The critical need to expand geriatric competencies among all physicians has been well documented and was a theme of an Institute of Medicine report. 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. 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).

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

Given this trend, knowledge about the SNF is important for discharging physicians both in terms of indications for SNF care and its limitations. In addition, 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.

To begin to evaluate how well internal medicine (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 2 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 and 30 years old; 54% 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 institutional review board 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 more years of 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 postgraduate year (PGY)-1, PGY-2, and PGY-3 residents. The majority of these trainees already had experience in transferring 1 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 on 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 2-year period.

χ² 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 pair-wise comparisons between groups of trainees.

Results

During a 24-month period, 67 out of 67 IM 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 posthospitalization.

Discussion

With the increasing use of SNFs to provide posthospital 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 proportion of their hospitalized patients. Care transitions are not typically taught in medical school and residency. Only 16% of IM residency programs have formal discharge curricula. In addition, 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 IM residencies.

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 posthospitalization benefit. These educational gaps could result in a patient being discharged to the wrong level of care.

Although there is some evidence that the PGY-3 residents did better overall on the quiz, it is difficult 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 SNFs that are important for residents’ training.

Conclusions

This is the first study that looks at IM residents’ knowledge of the care transition from the acute hospital to the SNF. Residents’ lack of knowledge and understanding of SNFs can lead to problems with their patient’s care transitions. More education about SNFs should be part of their curriculum.

Based on the results of this study, we have introduced this knowledge test into the didactic curriculum of IM 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 SNF experience for IM 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

Table 1

<table>
<thead>
<tr>
<th>Level of Training</th>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>Overall</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>41 (61)</td>
<td>11 (16)</td>
<td>15 (22)</td>
<td>67 (100)</td>
<td>-</td>
</tr>
<tr>
<td>Number correct [Mean (SD)]</td>
<td>4.2 (1.4)</td>
<td>5.3 (1.0)</td>
<td>6.3 (1.6)</td>
<td>4.9 (1.6)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Incorrect answers (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is a SNF?</td>
<td>80</td>
<td>76</td>
<td>76</td>
<td>76</td>
<td>.006</td>
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<td>Skilled need for Medicare</td>
<td>27</td>
<td>72</td>
<td>73</td>
<td>76</td>
<td>.45</td>
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<td>Part A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Required time to see patient</td>
<td>76</td>
<td>64</td>
<td>53</td>
<td>69</td>
<td>.63</td>
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<td>Patient not appropriate for SNF transfer</td>
<td>54</td>
<td>36</td>
<td>27</td>
<td>45</td>
<td>.50</td>
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<tr>
<td>Medicare Part A benefit</td>
<td>7</td>
<td>18</td>
<td>0</td>
<td>7</td>
<td>.13</td>
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<td>What is required for a SNF?</td>
<td>49</td>
<td>45</td>
<td>20</td>
<td>42</td>
<td>.04</td>
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<td>Staffing requirement for SNF</td>
<td>80</td>
<td>55</td>
<td>40</td>
<td>67</td>
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<td>Services not available at SNF</td>
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<td>9</td>
<td>33</td>
<td>22</td>
<td>.64</td>
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<td>68</td>
<td>64</td>
<td>20</td>
<td>57</td>
<td>.0006</td>
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<tr>
<td>Maximum limit of SNF therapy</td>
<td>66</td>
<td>73</td>
<td>60</td>
<td>66</td>
<td>.85</td>
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</table>

P value indicates differences by track (ANOVA F-test or χ² as appropriate).
Care Organizations, physicians must become more knowledgeable about all sites of the health care system, including SNFs. Residency is opportune time for this training.

References