Investigating the Impact of Intervention Refusal on Hospital Readmission

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Transitions between care settings have been identified as vulnerable exchange points that are associated with increased risk for hospital readmissions,[1-5] medication errors,[6,7] lapses in care and safety,[8] poor satisfaction with care,[9] unmet needs,[10] and subsequent high rates of additional costly health service use, many of which may have been avoided.[5,7] Older adults are at highest risk for poor transitions and subsequent hospital readmissions. A benchmark study found that 20% of hospitalized Medicare beneficiaries were readmitted within 30 days and 34% within 90 days of their index hospitalization.[11] This high rate of readmission among older adults served as the impetus for the Hospital Readmissions Reduction Program (HRRP) implemented as part of the Affordable Care Act (ACA) in 2012, which imposes penalties on hospitals with higher than expected rates of 30-day readmissions among older adults with certain conditions (heart attack, pneumonia, and heart failure, during this study period). A study conducted following implementation of HRRP payment penalties found that readmission rates declined to 17.8% for HRRP-targeted conditions.[12] Although some have challenged these findings by attributing reductions in readmission rates to rising observation rates,[13] it is clear that hospitals have made some improvements in 30-day readmission rates.[12,14,15]

Although many hospitals have implemented transitional care interventions targeting older adults,[16-18] the penalties have raised hospital interest in identifying additional mechanisms to further reduce readmissions. While some hospitals have seen significant reductions in 30-day rehospitalization rates,[16-18] recent studies and reports highlight several challenges in the ability of hospitals to impact readmission rates and associated HRRP penalties. These concerns include patient-level factors (eg, sociodemographic factors, patient preference, and access to community-based supportive services) beyond the hospital's control influencing recidivism,[19-23] readmissions that are appropriate and unavoidable,[23] and lack of risk adjustment for uncontrollable factors that influence recidivism (resulting in disproportionate penalties on safety-net hospitals).[15,19,23] Administrators and researchers are

ABSTRACT

OBJECTIVES: To identify characteristics and readmission risks associated with opting out of a social work–driven transition intervention.

STUDY DESIGN: Secondary data analysis of a randomized controlled pilot study at a large nonprofit urban community hospital.

METHODS: Hospitalized English-speaking, cognitively intact adults 65 years or older with expected discharge back to the community were eligible for enrollment. Additionally, patients met at least 1 of the 3 criteria: 1) 75 years or older, 2) taking 5 or more medications, or 3) had 1 or more prior inpatient stays or emergency department visits in the previous 6 months. The transition intervention consisted of up to 2 in-home visits (the first occurring within 48 hours after discharge) and up to 4 telephone follow-up calls (for a maximum of 6 total contacts) by a transition social worker. This study analyzed participants randomized to the intervention arm on measures including demographics, medical diagnoses, presence of advance directive, and all-cause 30-day hospital readmissions.

RESULTS: Of the 90 patients randomized to the Social Work Intervention Focused on Transitions intervention group, 10% were readmitted within 30 days and nearly one-third refused (ie, opted out of) the home visit component of the intervention. Multivariate analyses revealed that those opting out of the intervention had 3 times greater odds of having a respiratory condition compared with intervention recipients (odds ratio [OR], 3.10; 95% CI, 1.09-8.80; P = .034). Additionally, opting out of the intervention (OR, 6.75; 95% CI, 1.05-43.52; P = .045) and having a diagnosis of cancer (OR, 29.59; 95% CI, 2.01-435.45; P = .014) significantly predicted readmission.

CONCLUSIONS: Findings suggest that some at-risk patients may not be receptive to services and programs aimed at improving care transitions, resulting in a higher risk for readmission.

calling for HRRP reform; in the meantime, hospitals continue to grapple with which patients constitute the high-risk pool that should be targeted for transitional care services and be provided with interventions aimed at reducing readmissions and improving quality.[23]

This study is a secondary analysis of patients randomized to the care transition intervention arm of the Social Work Intervention Focused on Transitions (SWIFT) pilot study conducted among older adults identified as being at high risk for readmission. This analysis aims to identify the characteristics and risk factors associated with opting out of a social work–driven transition intervention. Increased knowledge of the factors associated with intervention refusal can help hospitals identify those patients who appear resistant to interventions. With hospitals accountable for 30-day readmissions, information from this study may provide insight to hospitals on patient groups who could benefit from alternate strategies to reduce readmissions, such as education and interventions provided during the hospital stay or in the primary care setting following discharge. Findings from this study also may inform hospital practice and CMS policies and funding priorities.

The question guiding this research was: what characteristics and risk factors are associated with opting out of transition intervention services?

METHODS

This study was a secondary data analysis of the SWIFT randomized controlled pilot study conducted between February 2011 and September 2013 at a large (625-bed) nonprofit teaching hospital located in the Los Angeles area. The study was approved by the institutional review board at the hospital study site (Huntington Memorial Hospital) and the academic research institution (University of Southern California) executing the study.

Eligibility and Recruitment

Hospitalized patients eligible for the study were English-speaking community-dwelling adults 65 years or older living within a 20-mile radius of the hospital. Additionally, participants had to meet at least 1 of the following criteria: 1) advanced age (75 years or older), 2) taking 5 or more prescription medications, and/or 3) having 1 or more hospitalizations or emergency department (ED) visits in the previous 6 months. These criteria have been used in previous social work case management[24] and hospital-to-home care transition interventions[25] to identify individuals at high risk for hospital readmission. Patients were ineligible for the SWIFT study if they were homeless, lived in an environment where they received skilled care (ie, long-term care or hospice recipient), were

TAKEAWAY POINTS

Current policies have charged hospitals with the task of reducing 30-day readmission rates; however, results of the present study contribute to a growing body of research suggesting that it may not be reasonable to place this burden solely on hospitals.

▸ Some patients at risk for hospital readmission may not be receptive to in-home transition interventions, yet those who refuse interventions may experience greater odds of being readmitted within 30 days.

▸ Participants who opted out of the Social Work Intervention Focused on Transitions intervention or those diagnosed with cancer were more likely to be readmitted within 30 days.

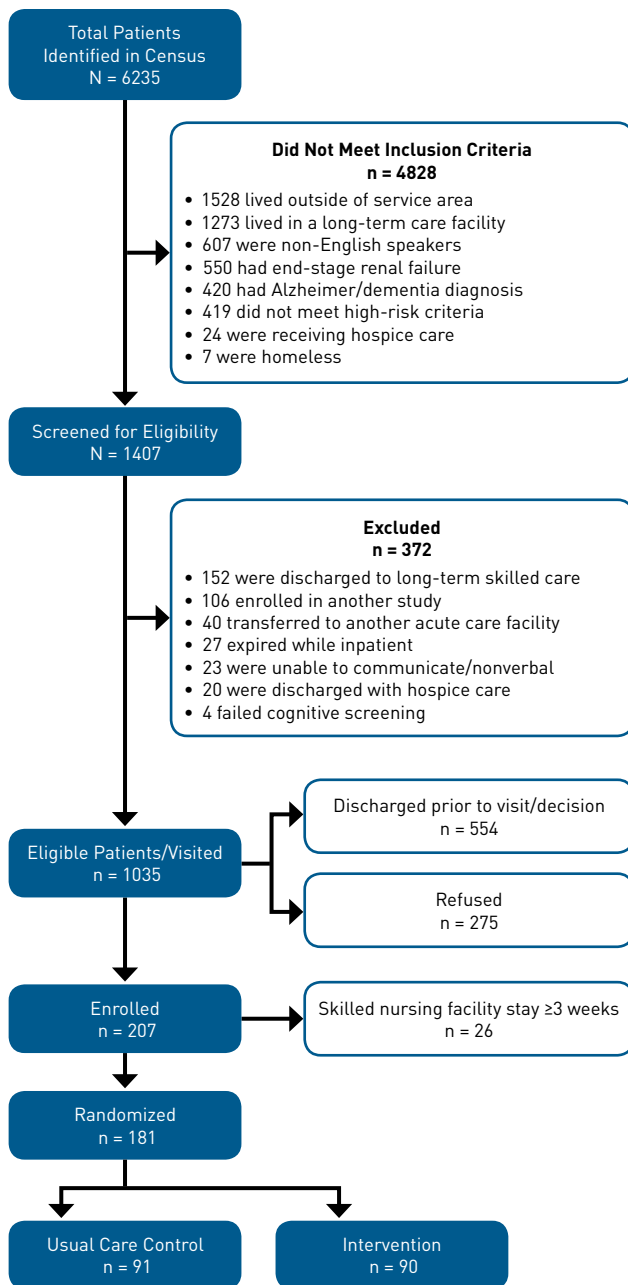▸ Participants with a respiratory condition were more likely to opt out of the intervention.

cognitively impaired (as determined by a Short Portable Mental Status Questionnaire [SPMSQ][26-28] score of 5 or more errors in replies to 10 questions), or were diagnosed with Alzheimer disease, severe dementia, or end-stage renal disease. Patients with end-stage renal disease were excluded from the SWIFT study due to their elevated risk of death and the associated level of need for skilled nursing care, which is outside the skillset of social workers.[29]

We identified potentially eligible patients 65 and older by reviewing daily hospital census reports (excluding the intensive/critical care unit) 1 to 2 times per day Monday through Friday. Direct referrals also were made by a social worker conducting rounds in the nursing units. Electronic health records (EHRs) were reviewed to determine number of medications being taken and previous medical service use. Patients meeting the eligibility criteria were approached at hospital bedside by master's-level research assistants who administered the SPMSQ to establish mental competency. Initial (and, if needed, subsequent) patient contact was made at varying points during the patient's hospitalization course due to noncontinuous census screening, patients sometimes being out of their room for a procedure or test, and some patients requesting a revisit (eg, because they were feeling unwell or requested family be present during discussion). Eligible patients were invited to participate and asked to sign informed consent and Health Insurance Portability and Accountability Act authorization documents.

SWIFT Intervention

The SWIFT intervention builds on previous transitional care research[16,25,30] and integrates social work practice approaches. The intervention consists of in-home visits (a maximum of 2 in-home visits) and telephone follow-up calls (up to 4 telephone contacts) conducted by the study social worker. Patients receive a minimum of 2 contacts (1 in person and 1 phone call) and a maximum of 6 contacts with the social worker. The purpose of the first home visit is to conduct an initial assessment and develop and implement a plan of care. Activities performed by the social worker during this visit are guided by an intervention checklist and include a psychosocial evaluation, home safety check, medication inventory for reconciliation, review of hospital discharge instructions, health goal setting and problem solving, coaching around scheduling

FIGURE. Screening and Enrollment: Consort Diagram

Total Patients
Identified in Census
N = 6235

**Did Not Meet Inclusion Criteria
n = 4828**
- 1528 lived outside of service area
- 1273 lived in a long-term care facility
- 607 were non-English speakers
- 550 had end-stage renal failure
- 420 had Alzheimer/dementia diagnosis
- 419 did not meet high-risk criteria
- 24 were receiving hospice care
- 7 were homeless

Screened for Eligibility
N = 1407

**Excluded
n = 372**
- 152 were discharged to long-term skilled care
- 106 enrolled in another study
- 40 transferred to another acute care facility
- 27 expired while inpatient
- 23 were unable to communicate/nonverbal
- 20 were discharged with hospice care
- 4 failed cognitive screening

Eligible Patients/Visited
n = 1035

Discharged prior to visit/decision
n = 554

Refused
n = 275

Enrolled
n = 207

Skilled nursing facility stay ≥3 weeks
n = 26

Randomized
n = 181

Usual Care Control
n = 91

Intervention
n = 90

these calls is to follow up on issues identified at the home visit(s), discuss outcomes from physician office visits, review established health goals (and draft new ones, when applicable), determine success of linkages or referrals to community-based services, and problem-solve around new issues.

Measures

The study researchers collected data from the hospital electronic database and through patient surveys. To ensure reliability, they were formally trained in methods for gathering and extracting data and the safe and ethical conduct of human subjects research. They used the hospital's EHR to obtain data on previous ED visits and hospitalizations, all-cause 30-day readmissions (planned and unplanned), and presence of an advance directive. Research assistants collected patient demographics and other characteristics, including age, gender, marital status, and disease diagnoses (via a "yes/no" inventory of 10 common conditions) through patient surveys conducted at bedside. Asthma and chronic obstructive pulmonary disease (COPD) were consolidated into a single variable renamed "respiratory disease." Similarly, "cardiac disease" represented a consolidation of heart disease and chronic heart failure, and all cancers were included in a single "cancer" variable. Following hospital discharge, research assistants obtained EHR data on hospital length of stay and whether home health care services were ordered at discharge.

Study participants randomized to the SWIFT intervention who did not receive in-home intervention visits were considered "opt-outs." Opt-outs were identified by social workers in their outreach to SWIFT intervention participants. SWIFT social workers documented patients' stated reasons for opting out of SWIFT intervention home visits during their initial patient contact following hospital discharge.

Analysis

Descriptive statistics were used to describe the sample, and bivariate tests (χ^2 and Mann-Whitney U) were performed to analyze differences between the participants who opted out of the intervention and those who received the intervention. Two logistic regressions were performed to identify characteristics associated with opting out of the SWIFT intervention and to determine risk factors for 30-day readmission. We used results of the bivariate analyses and findings from previous research to guide inclusion of variables in the regressions to maintain the most parsimonious model, given the small sample size. Regression models to determine predictors of opting out of the SWIFT intervention included the following independent variables: respiratory condition, cardiac condition, cancer, length of stay (index hospitalization), presence of advance directive, and discharge to home without home health care services (self-care). We included the same variables, with the addition of the intervention opt-out variable, in the second logistic regression to determine predictors of 30-day readmission.

follow-up physician appointments, and referrals to home- and community-based services. The second in-home visit is conducted if problems identified at the initial home visit are not sufficiently resolved or are extensive enough that telephone contact is not adequate to resolve the problems.

In addition to the in-home visit(s), SWIFT intervention patients receive up to 4 telephone calls from the social worker. The aim of

RESULTS

Demographics

Overall, 90 participants were randomized to the SWIFT intervention group (see **Figure**). SWIFT intervention group participants were mostly Caucasian (63.6%), male (56.1%), and living in their own houses or apartments (89.7%). The average (SD) age of participants was 78.4 (7.8) years. Educational attainment was high; the vast majority (87.6%) completed high school or beyond and 46.3% held a bachelor's degree or higher (**Table 1**).

Among the 90 participants randomized to the intervention group, nearly one-third (31.1%) opted out. Participants identified the following reasons for opting out of the SWIFT intervention: felt home visit/follow-up care was not needed (n = 12; 42.9%), did not want a home visit (n = 8; 28.6%), were hoping to be randomized to the usual care arm (n = 6; 21.4%), and were unreachable (n = 2; 7.1%). We queried the reachable subsample of participants (n = 26) to further understand their reasons for opting out of the home intervention. Several reported not needing the home visit because they were feeling very good (n = 7; 26.9%) or were already well cared for by family members and/or caregivers (n = 2; 7.7%). Three indicated that they were not usually "sick" and did not need home visits. Others no longer wanted the SWIFT home visit because they were prescribed visits from home health (n = 6; 23.1%) and felt that additional visitors were unnecessary. Two participants reported "fatigue" with clinicians and medical encounters in general. The 6 participants who had hoped to be randomized to the usual care arm of the study unanimously stated that they only enrolled to either "help the hospital" or "help the researchers," explaining that this "level of care" (ie, home visits) was unnecessary for them but could help "someone who could really use it" in the future if it became "normal care for all seniors."

Comparison of characteristics of those enrolled in the SWIFT intervention and those opting out revealed few differences: opt-outs were more likely to have a respiratory disease compared with intervention recipients (52.2% of opt-outs vs 28.3% of intervention; *P* = .04). A greater proportion of opt-outs were readmitted to the hospital within 30 days (n = 5 [18.5%] vs n = 4 [6.3%] of intervention recipients), but this trend did not reach statistical significance (*P* = .08). Of the 9 readmissions among all participants randomized to the SWIFT intervention, only 1 was planned (an intervention recipient with a planned hospitalization for a fiber-optic bronchoscopy procedure).

Intervention Opt-out

Using binary logistic regression, we investigated characteristics associated with opting out of the SWIFT intervention. Results revealed that the odds of opting out of the SWIFT intervention were significantly higher for participants with respiratory conditions (odds ratio [OR], 3.29; 95% CI, 1.09-9.90; *P* = .034) (**Table 2**). No other variables were significantly associated with opting out.

TABLE 1. Intervention Patient Demographic Characteristics (n = 90)

	Frequency (%) (unless otherwise noted)			
	Received Intervention (n = 63)	Refused Intervention (n = 27)	Overall Intervention Group (n = 90)	*P*
Age, years[a] (mean ± SD)	78.3 ± 8.2	78.4 ± 7.1	78.4 ± 7.8	.989
Gender				
Male	32 (52.5)	18 (64.3)	50 (56.1)	.208
Female	29 (47.5)	10 (35.7)	30 (43.8)	
Highest education				
8th grade or less	4 (7.0)	1 (4.3)	5 (6.3)	
9th-11th grade	3 (5.3)	2 (8.7)	5 (6.3)	
High school graduate	10 (17.5)	3 (13.0)	13 (16.3)	
Some college	15 (26.3)	5 (21.7)	20 (25.0)	.692
College graduate	13 (22.8)	6 (26.1)	19 (23.8)	
Graduate degree	8 (14.0)	6 (26.1)	14 (17.5)	
Doctoral degree	4 (7.0)	0 (0)	4 (5.0)	
Race/ethnicity				
African American	11 (18.0)	3 (11.1)	14 (15.9)	
Caucasian	38 (62.3)	18 (66.7)	56 (63.6)	
Latino	5 (8.2)	4 (14.8)	9 (10.2)	
Native American	1 (1.6)	0 (0)	1 (1.1)	.736
Asian/Pacific Islander	1 (1.6)	1 (3.7)	2 (2.3)	
Other	5 (8.2)	1 (3.7)	6 (6.8)	
Marital status				
Married	29 (49.2)	16 (57.1)	45 (51.7)	
Single	10 (16.9)	6 (21.4)	16 (18.4)	
Divorced	6 (10.2)	1 (3.6)	7 (8.0)	.622
Widowed	14 (23.7)	5 (17.9)	19 (21.8)	
Living situation				
Own house/apartment	51 (86.4)	27 (96.4)	78 (89.7)	
Living in family member's home	5 (8.5)	1 (3.6)	6 (6.9)	.317
Other	3 (5.1)	0 (0)	3 (3.4)	

(continued)

TABLE 1. Intervention Patient Demographic Characteristics (n = 90)

	Frequency (%) (unless otherwise noted)			
	Received Intervention (n = 63)	Refused Intervention (n = 27)	Overall Intervention Group (n = 90)	P
Who do you live with?				
Alone	13 (22.4)	7 (25.9)	20 (23.5)	
Spouse/partner	27 (46.6)	16 (59.3)	43 (50.6)	
Child	9 (15.5)	4 (14.8)	13 (15.3)	.300
Paid caregiver	1 (1.7)	0 (0)	1 (1.2)	
Other	8 (13.8)	0 (0)	8 (9.4)	
Who is your primary caregiver?				
No one/self	24 (40.7)	9 (33.3)	33 (38.4)	
Spouse	16 (27.1)	8 (29.6)	24 (27.9)	
Significant other	3 (5.1)	1 (3.7)	4 (4.7)	
Child	6 (10.2)	5 (18.5)	11 (12.8)	.907
Paid caregiver	4 (6.8)	2 (7.4)	6 (7.0)	
Other	6 (10.2)	2 (7.4)	8 (9.3)	
Annual income				
<$10,000	8 (12.9)	1 (3.6)	9 (10.0)	
$10,000-$19,000	7 (11.3)	3 (10.7)	10 (11.1)	
$20,000-$29,000	4 (6.5)	1 (3.6)	5 (5.6)	
$30,000-$39,000	1 (3.7)	0 (0)	1 (1.1)	.529
$40,000-$49,000	0 (0)	1 (3.6)	1 (1.1)	
≥$50,000	6 (9.7)	3 (10.7)	9 (10.0)	
Refused to reply	36 (55.9)	19 (67.8)	55 (61.1)	
Length of stay,[a] days (mean ± SD)	3.8 ± 8.1	3.0 ± 2.6	3.5 ± 4.2	.959
Number of prior inpatient stays, last 6 months[a] (mean ± SD)	0.5 ± 1.0	0.6 ± 1.1	0.6 ± 1.0	.798
Number of prior ED visits, last 6 months[a] (mean ± SD)	0.3 ± 0.6	0.5 ± 0.7	0.3 ± 0.6	.309
Number of daily medications[a] (mean ± SD)	7.5 ± 3.4	9.1 ± 4.3	7.9 ± 3.7	.122
Number of health conditions[a] (mean ± SD)	5.9 ± 3.2	6.2 ± 2.9	5.9 ± 3.1	.515

*P <.05; **P <.01; ***P <.001.
ED indicates emergency department.
[a]Mann-Whitney U test.

Any 30-Day Readmission

We conducted a second logistic regression to examine variables associated with all-cause readmission to the hospital within 30 days of the index hospital discharge. Results revealed that, while controlling for other confounding variables, having a cancer diagnosis and opting out of the SWIFT intervention both predicted 30-day hospital readmission (P = .01 and P = .05, respectively). SWIFT participants diagnosed with cancer had nearly 30 times higher odds of being readmitted within 30 days of discharge (OR,

29.59; 95% CI, 2.01-435.45), and those who opted out of the home intervention had greater than 6 times higher odds of being readmitted within 30 days of discharge (OR, 6.75; 95% CI, 1.05-43.53) (**Table 3**).

DISCUSSION

This study aimed to identify the characteristics and risk factors associated with opting out of a social work–driven transition intervention. Findings suggest that some at-risk patients may not be receptive to in-home transition interventions, with nearly one-third of patients opting out of a home visit after consenting to participate in the study.

We found that participants who opted out of the intervention were significantly more likely to have a respiratory condition. There is a dearth of literature pertaining to the medical diagnoses of older adults who decline or drop out of interventions. However, the results of a study by Voss and colleagues examining recruitment of hospitalized Medicare patients for behavioral research show that patients who reported a perceived inability to control important life domains (ie, "In the last week, how often have you felt that you are unable to control the important things in your life?"[31]), had low expectations of recovery, or reported confusion with the researcher's questions were significantly less likely to consent to the research.[31] The authors suggested that stress, self-expectations for recovery, and health literacy are potential influences on older adults' decision to participate in behavioral research.[31]

Although participants in the present study did originally consent to the research, with some later opting out of the home intervention aspect of the study, the constructs that Voss et al describe may be particularly prevalent among older adults with respiratory conditions. For example, COPD is a common respiratory condition most prevalent among older adults aged 65 to 74 years[32] and was the second leading overall cause of death for all ages in 2015.[32] Exacerbations of COPD can be significant events that can cause patients to be hospitalized and may require any number of inpatient interventions, each of which is considered to have fatal risks.[33,34] The constructs of perceived stress, expected recovery, and health literacy offered by Voss et al could be impacted by the severity of COPD exacerbations and

TABLE 2. Logistic Regression: Factors Associated With Intervention Opt-Outs

	Model 1				Model 2			
	OR	SE	P	CI	OR	SE	P	CI
Respiratory condition	2.97	0.53	.040[a]	1.05-8.37	3.29	0.56	.034[a]	1.09-9.90
Cardiac condition	0.76	0.62	.658	0.23-2.55	0.76	0.64	.665	0.22-2.64
Cancer	1.55	0.66	.503	0.43-5.62	1.550	0.68	.521	0.41-5.89
Length of stay					1.04	0.09	.633	0.88-1.24
Has advance directive					1.53	0.55	.438	0.52-4.49
Home, self-care					4.18	0.90	.110	0.72-24.15
-2Log likelihood	87.35				83.24			
R^2	0.08				0.11			
Hosmer and Lemeshow χ^2	2.57				10.62			

OR indicates odds ratio; SE, standard error.
[a]P <.05.

TABLE 3. Logistic Regression: Factors Associated With 30-Day Readmission

	Model 1				Model 2				Model 3			
	OR	SE	P	CI	OR	SE	P	CI	OR	SE	P	CI
Respiratory condition	0.90	0.81	.893	0.18-4.37	1.01	0.86	.992	0.19-5.40	0.50	1.04	.503	0.07-3.83
Cardiac condition	0.35	0.69	.408	0.03-4.14	0.20	1.45	.267	0.01-3.40	0.27	1.47	.368	0.02-4.78
Cancer	15.75	5.96	.015[a]	1.72-143.90	26.84	1.34	.014[a]	1.94-372.22	29.59	1.37	.014[a]	2.01-435.45
Length of stay					1.19	0.11	.110	0.96-1.48	1.21	0.12	.118	0.95-1.55
Has advance directive					0.70	0.81	.661	1.45-3.40	0.54	0.87	.477	0.10-2.98
Home, self-care					2.850	1.13	.353	0.31-25.83	3.57	1.31	.331	0.27-46.37
Opted out of intervention									6.75	0.95	.045[a]	1.05-43.52
-2Log likelihood	46.86				44.09				39.65			
R^2	0.22				0.28				0.37			
Hosmer and Lemeshow χ^2	2.20				7.75				9.05			

OR indicates odds ratio; SE, standard error.
[a]P <.05.

hospital course of care, in addition to psychosocial risk factors such as depression and socioeconomic status,[35] and later translate to intervention opt-outs.[31,36,37]

Another reason why participants with a respiratory condition may have opted out of the SWIFT intervention was because they were feeling better after their hospital stay. The most common reason for opting out of the SWIFT intervention was that the home visits were not needed because the participant was feeling good or did not consider themselves to be a "sick" person who needed home visits. This possibility is corroborated by previous research by van Grunsven et al.[36] Interestingly, although we found that respiratory disease was significantly associated with opting out of the intervention but not with having a 30-day readmission, others have

found high readmission rates (within 30 days and beyond) among patients with COPD.[38-40] Further research among older patients with COPD and other respiratory conditions is needed.

All but one 30-day readmission among our SWIFT intervention study participants was unplanned. We found significantly higher odds of 30-day readmission among participants diagnosed with cancer. Studies of hospitalized patients with cancer also found significantly higher 30-day rehospitalization rates compared with patients without cancer.[41,42] These findings and those of the present study suggest that the effects of cancer and its treatment may place patients with cancer at increased risk for unplanned 30-day rehospitalization. Additionally, our finding of higher odds of 30-day readmission among participants opting out of our SWIFT

intervention lends to the question of the role of patient self-determination in hospital readmissions. Patients cited several reasons for opting out of the SWIFT intervention—lack of perceived need, lack of interest, health provider fatigue—all reflecting personal preference toward less or no additional care. This finding is consistent with another study that found that patients who did not keep their outpatient appointments following hospital discharge had higher readmission rates.[43] Other studies also have highlighted the variability in 30-day hospitalization rates driven by the risk and composition of the patient population they serve, patient access to care, and the availability of community resources.[20-22] Studies have found that demographic factors (eg, older age, low income) and psychosocial factors (eg, baseline depression) are related to higher rates of hospital readmissions.[35]

With patient-level and community factors accounting for a high portion of readmission rates, penalizing hospitals for aspects they cannot control may be misguided. Moreover, although many hospitals have successfully undertaken efforts to improve transitional care provided to patients, some interventions have been found to be associated with an increase in readmission rates believed to be caused by improved access to care and patient satisfaction.[22,44]

Limitations

Results of the study may be limited in several ways. First, the sample size may weaken the statistical power to detect differences between intervention opt-outs and intervention recipients. Secondly, study participants were recruited from a single, large, nonprofit, urban hospital, and the results may not be generalizable to other areas. Similarly, although our inclusion and exclusion criteria may have introduced selection bias that could impact the generalizability of findings (ie, excluding those with advanced dementia or Alzheimer disease, homeless individuals, etc), these criteria are appropriate for the skillset of social workers conducting a home-based intervention. Noncontinuous patient eligibility screening and enrollment efforts, resulting in a large number of patients being discharged before they could determine participation, and the use of a single EHR are limitations of the present study. Self-reported patient data posed limitations as well: we could not fully understand the reasons that at-risk patients opted out of the intervention, and we did not obtain patient self-reports to document ED visits and inpatient hospital stays to supplement the EHRs. Additional EHR and/or Medicare claims data would strengthen these findings. Also, due to the nature of the pilot study, only cognitively intact English-speaking older adults were eligible to participate and, therefore, this sample may not be representative of hospitalized older adult patients.

CONCLUSIONS

Findings from this study provide insight into the characteristics and risk factors associated with opting out of a care transition

intervention and suggest that some at-risk patients may not be receptive to in-home transition interventions. Additionally, opting out of a transition intervention may be associated with higher odds of hospital readmission. Current policies have charged hospitals with the task of reducing 30-day readmission rates; however, these results suggest that it may not be reasonable to place this burden solely on hospitals. Hospital readmissions are a costly phenomenon. Given the current ACA provisions, being able to identify patients who are resistant to interventions and likely to opt out could present a considerable benefit and better inform resource allocation, including CMS funds, potential grants, and hospital resources. More research is needed to confirm these findings and better understand patient characteristics associated with intervention opt-out among at-risk older adults. ■

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