident demographic characteristics were obtained from the CMS Nursing Home Compare Web site and the Centers for Disease Control National Center for Health Statistics 1999 National Nursing Home Survey.

Resident characteristics, including demographic, functional, and mental health components, were obtained from each resident’s Minimum Data Set (MDS) Version 2.0. We used the first MDS quarterly assessment post-transfer (approximately 3 months following the transfer) from the receiving nursing home and the last MDS quarterly assessment (within 3 months of discharge) from the transferring nursing home. The individual items and composite scales used in this study
have all demonstrated good to excellent reliability in other research.15-17

Resident clinical characteristics include functional, mental health, and physical status. We used the 5 basic activities of daily living tasks (dressing, eating, toileting, personal hygiene, and bathing) that have been used in studies exploring changes in function over time.18 To quantify mobility we used 3 MDS items: bed mobility, transfer ability, and walking in room; scores on these items include “0” (independent), “1” (supervision), “2” (limited assistance), “3” (extensive assistance), and “4” (total dependence). We considered scores of “2” or higher to represent a level of dependency that requires more than supervision. As in other studies, we recoded “8” responses (did not occur) to “5” to facilitate analyses of these variables.19

Mental health indicators consist of cognitive ability as well as behavioral and depressive symptoms. Cognition was measured using the MDS Cognitive Performance Scale (CPS), an ordinal rating scale based on applying decision rules to 5 MDS items concerning cognitive abilities.20 When compared to the Mini-Mental State Examination (MMSE), the CPS demonstrates a construct validity of 0.65,21 a sensitivity of 94%, a specificity of 94%, and a diagnostic accuracy of 96%.22 It has been used in other studies examining the effect of relocation on nursing home residents.23,24

The frequency of behavioral symptoms (4 items of section E4: wandering, verbally abusive, physically abusive, and socially inappropriate and resists care) was summed and then dichotomized into none or any (>0) symptoms present. Similarly, indicators of depression, anxiety, and sad mood (16 items of 4 parts of section E1: verbal expressions of distress, sleep-cycle issues, sad appearance, and loss of interest) was summed and then dichotomized into none or any (>0) symptoms present. Physical status was evaluated by assessing individual MDS items that denote important clinical indicators: bladder and bowel incontinence, pressure ulcers, pain, and falls. MDS items that reflect facility care practices were examined, such as transfer to the hospital and the use of physical restraints and psychoactive medications.

Finally, a semi-structured interview using an 8-item investigator-developed questionnaire, was conducted with residents and their designated family member/proxy. Participants were asked to compare care received at the transferring nursing home to the current facility, and to describe their thoughts and feelings regarding the relocation process and their current situation. These interviews, guided by the questionnaire, were approximately 30 minutes in length and the interviewer wrote notes of resident/family responses. There were 76 residents and 56 family members who completed questionnaires and participated in the interview.

Data Analysis

Facility characteristics were summarized and compared to national statistics. Changes in resident clinical characteristics following transfer, compared to pre-transfer, were examined using paired t tests for continuous variables following verification of assumptions and McNemar’s tests for dichotomous variables. For characteristics demonstrating significant differences post-transfer, magnitudes of association were estimated using odds ratios and their 95% confidence intervals (CI). Changes in resident and family member’s perception of the transferring and current nursing home facility using paired t tests and mean change scores were calculated.

Qualitative content analysis was used to group patterns that emerged from interview data obtained from the resident and the resident’s primary contact.25,26 The data were then coded into manageable content categories with detailed descriptions written for each category.27 All the data were analyzed until no new codes emerged and then these codes were grouped into themes. Finally, these themes were examined within the context of the research questions.26

RESULTS

Receiving facility characteristics are described in Table 1. All facilities were located in the Philadelphia metropolitan area, compared to 60% of nursing homes nationally that are in urban locations. The average bed size of the receiving facilities was 170.1 beds (SD = 87.4), more than twice the national average. The percentage of proprietary ownership (60.9%) and chain affiliation (56.5%) approximated national comparison data.

Resident demographic characteristics are presented in Table 2. The only demographic characteristic similar to national data is the high proportion of female residents. Otherwise, these characteristics reflect the population of the transferring nursing home’s geographic area; the residents are poorer (Medicaid as primary payor), younger, more likely not to be widowed, and less likely to be Caucasian compared with national nursing home statistics. Forty percent of residents in this study population had relocated at least once prior to the close of the transferring facility, while about 12% of residents in US nursing homes are admitted from another nursing home.

Table 3 compares resident clinical characteristics obtained within 3 months before and 3 months following the relocation. All these characteristics, except fall outcomes, did not demonstrate any significant changes between the 2 time points. There was a statistically significant increase in the number of residents who fell during the post-transfer (76.9%)
compared to the pre-transfer (51.2%) period ($P < 0.0001$). Of those with a history of falling prior to transfer, 76.3% fell during the post-transfer period whereas 77.4% of those without a history of falling prior to transfer fell. Residents were 3.78 times more likely to fall if they required more than supervision while walking (95% CI 1.57–9.06) and 2.65 times more likely if they required more than supervision while transferring (95% CI 1.09 – 6.44). Logistic regression demonstrated that the mobility was also associated with falls (odds ratio 1.15, 95% CI 1.05–1.26). None of the other resident characteristics were associated with falls.

Table 4 presents the resident and family perceptions of the relocation with higher scores representing more positive responses. The residents’ ($n = 76$) perceptions of the transferring nursing home versus the current facility were significantly different with mean percent scores (SD) of 22.57 (5.98) and 25.34 (5.58), respectively (paired $t$ test, $t = 3.192$, $P < 0.002$). Most believed their health was the same (32.2%) or

Table 2. Resident Characteristics ($n = 120$)

<table>
<thead>
<tr>
<th>Resident Participants</th>
<th>National Average*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>77.75 (13.5; range 42–102)</td>
</tr>
<tr>
<td>% age &gt; 64</td>
<td>81.5</td>
</tr>
<tr>
<td>% female</td>
<td>73.4</td>
</tr>
<tr>
<td>% widowed</td>
<td>48.4</td>
</tr>
<tr>
<td>% English as primary language</td>
<td>88.7</td>
</tr>
<tr>
<td>% MA as payor</td>
<td>97.6</td>
</tr>
<tr>
<td>% African American</td>
<td>57.3</td>
</tr>
<tr>
<td>% White</td>
<td>34.7</td>
</tr>
<tr>
<td>Mean/median (SD/range) number of days as nursing home resident</td>
<td>628/420 (630; range 60–3600)</td>
</tr>
<tr>
<td>% of residents with &gt;1 nursing home relocation</td>
<td>40.5</td>
</tr>
</tbody>
</table>

— data not available.

* National data are from the Centers for Disease Control National Center for Health Statistics 1999 National Nursing Home Survey.

† Although a national percentage of relocated residents is not available, approximately 12.25% of nursing home residents were in another nursing home before their current stay.

Table 3. Resident Physical and Mental Health Characteristics Before and Following Transfer ($n = 120$)*

<table>
<thead>
<tr>
<th>Resident Characteristics</th>
<th>T0 (3 months Pre-Transfer)</th>
<th>T1 (3 months Post-Transfer)</th>
<th>$P$ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical function†</td>
<td>12.72 (4.99)</td>
<td>12.57 (5.55)</td>
<td>.65</td>
</tr>
<tr>
<td>Mobility†</td>
<td>8.08 (4.24)</td>
<td>7.68 (4.57)</td>
<td>.10</td>
</tr>
<tr>
<td>Cognition†</td>
<td>2.34 (1.99)</td>
<td>2.31 (1.94)</td>
<td>.81</td>
</tr>
<tr>
<td>% behavioral symptoms</td>
<td>19.0</td>
<td>19.8</td>
<td>1.00</td>
</tr>
<tr>
<td>% depressive symptoms</td>
<td>33.9</td>
<td>33.1</td>
<td>1.00</td>
</tr>
<tr>
<td>% any bladder incontinence</td>
<td>60.0</td>
<td>62.5</td>
<td>.55</td>
</tr>
<tr>
<td>% any bowel incontinence</td>
<td>55.8</td>
<td>57.5</td>
<td>.71</td>
</tr>
<tr>
<td>% pressure ulcers‡</td>
<td>13.3</td>
<td>10.8</td>
<td>.44</td>
</tr>
<tr>
<td>% pain‡</td>
<td>30.8</td>
<td>27.5</td>
<td>.51</td>
</tr>
<tr>
<td>% residents with a fall‡</td>
<td>51.7</td>
<td>76.7</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>% physical restraints‡</td>
<td>7.5</td>
<td>2.5</td>
<td>.08</td>
</tr>
<tr>
<td>% psychoactive drug use‡</td>
<td>56.7</td>
<td>59.2</td>
<td>.49</td>
</tr>
<tr>
<td>% Hospitalized‡</td>
<td>20.8</td>
<td>21.7</td>
<td>.86</td>
</tr>
</tbody>
</table>

Mobility includes 3 MDS items: bed mobility, transfer ability, and ability to walk in room; “did not occur” responses were recoded as “5” instead of 8. Scores potentially range from 0 to 13 with higher scores indicating greater dysfunction.

Cognition was measured using the MDS Cognitive Performance Scale. Scores potentially range from 0 to 6 with higher scores indicating greater cognitive impairment.

Behavioral symptoms represent the sum of 5 MDS items (section E4): wandering, verbally abusive, physically abusive, socially inappropriate, and resists care that was dichotomized into none or any ($>0$) symptoms present.

Depressive symptoms are the sum of 16 MDS (section E1) that are considered indicators of depression, anxiety, and sad mood (16 items of 4 parts of section E1: verbal expressions of distress, sleep-cycle issues, sad appearance, and loss of interest). These were summed and then dichotomized into none or any ($>0$) symptoms present.

The remaining characteristics are based on individual MDS items, each of which has been dichotomized into none or any ($>0$) symptoms present. Thus, behavioral, depressive symptoms, and the other characteristics each represent the percentage of residents with that characteristic present.

* $>0$: Physical function measured with the basic activities of daily living (ADL) items: dressing, eating, toilet use, personal hygiene and bathing of the Minimum Data Set (MDS). The potential range of scores is 0 to 20 with higher scores indicating greater dysfunction.

† Mean (SD), paired $t$ test.

‡ Values are based on McNemar’s test.
improved (29.8%) and that they enjoyed life about the same (35.5%) or more (20.7%) after the relocation. Similarly, the families’ (n = 56) perceptions of the transferring nursing home versus the current facility were significantly different with mean percent scores (SD) of 21.77 (5.13) and 25.54 (4.64), respectively (paired t test, t = −3.872, P < .0003). Family members also perceived the resident’s health to be the same (28.1%) or improved (25.7%) and that the resident enjoyed life about the same (31.4%) or more (28.7%) following the move.

The content analysis of resident and family statements mirrored the quantitative findings (Table 5). Residents’ comments focused on 3 primary themes: loss, deception, and fear. Since residents were dispersed to 69 facilities, many resident friendships ended. Most residents were concerned with the loss of caregivers, especially nursing assistants, with whom they had developed a strong relationship. Residents also missed the facility neighborhood since many lived most of their lives in that section of the city. For many residents, the receiving home was located in another area of the city or in a suburb with minimal or no access to public transportation. This posed a problem for residents’ families and friends who found it difficult to visit and thus did not physically see the resident as much as they did previously. Residents felt that they were deceived by the transferring facility and were given little time to prepare. They expressed feeling pressured to make a decision regarding the receiving home without having adequate information. Many feared the unknown, ie, “Will this happen again?” They felt that the move indicated a lack of control of their lives and many continued to worry about future relocations.

Several family members used the terms, “chaotic” and “rushed” to describe the process of making preparations and decisions regarding the relocation. Many felt deceived especially that they were not given enough choices of facilities located closer to their homes. Some expressed anger about the poor quality of care their family member received at the transferring facility. Despite these negative feelings, most were glad that the transferring nursing home closed and that their family member was now at a better facility.

### DISCUSSION

Although the study facility and residents’ demographic characteristics do not reflect a typical American nursing home and its residents, they do mirror the population of nursing homes that are generally likely to close. Facilities that depend primarily on Medicaid funding are at greatest risk of closure since they do not have the financial resources to respond to negative government surveys.28,29 African Americans are 4 times more likely than whites to reside in facilities at risk of closure.30 Poor, often minority, residents are then transferred to homes willing to accept Medicaid, many with their own history of government-cited deficiencies. Forty percent of this sample had experienced at least 1 relocation prior to closure of the transferring facility. Three months following the transfer, many residents continued to worry that they would need to relocate again. Some argue that the government should create a fund to increase payments to nursing homes that accept transfers from failing facilities in order to prevent those nursing homes from closing.29 In this case, however, the residents were transferred within the same health care system that, despite adequate financial assets from their hospitals, did not appropriately invest in the resources necessary for quality nursing home care.

With the exception of falls, residents did not demonstrate any significant physical or mental health changes during the 3 months following the involuntary transfer when compared with their pre-transfer status. Although there are several literature reviews that report loss in functional status and other physical health parameters following involuntary relocation,31,32 this has not been consistently supported in the research literature.33-40 Residents and family members reported that the receiving nursing home was significantly more responsive to resident care needs compared to the transferring nursing home. This is not surprising since the transferring nursing home closed as a result of their inability to correct numerous deficiencies cited by state surveyors. Thus, our findings are consistent with

### Table 4. Resident and Family Perceptions of Transferring and Receiving Nursing Home*

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD) Score: Perception of Transferring Facility</th>
<th>Mean (SD) Score: Perception of the Receiving Facility</th>
<th>95% Confidence Interval (Differences in Means)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident perception (n = 76)</td>
<td>22.57 (5.98)</td>
<td>25.34 (5.58)</td>
<td>−4.51, −1.04</td>
<td>.002</td>
</tr>
<tr>
<td>Family perception (n = 56)</td>
<td>21.77 (5.13)</td>
<td>25.54 (4.64)</td>
<td>−5.72, −1.82</td>
<td>.0003</td>
</tr>
</tbody>
</table>

* Higher scores represent more positive perceptions of the facility.
Relocation is stressful, especially when residents and families experience a lack of control over their situation and when residents are involuntarily placed geographically apart from their social network. Although the residents interviewed clearly voiced their dismay over the involuntary relocation, there were no differences found in behavioral or depressive symptoms post-transfer compared to the pre-transfer period. Lutgendorf and colleagues in a study of healthy, upper middle-class Caucasians, reported more intrusive thoughts related to relocation within a month of the moving but that this subsided by 3 months post-transfer. Moreover, a study examining the biobehavioral correlates of relocation found that measures of the stress response (cortisol levels and observed anxiety and sadness indicators) that were elevated immediately following the move had all declined within 1 month. Relocation has been described as a process with 3 distinct stages: an anticipatory (pre-transfer) stage, an effect (relocation and adjustment in the immediate post-transfer) stage, and a settling-in (decline and plateau of stress reaction) stage. The data from this study include the first 2 stages (ie, both the 3 months preceding and following the transfer) when stress responses such as anxiety and mood swings were most likely to manifest and thus we may not have true “baseline” resident data to detect changes in these indices. Additionally, residents in this study were transferred to a facility that was largely perceived to provide better care; the stress of relocation, and attendant physical and mental manifestations may have been mitigated by improved satisfaction with the new facility. Although many of the measures used have demonstrated good reliability in other studies, measures based on MDS data recorded by facility staff certainly have limitations compared to MDS data collected by research staff. Since the transferring facility was known for deficient care practices, we cannot be confident of the quality of their MDS data. Similarly, increased rates of falls in the receiving nursing homes may reflect better reporting. Finally, the generalizability of the study findings are limited by the fact that only 42% of eligible residents or their proxy agreed to participate.

CONCLUSION

Nursing homes will continue to close because of financial problems resulting from civil litigation and government sanctions, or, as in this case, as a result of the inability of a hospital system to adequately provide nursing home care. In 2002, the Public Policy Institute of the American Association of Retired Persons released an issue paper regarding nursing home closure. It encouraged a uniform protocol for tracking residents after relocation as well as a central point of coordination for collecting resident information. This study, similar to other post-relocation studies, provides data from one nursing home closure. A national database, coordinated by CMS, could provide a comprehensive source of valuable information that may potentially identify best practices for resident relocation.

REFERENCES


