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Do Internal Medicine Residents Know Enough About Skilled Nursing Facilities To Orchestrate a Good Care Transition?

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Abstract

BACKGROUND—Although many older adults require skilled nursing facility (SNF) care after acute hospitalization, it is unclear whether Internal Medicine (IM) residents have sufficient knowledge of the care that can be provided at this site.

METHODS—We developed a 10-item multiple choice pre-test that assessed knowledge of the definition of a SNF, SNF staffing requirements, and SNF services provided on-site. The test was administered to trainees on the first day of a mandatory SNF rotation that occurred during their first, second or third year of training.

RESULTS—67 IM residents (41 PGY-1, 11 PGY-2, and 15 PGY-3) were assessed with the test. The mean number of questions answered correctly was 4.9, with a standard deviation of 1.6. Regardless of their level of training, residents had a poor baseline knowledge of SNF care (mean scores 4.2 for PGY-1, 5.3 for PGY-2, and 6.3 for PGY-3 ($p < 0.0001$)). Performance on some questions improved with increased level of training but others did not.

CONCLUSIONS—Medical residents have insufficient knowledge about the type of care that can be provided at a SNF and efforts to improve this knowledge are needed to assure proper triage of patients and safe transitions to the SNF.

INTRODUCTION

The critical need to expand geriatric competencies among all physicians has been well documented and was a theme of an Institute of Medicine report.¹ Currently, the education that physicians in training receive in geriatrics has been variable with respect to scope, depth, and training sites. To address this heterogeneity, many different professional organizations have been involved in defining a minimal set of competencies in geriatrics.² One such competency where few residents in training are currently receiving formal instruction and experience is the care transition from the acute hospital to the skilled nursing facility (SNF).³

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Lack of knowledge about post-hospital care has been implicated in poor care transitions leading to high-risk events for elders, such as re-hospitalizations and adverse drug events.⁴ At the same time, the frequency of use of post hospital care, including the SNF, has increased substantially.⁵ Overall, about 45% of Medicare beneficiaries discharged from a hospital go to some sort of post-hospital care.⁶

Given this trend, knowledge about the skilled nursing facility is important for discharging physicians both in terms of indications for SNF care and its limitations. Additionally, the discharging physician should have a working knowledge about what type of care is provided in this setting so they can counsel patients on their post hospital care options.⁶

To begin to evaluate how well IM residents understand SNF care, we developed a 10-item knowledge test and administered it to residents participating in a mandatory SNF rotation. These residents came from a large residency program (with more than 100 residents). They primarily rotate through two large tertiary academic medical centers. These were typical medicine residents for the US. The mean age of the residents was 28.4 with a range between 25–30 years old. Fifty four percent were female and 46% percent were male. Interns had no formal exposure to geriatrics. Residents in their second or third year may have rotated on the inpatient geriatric wards attended by academic geriatricians.

METHODS

The study was a secondary analysis of an educational program and was determined to be exempt from IRB review.

We developed a 10-item multiple-choice knowledge test. Question content included information thought to be important for orchestrating a successful transition from hospital to SNF. Topics included Medicare qualifiers for SNF care, available SNF services, and limits to SNF staffing and treatments. Two geriatricians with 5 or greater years experience in SNFs wrote the questions. Questions that performed poorly among a group of geriatric SNF doctors were eliminated or clarified.

The study population included PGY-1, PGY-2, and PGY-3 residents. The majority of these trainees already had experience in transferring one or more of their hospitalized patients to a SNF prior to their SNF rotation. Some baseline knowledge of the SNF was expected.

Demographic information was not obtained as part of the test in order to provide anonymity as part of the test procedures.

The test was administered to residents on the first day of their SNF rotation. Originally the rotation experience included PGY-2 and PGY-3 residents. These residents thought the rotation was valuable and wished they had learned the information earlier in their training. Based upon this feedback the rotation was moved into the PGY-1 curriculum.

The test was collected and the answers were provided in a didactic session that followed. All data were collected prior to the didactic session. Data was collected over a two year period.

Chi-square analyses were used to evaluate differences by training for individual survey items. Analysis of variance was used to examine differences in total score by level of training. Sheffe tests were used to conduct post-hoc pairwise comparisons between groups of trainees.

RESULTS

During a 24-month period, 67 out of 67 internal medicine residents in their first, second, or third year of residency completed quizzes. Quizzes were completed at the beginning of the rotation with a dedicated time for completion prior to an education session provided by the attending physician. The high response rate was due to the dedicated time for completion and the collection of completed quizzes by the attending physician at the time of the education session.

Regardless of their level of training, residents had poor baseline knowledge of SNF care (Table 1). PGY-3 residents scored the highest. Mean correct scores were 4.2 for PGY-1, 5.3 for PGY-2, and 6.3 for PGY-3 out of 10 questions ($p<.0001$).

To obtain an understanding of the internal consistency of the 10 items on the quiz, Cronbach's alpha was calculated using the residents' scored items (0=incorrect, 1=correct; $\alpha=0.26$). Consistent with the analysis of the individual items in Table 1, item-total correlations indicate some items contribute more consistently to the total score than others.

Table 1 shows a breakdown of each question into the percent of incorrect answers by residency year. Specifically, 64% of residents did not know that a SNF is a nursing home, 69% did not know the 72 hour time window for the accepting physician to see new nursing home admissions, and 67% did not know the type of nursing staff that provides care at a SNF. More than three fourths of the residents could not correctly identify a "skilled need" under the Medicare Part-A post-hospitalization.

DISCUSSION

With the increasing use of SNFs to provide post-hospital care, it is essential that physicians who transfer patients to these facilities are knowledgeable about the staffing and care that can be provided in this setting. The results of this study demonstrate that trainees, including those who will soon graduate and enter the work force, know very little about a setting to which they are discharging a large per portion of their hospitalized patients. Care transitions are not typically taught in medical school and residency. Only 16% of Internal Medicine residency programs have formal discharge curricula.⁷ Additionally, the most recent published data specifically about residency programs that have nursing home experience is from 1992. At that time there were 87% of family practice residencies with a nursing home experience and 32% of internal medicine residencies.⁸

Of significant concern is that the majority of residents think a SNF is an acute rehabilitation facility rather than a nursing home. Also concerning is that they are unaware of how a patient qualifies for a SNF admission under the Medicare Part A post-hospitalization benefit. These educational gaps could result in a patient being discharged to the wrong level of care.

While there is some evidence that the PGY-3 residents did better overall on the quiz it is hard to say whether that effect is due to their greater experience in discharging patients to SNF or their training on geriatric wards.

There were limitations to our study. First, the number of residents who completed the quiz is small, particularly from the advanced years (PGY-2 and PGY-3). Second, the Cronbach's alpha value was low. Given the number of incorrect responses even from highly-trained residents, the low Cronbach's alpha value is not surprising. The quiz might be improved in the future, however, through analysis of the latent dimensions assessed by the quiz which may indicate multiple dimensions of knowledge regarding skilled nursing facilities that are important for residents' training.

CONCLUSION

This is the first study that looks at Internal Medicine residents' knowledge of the care transition from the acute hospital to the skilled nursing facility. Residents' lack of knowledge and understanding of skilled nursing facilities can lead to problems with their patient's care transitions. More education about skilled nursing facilities should be part of their curriculum.

Based on the results of this study, we have introduced this knowledge test into the didactic curriculum of internal medicine residents in the hospital setting as a formative method of teaching trainees about SNFs. Recognizing that improving knowledge is not equal to knowledge translation, we have also maintained a mandatory skilled nursing facility experience for internal medicine residents. Activities during this experience include admitting a newly transferred patient from the acute hospital to the SNF.

As tighter linkages between hospitals and external partners are created in response to "bundling" payment systems and Accountable Care Organizations, physicians must become more knowledgeable about all sites of the health care system, including SNFs. Residency is opportune time for this training.

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Table 1
 Baseline Knowledge of Skilled Nursing Facilities by Internal Medicine Residents

Level of Training	1st Year	2nd Year	3rd Year	Overall	p-value
N (%)	41 (61)	11 (16)	15 (22)	67 (100)	–
Number correct (Mean (SD))	4.2 (1.4)	5.3 (1.0)	6.3 (1.6)	4.9 (1.6)	<0.0001
Incorrect answers (%)					
What is a SNF?	80	27	47	64	0.006
Skilled need for Medicare Part A	76	82	73	76	0.45
Required time to see patient	76	64	53	69	0.63
Patient not appropriate for SNF transfer	54	36	27	45	0.5
Medicare Part A benefit	7	18	0	7	0.13
What is required for a SNF?	49	45	20	42	0.04
Staffing requirement for SNF	80	55	40	67	0.12
Services not available at SNF	22	9	33	22	0.64
Equipment not available at SNF	68	64	20	57	0.0006
Maximum limit of SNF therapy	66	73	60	66	0.85

Note. p-value indicates differences by track (ANOVA F-test or Chi-square as appropriate)