Evaluation of a Novel Decision Guide "Go to the Hospital or Stay Here?" for Nursing Home Residents and Families

A Randomized Trial

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ABSTRACT

Initiatives to reduce potentially preventable hospitalizations of nursing home residents have focused on staff response to changes in condition and advance care planning. Yet, resident and family insistence on transfer has been one of the most intractable sources of these hospitalizations, although not the target of active intervention until now. Consented residents and family members in the intervention group received a newly developed decision aid entitled, "Go to the Hospital or Stay Here?," providing information on the risks and benefits of transfer versus remaining in the nursing home. This person-centered decision aid was developed from the results of 271 interviews of residents, families, and providers to identify what they wanted to know and any misunderstandings surrounding the transfer process. Engaging residents in the decision respects their right to participate and provides the information they need to make a deliberative decision. The intervention group showed a gain in knowledge and reduction in decisional conflict but reported decreased decisional preparation. There was no decrease in transfers compared to the control group. Evaluation of the decision guide by residents and families was positive.

Targets: Nursing home residents and their family members.

Intervention: To provide information regarding the decision to stay in the nursing home or transfer to acute care due to a change in condition.

Mechanisms of Action: Decision aid "Go the "Hospital or Stay Here?" to impart knowledge regarding the decision to remain in the nursing home or transfer to acute care.

Outcomes: Use of the Guide was found to increase residents' and family members' knowledge and decrease decisional conflict, but it did not increase decisional preparation. No reduction in transfers was found. Residents and families rated the Guide as very helpful.

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Health care decisions for older adults are often complex and multifaceted. The decision to transfer residents of nursing homes to acute care involves many considerations, such as the condition and health status of the resident, potential risks, and whether the transfer is necessary. Hospitalizations can result in poor health outcomes for residents due to unintended consequences, such as functional, cognitive, and physiological decline, as well as stress related to the transition (Morley, 2016; Ouslander et al., 2000). For example, hospitalizations of residents may result in increased falls, skin breakdown, infections, depression, and delirium (Binder et al., 2003; Creditor, 1993; Davydow et al., 2013; Friedman et al., 2008; Thomas & Brennan, 2000).

An added burden is the cost associated with potentially preventable transfers that could be avoided if interventions were put in place before an acute change in condition occurred (Kane et al., 2017; Unroe et al. 2018). Grabowski and O'Malley (2014) noted that approximately 25% of in-

dividuals who are admitted from acute care are rehospitalized within 1 month, at an estimated cost of $4.3 billion annually. Previous research has suggested that up to 60% of these hospitalizations are potentially avoidable (Ouslander et al., 2010; Spector et al., 2013). Most recently, Popejoy et al. (2019) found that 54% of such hospital transfers were potentially avoidable.

It is important to consider how such transfer decisions are made. Lamb et al. (2011) found that approximately 14% of avoidable transfers were attributed by nursing staff to family and resident insistence. In another study, Ouslander et al. (2016) examined the root causes of these transfers and found that resident and family insistence was a critical factor in 16% of decisions to transfer to the hospital. Study results also indicated that in more than 25% of the transfers considered to be potentially avoidable, skilled nursing facility staff acknowledged that having an earlier conversation about resident and family preferences and/or having advance care plans in place might have prevented the transfer (Ouslander et al., 2016). As family and resident insistence have been found to significantly contribute to transfer decisions of nursing home residents, it is important to include their perspectives and preferences in evaluation of the quality of these decisions. Moreover, consideration of resident and family perspectives and preferences related to hospital transfers is consistent with person-centered care within a nursing home context (McCormack & McCance, 2017; Mitchell et al., 2007). The Ottawa Decision Support framework (Ottawa Hospital Research Institute, 2020) posits that patient decision aids contribute to increased knowledge, clarification of personal values, and development of realistic expectations. Ultimately, they affect the choices made by patients and their families (O'Connor et al., 1995).

Although consistent with a person-centered approach, consideration of the family perspective is scarcely represented in the literature regarding acute care transfer of nursing home residents. And, when either resident or family perspectives are considered, the focus is usually on acquiring information about end-of-life care (Carnahan et al., 2017) and residents with advanced dementia, rather than nursing home residents capable of participating in a shared decision-making process.

In a study of resident and family preferences, Tappen et al. (2014) found that, although approximately equal numbers of residents expressed a preference for remaining in the nursing home for treatment, transferring to acute care, or deciding based on the severity of their condition, family members expressed a distinct either/or preference for the resident remaining in the nursing home or transferring to acute care. The severity of a resident's change in condition was less influential in the expressed preferences of family members than for residents. In another study, Tappen et al. (2016) described the decision-making process used by nursing home residents and their family members when confronted with an acute change in condition. Eighty-one percent of family members and 53% of residents preferred a deliberative, information-seeking process in weighing the risks and benefits. Given these findings across studies, it is important to provide residents and family members with relevant information regarding the acute change in condition and the care that can be provided in the nursing home and in the hospital, a key component of person-centered care.

In general, patient preference for shared decision making has increased across time (Chewning et al., 2012). Use of decision aids supports active inclusion of residents and family members in shared decision making. The use of decision aids has been found to improve patient outcomes (Stacey et al., 2017), particularly improvements in affective–cognitive outcomes (Shay & Lafata, 2015). In a recent review, Stacey et al. (2017) found that, when compared with usual care, use of decision aids decreased decisional conflict associated with feeling uninformed as well as indecisiveness about one's personal values. The review also found that use of decision aids enhanced participants'

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knowledge and increased patient–clinician communication, consistency between values and care choices, and accuracy of risk perception. Although there is evidence to support the use of decision aids for a variety of conditions, research on the use of decision aids with older adults in long-term care facilities is sparse to nonexistent.

The use of decision aids with older adults has generally been found to improve their knowledge, participation, and risk perception and reduce decisional conflict (van Weert et al., 2016). However, the literature supporting the use of decision aids and interventions among older adults remains limited. Older adults experiencing frailty, multiple comorbidities, or cognitive impairment are underrepresented in randomized controlled trials (Scott & Guyatt, 2010). In particular, there is a paucity of literature about the use of decision aids with residents of long-term care facilities and their family members. The purpose of the current study was to conduct a randomized trial of a newly developed decision aid, "Go to the Hospital or Stay Here?," designed to support resident and family member involvement in the transfer decision when an acute change in condition occurs.

DECISION GUIDE DEVELOPMENT

The decision aid "Go to the Hospital or Stay Here?" (herein referred to as "the Guide") evaluated in the current study was developed from data obtained in a previous study (Tappen et al., 2014) that examined knowledge of the issues and preferences for hospitalization versus treatment in the nursing home among 271 individuals: nursing home residents ($n = 96$), family members ($n = 75$), and long-term care staff and medical providers ($n = 100$). Interviews were conducted to obtain participants' understanding and preferences regarding treatment. These interviews included an inquiry about a hypothetical acute care transfer and open-ended questions inquiring about anticipated response to the possibility of an acute care transfer. Participants' responses were recorded and transcribed and a thematic analysis of the responses was conducted. Representative quotes from participants were also identified. These results were transformed into explanatory narrative that is included in the Guide. This narrative includes indications of when a decision to transfer to acute care or remain in the nursing home setting is appropriate (i.e., the possible reasons for making either decision, residents' and families' rights to participate in these decisions, and how preference for place of treatment can be communicated to medical providers).

The Guide also contains a list of assessments and interventions that can be provided in most nursing homes to address the evidence of limited awareness of the capabilities of long-term care facilities. A frequently asked questions section is included to address assumptions and misunderstandings evident in participant responses, such as the ability to specify transfer to a preferred hospital or the expectation that a room will be held for the duration of the hospitalization. Frequently expressed concerns about personal belongings and how family members are informed if a transfer becomes necessary were also addressed within the Guide. The Guide was reviewed by 30 end users, providers, residents, and their families prior to testing in this randomized trial. The purpose of the current study was to further evaluate the acceptability of the Guide and to conduct a clinical trial of the potential effect of this Guide on acute care transfer decision making. The research questions were:

- What is the effect of having received the resident/family Guide on participant knowledge of the risks and benefits of treatment in the hospital versus treatment in the nursing home, self-rated decisional conflict, preparation for making a transfer decision, and expressed preference to be treated in the nursing home or transferred to the hospital?
- What is the difference in the number of rehospitalizations of intervention group participants compared to control group participants?
- How helpful did intervention group participants find the Guide?
- How many intervention group participants reported that they reviewed the Guide after it was given to them and/or shared it with another family member?

The complete Guide can be found online (access www.decisionguide.org).

METHOD

Study Design

A mixed method randomized clinical trial was conducted with the qualitative data embedded in the quantitative data and a between-groups repeated measures design used for the quantitative phase. The quantitative outcomes focus on the impact the Guide had on improving knowledge about acute care transfers, decisional conflict, decisional preparation, and transfers in a sample of nursing home residents and family members from 15 long-term care facilities. None of these facilities had an initiative or program to address the effect of resident and family insistence on unnecessary transfers to acute care.

To identify the number of participants required to assess the effectiveness of the Guide across the outcome vari-

ables, a sample size calculation was conducted using the between-groups repeated measures analysis of variance (ANOVA) selection in G*Power version 3.1.9.2. To obtain power at 0.80 with a small medium effect size (f = 0.20, α = 0.05), a control and intervention group measured at a minimum two times, and a correlation between measures of 0.5, a minimum sample size of 150 was determined to be required. Due to an expected loss to follow up of 20%, a sample size of 192 was recruited.

Sample Selection

Potential participants were identified by facility staff on the basis of ability to read the Guide in either English, Spanish, or Haitian Creole (Guide translations were done by University faculty who were experienced translators and native speakers) and to respond to our questions. Residents able to speak for themselves; read the Guide in English, Spanish, or Creole; respond to our questions; willing to participate; and have a Mini-Cog (Borson et al., 2000) score indicating no dementia were included in the study. Individuals unable to read and respond to our questions due to physical condition or cognitive impairment as measured by their Mini-Cog score were excluded. An additional inclusion criterion for family members was having visited in person with the resident at least once per week over the past 3 months and/or the length of stay if shorter. Family members of residents unable to speak for themselves whether due to stroke, dementia, lower levels of consciousness, or other physical condition, were sought for participation to provide some representation for these residents. Exclusion criteria were less than weekly visits with the resident, inability to read the Guide or respond to our questions, or declining to participate.

One hundred ninety-two participants, 128 residents and 64 family members, were identified by staff, screened for eligibility, and consented in accordance with Institutional Review Board (IRB) –approved procedures. Computer-generated random numbers were used to assign individual participants to either the intervention group (n = 97) or control group (n = 95). This study was approved by the University Committee for the Protection of Human Subjects and has been registered on clinicaltrials.gov.

Intervention

Upon completion of enrollment and pretesting, participants randomized to the intervention group were visited by a member of the research team who reviewed the content of the Guide with the participant and answered any questions that arose. Participants were given a printed copy of the full color, 13-page, large print Guide, asked to re-read it, and think about what their decision would be should an acute change in condition occur. They were encouraged to keep it in a safe place where they could find it again and share it with others. Participants in the control group received regular care that did not include discussion of the eventuality of an acute change in condition or the decision to remain in the facility for care or transfer to acute care.

Data Collection

Enrolled participants were tested at baseline, 2- to 3-week posttest, and 3-month follow up. Due to their potential influence and/or irrelevance to those in the control group, several scales were not administered to the control group. These scales included the Decisional Preparation measure and questions about the usefulness of the Guide itself. The Knowledge Test and questions about preference to be treated in the facility versus transferred to acute care were administered to both groups (**Table 1**).

Screening

Resident participants were screened for possible dementia using the Mini-Cog. The Mini-Cog (Borson et al., 2000; Borson et al., 2003) is a brief 3-minute screening measure used to evaluate cognition in older adults. Reported sensitivity is 0.76 and specificity is 0.73 (Holsinger et al., 2012).

Knowledge Test

An appropriate measure of knowledge of the options, risks, and benefits of acute care transfer did not exist; therefore, a 22-item true/false test of the content of the Guide was developed by the research team and reviewed by study consultants. As with most knowledge measures, the test used in the current study is a criterion referenced test (CRT). Internal consistency psychometric assessments of CRTs are not always appropriate in knowledge tests where each question might be assessing a potentially different domain (Popham, 1978; Schaeffer et al., 1986). Therefore, to evaluate the appropriateness of the questions in this knowledge measure, content validity was assessed by two highly experienced long-term care providers, a gerontological nurse practitioner and clinical nurse specialist, producing a content validity index of 3.93 on a scale of 1 (*not relevant*) to 4 (*very relevant*), suggesting that this measure was appropriate for assessment of knowledge changes across relevant domains in the current study. Further psychometric testing of this test should be done on a larger sample.

TABLE 1

Data Collection Schedule

Data	Baseline	2- to 3-Weeks Posttest	3-Month Follow Up
Knowledge test	Intervention and control	Intervention and control	Intervention and control
Decisional conflict	Intervention only	Intervention and control	—
Decisional preparation	—	Intervention only	Intervention only
Preference: remain in nursing home or transfer to acute care	Intervention and control	Intervention and control	Intervention and control
Hospitalization	—	Intervention and control	Intervention and control
Evaluation of decision guide	—	Intervention only	Intervention only

Decisional Conflict

The Decisional Conflict Scale (O'Connor, 1995) is a 16-item scale designed to measure uncertainty about the course of action to take when confronted with an important treatment decision. Test–retest correlation coefficient was 0.81. Cronbach's alpha ranged from 0.78 to 0.92. The Decisional Conflict Scale has been found to discriminate between individuals who were certain of their decision and those who delayed their decision. The scale has been administered to older, sicker, less educated individuals as well as healthy individuals (O'Connor, 1995; Song & Sereika, 2006). Psychometric evaluation suggests the scale measures lack of knowledge, lack of autonomy, and lack of confidence in the ability to make a decision (Katapodi et al., 2011).

Decisional Preparation

Preparation for Decision Making (Bennett et al., 2010) is a 10-item scale designed to evaluate resident and family perceptions of how useful a decision aid is in preparing to discuss a decision with the provider and make a health care–related decision. Reported Cronbach's alpha across five patient groups ranged from 0.92 to 0.96. Item to total correlations were high, ranging from 0.75 to 0.81. Item response theory analysis indicated that the scale functions well across a wide range of degrees of preparedness. Discrimination values for the 10 items ranged from 2.12 to 3.80. Higher scores were obtained for those who gave the decision aid higher acceptability scores.

Transfer Scenario

Participants were presented with a brief example of an acute change in condition that would trigger discussion of transfer to acute care or remaining in the nursing home: "If you developed a cough and fever and then experienced some difficulty breathing 3 days later, would you prefer to be treated in the nursing home or would you prefer to be transferred to the hospital?" Responses were recorded, transcribed, and coded for expressed preference to remain in the nursing home if possible or to be transferred to acute care.

Data Analysis

Descriptive statistics including means, standard deviations, and frequencies were used to describe the sample. All tests of statistical significance used parametric approaches except the chi-square, as parametric tests provide greater power even in non-normal distributions and with smaller sample sizes (Altman & Bland, 2009; Grech & Calleja, 2018). To assess the effectiveness of the use of the Guide in increasing the perception of preparation for decision making and reducing decisional conflict, paired sample *t* tests were used to access change in the intervention group from pretest to posttest. In addition, an independent sample *t* test was used to assess the differences on the posttest scores in decisional conflict between the control and intervention groups. A repeated measures ANOVA was used to assess the effectiveness of the decision aid in improving residents' and family members' knowledge over time compared to the control group (Field, 2018; Stevens, 2009). Lastly, a 2×2 chi-square was conducted to test differences in rehospitalization rates between groups (Field, 2018). Statistical significance was set at $\alpha = 0.05$ with differences in baseline characteristics between the intervention and control groups assessed with a 2-tailed test of statistical significance and a 1-tailed test used to assess the impact of the Guide across the outcome variables.

RESULTS

Sample

The mean age of residents was 81, and the majority were female (66.4%). Most residents (91%) were born in the

TABLE 2

Characteristics of Study Participants

Variable	Control Group		Intervention Group		*p* Value
	n (%)	Mean (*SD*) (Range)	*n* (%)	Mean (*SD*) (Range)	
Age	95 (100)	79.4 (13.9) (33 to 103)	96 (99)	76.7 (12.7) (38 to 98)	0.157
Years in United States	95 (100)	75.8 (18.1) (15 to 103)	96 (99)	73.9 (16.1) (21 to 98)	0.452
Resident risk of hospitalization	77 (81)	1.9 (1.3) (1 to 7)	79 (81)	2.0 (1.3) (1 to 7)	0.429
Resident acuity level	85 (89)	1.6 (0.9) (1 to 5)	85 (88)	1.7 (0.9) (1 to 5)	0.615
Knowledge pretest	93 (98)	15.3 (2.7) (8 to 20)	96 (99)	15.7 (2.7) (7 to 22)	0.300
Years of education	95 (100)	13.1 (2.4) (3 to 20)	96 (99)	14 (3.2) (1 to 24)	0.046
Resident length of stay (days)	93 (98)	736.2 (860.9) (1 to 4,745)	95 (98)	869.8 (1028.9) (1 to 4,015)	0.930

United States and had an average of 13 years of education and an average length of stay in the facility of 859.3 days. The majority of these residents were European American (84.1%), 14.1% were African American, and 0.8% Hispanic or other. Sixty-four family members also participated. Their average age was 64, and average years of education was 14.6. The majority (79.7%) were European American, with African American and Hispanic individuals representing 6.3% each, and Afro-Caribbean individuals representing 7.8%. There were no differences between control group residents and those receiving the decision aid in terms of age, years residing in the United States, risk of hospitalization, acuity, knowledge pretest, and resident length of stay (**Table 2**). Resident acuity level and risk of hospitalization were based on staff rating. The only difference was in years of education, with the control group having approximately 1 full year less of education on average.

Participant Attrition

One hundred ninety-two participants were tested at baseline. By posttest (i.e., the second data collection point 14 to 21 days later), 13 had been lost to follow up for the control group and 12 for the intervention group. At 3-month follow up, an additional 30 participants were lost from the control group and 39 participants were lost from the intervention group (**Figure 1**). These losses occurred for various reasons, primarily transfers to other nursing homes or hospitals or discharge to home with no additional contact information available. To assess the potential bias due to loss to follow up, independent sample *t* tests were conducted on the continuous variables. There were no differences between individuals who were lost to follow up and those who remained on the variables of age ($t[189] = 0.93$, $p = 0.354$, Cohen's d = 0.135), years in the United States ($t[189] = 0.54$, $p = 0.59$, Cohen's d = 0.079), and years of education ($t[189] = -1.37$, $p = 0.171$, Cohen's d = 0.20). There was a significant difference in length of stay, where the average length of stay for those not lost to follow up was 995.5 days and those lost was 599.3 days ($t[189] = 2.92$, $p = 0.004$, Cohen's d = 0.42). Chi-square tests were used to assess the differences in those lost to follow up for the categorical variables. There were no significant differences across the variables of assignment to intervention ($\chi^2[1] = 2.11$, $p = 0.146$, Cramer's V = 0.11), gender ($\chi^2[1] = 0.32$, $p = 0.57$, Cramer's V = 0.04), ethnicity ($\chi^2[3] = 0.533$, $p = 0.911$, Cramer's V = 0.054), race ($\chi^2[2] = 1.71$, $p = 0.558$, Cramer's V = 0.08), marital status ($\chi^2[4] = 4.51$, $p = 0.342$, Cramer's V = 0.15), religion ($\chi^2[2] = 3.19$, $p = 0.203$, Cramer's V = 0.13), or born in the United States ($\chi^2[1] = 0.97$, $p = 0.614$, Cramer's V = 0.07).

Knowledge Test

Between-groups repeated measures ANOVA was conducted to assess the differential effect of the Guide over time in the intervention group compared to the control group. Of individuals who completed the pretest and posttest, there were statistically significant improvements overall for both groups, but the intervention group showed a greater improvement in knowledge from pretest to posttest compared to the control group ($F[1,159] = 7.88$, $p = 0.006$, $\eta^2 = 0.047$) (**Table 3**, **Figure 2**).

Decisional Conflict

Table 4 presents the means, standard deviations, and number of participants analyzed by intervention group for decisional conflict. Because decisional conflict was measured at pretest and posttest for the intervention group but only at posttest for the control group, an independent sam-

ples *t* test was used to assess differences in decisional conflict between individuals who received the Guide and those who did not at posttest. The intervention group had statistically significant lower decisional conflict (8.95) compared to the control group (15.73) ($t[160] = 3.49$, $p = 0.001$, Cohen's d = 0.55). A paired sample *t* test was then conducted to investigate reported pretest to posttest change in decisional conflict for the intervention group. Decisional conflict was significantly lower at posttest with an average of 9.98 compared to the pretest with an average of 13.11 ($t[75] = 3.35$, $p < 0.001$, Cohen's d = 0.41).

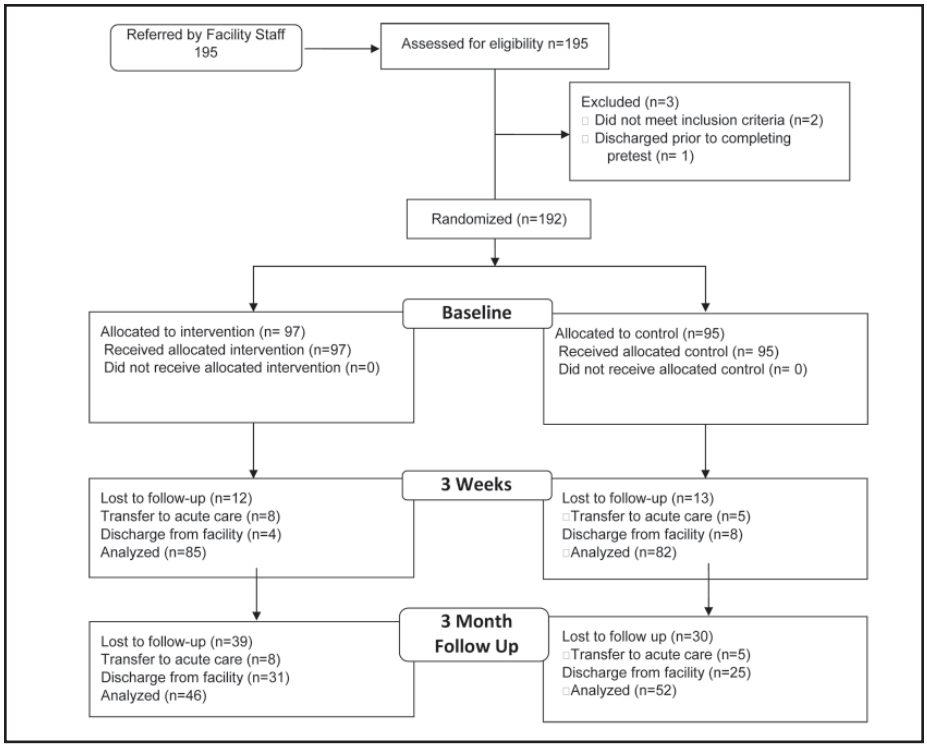

Figure 1. CONSORT diagram of participant selection (Altman et al., 2001).

Preparation for Decision Making

Preparation for decision making was only assessed for the intervention group at posttest and 3-month follow up (**Table 4**). To assess the effectiveness of improving residents' and family members' preparation for decision making, a paired sample *t* test was used. Despite the overall decrease in decisional conflict and improvement in knowledge, the overall reported preparation for decision making decreased from an average of 39.59 to 36 ($t[38] = 2.06$, $p = 0.046$, Cohen's d = 0.33). Because the majority of residents and families reported that they had not given any thought to this question prior to receiving the Guide, this decrease in preparedness may be due to increased awareness of the potential complexity of the decision.

Expressed Preference to Remain in the Nursing Home or Transfer to Acute Care

Participants in the intervention group were presented with the transfer scenario at baseline, posttest, and follow up. At baseline, 72% of intervention group participants preferred remaining in the nursing home, 20% preferred transfer to the hospital, and 8% said it depended on the situation, particularly the severity of the problem. The preference to remain in the nursing home in intervention group participants increased to 81% at posttest and then dropped to 79% at 3-month follow up. In comparison, 67% of control group participants preferred remaining in the nursing home at posttest but this increased to 78% at 3-month follow up. The difference between the intervention and control groups approached significance at posttest ($\chi^2[1] = 5.45$, $p = 0.06$, Cramer's V = 0.20). There were no significant differences between the intervention and control groups at 3-month follow up. However, by this point, the control group had been exposed not only to the knowledge test but also to the transfer scenarios that ask people to think about their preferences, suggesting that being encouraged to think about this topic may influence preferences.

Transfer to Acute Care

There were few rehospitalizations in the sample, five for the control group and eight for the intervention group. The difference in numbers of transfers from the nursing home to an acute care facility was not statistically significant across groups ($\chi^2[1] = 0.61$, $p = 0.437$, odds ratio = 1.58).

Participant Evaluation of the Guide

Participants in the intervention group were asked at posttest how helpful they had found the Guide, if they had

TABLE 3

Knowledge Change From Pretest to Posttest by Study Group

Group	Mean (*SD*, Range)		Intervention × Time Interaction		
	Pretest	Posttest	*F*[1,159]	*p* Value	χ^2
Intervention (*n* = 82)	15.6 (2.8) (9 to 27)	17.4 (2.8) (9 to 20)			
Control (*n* = 79)	15.2 (2.6) (7 to 22)	15.8 (2.6) (8 to 20)	7.88	0.006	0.047

TABLE 4

Decisional Conflict and Preparation for Decision Making by Study Group

Measure and Data Point	Control Group		Intervention Group	
	Mean (*SD*, Range)	*n* (%)	Mean (*SD*, Range)	*n* (%)
Decisional conflict				
Pretest	—	—	12.75 (11.74) (0 to 54)	88
Posttest	15.73 (14.68) (0 to 52)	78	8.95 (9.66) (0 to 43)	84
Preparation for decision making				
Posttest	—	—	39.61 (9.39) (10 to 50)	82
Follow up	—	—	35.74 (9.97) (14 to 50)	43

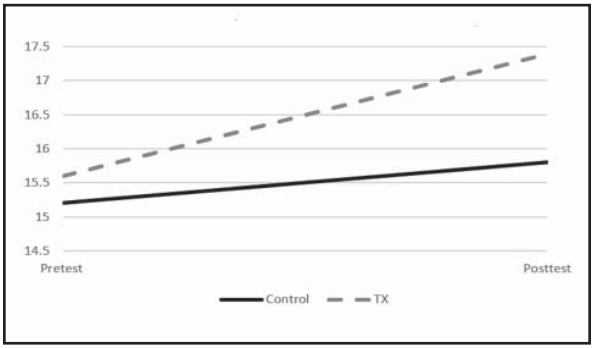

Figure 2. Knowledge change by study group.
Note. TX = intervention group.

looked at it again after the interventionist left it with them, and if they had shared it with anyone else. Of the 73 treatment group participants who commented on the Guide, 85% found it *helpful* or *very helpful*. Only three participants said it was not helpful, and two were neutral. On a scale of 1 (*not helpful*) to 5 (*very helpful*), the mean rating was 4.54 (*SD* = 0.89).

Approximately 26% of intervention group participants said they had shared the Guide with someone else, most often a family member. More than one half (55%) said they had thoroughly reviewed the Guide again after the interventionist left it with them. Only 12% said they had not looked at it a second time.

DISCUSSION

Contemporary literature suggests that decision making related to transfers to acute care can be challenging for residents, families, and providers (Lamb et al., 2011). In part, this challenge has been due to lack of evidence-based, person-centered information as is provided in the Guide, which addresses the multiple factors that influence transfer decisions (Levine & Ramos-Callan, 2019). Families have reported feeling ill-prepared to participate in this decision making and state that they are often excluded from the decision-making process (Hoffmann et al., 2018). A review of the literature indicated that there is little information concerning guidance for this important decision, which validates the need for the current study (Pulst et al., 2019).

Findings from a systematic review of qualitative research on family involvement in nursing home to hospital transfer decisions reinforces the presumed desire of family members to be actively involved (Pulst et al., 2019). Transfer decisions were affected by family members' judgment of the quality of the nursing home care, quality of the hospital care, perceived severity of the current concern, and the extent to which the family member was involved in treatment and decisions to transfer (Pulst et al., 2019).

The purpose of the current study was to test the acceptability and use of the newly developed decision guide, "Go to the Hospital or Stay Here?" Specifically, the current

study tested the effects of this Guide on decision quality, acute care transfers, and its acceptability to nursing home residents and family members as part of a randomized clinical trial. Overall, findings suggest that the Guide was useful in reducing decisional conflict: individuals who were given the Guide showed decreases in decisional conflict, whereas the same was not the case for individuals who did not have the Guide. This finding is consistent with previous literature on general populations faced with health-related decisions (Stacey et al., 2017) and older adults (van Weert et al., 2016), indicating that decision aids contribute to decrements in decisional conflict. Findings also provided evidence that reviewing the Guide resulted in increased knowledge of options and risks and benefits of acute care transfer versus remaining in the nursing home.

The results indicate that the Guide supports resident, family, and health care professionals in shared decision making when a change in resident condition occurs. Resident and family evaluation of the Guide's helpfulness was positive. Many shared it with others, and most looked at it more than once, suggesting the Guide addressed a subject of interest, if not concern, and that most found it valuable enough to review it a second time and/or share it with others.

LIMITATIONS

A substantial number of participants were lost to follow up due to inability to locate them after the intervention was implemented. The current nursing home environment is dynamic, making it challenging to follow up with participants. This difficulty probably affected the count of hospital transfers but the degree to which this occurred cannot be estimated. Staff at the nursing homes were unable to provide any information as to where residents went, making it difficult to track them for follow up. High staff turnover and inconsistency in staffing contributed to this challenge. Another limitation was the limited psychometric testing of the Knowledge Test, with only content validity being assessed using a content validity index. Further assessment of this measure using cut scores to assess standard error of measurement as well as predictive and discriminate validity estimates and IRT analysis are suggested. Despite random assignment to the intervention or control group, there was also a difference in the number of years of education between these groups. This difference could have influenced performance on the Knowledge Test.

Future research is needed to examine the effect of the Guide with organization-wide implementation. Using a facility-wide approach to prepare all residents for the possibility of having to make this decision may have a greater impact on the rate of acute care transfers. With the individual approach used in the current study, follow-up reinforcement by nursing home staff was not provided to participants. Moreover, the sample was not large enough to adequately examine differences across ethnic groups, an issue that should be considered in future studies.

CONCLUSION

Possessing knowledge regarding the care options, risks, and benefits of acute care transfers is essential in the decision-making process. Optimal shared decision making occurs when residents and families have the requisite knowledge to make informed decisions and their right to participate in the decision making is honored. The Guide provided information to support this decision making, which aligns with patient and caregiver suggestions for improvement found in previous studies, such as having an active role in the decision-making process, having adequate information, better communication with caregivers early and often, and allowing more time for decision making (Burke et al., 2018).

To the best of the current authors' knowledge, this is the first test of a decision guide focused on going to the hospital or staying in the nursing home. Although more research is needed to test the impact of implementation organization-wide in multiple post-acute facilities, there is evidence that the Guide can be useful in supporting dialogue before an acute change occurs in a resident's condition. The Guide provides information about the benefits and risks of going to the hospital or staying in the post-acute/long-term care facility and its use provides opportunities for non-stressful, person-centered, shared decision making that honors the values and wishes of the resident and family.

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