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## Likelihood of Nursing Home Referral for Fecally Incontinent Elderly Patients is Influenced by Physician Views on Nursing Home Care and Outpatient Management of Fecal Incontinence

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### Abstract

**OBJECTIVES**—(1) Characterize physicians' management practices for fecal incontinence (FI) among elderly patients, (2) describe physician perceptions of the quality of care for FI provided in nursing homes (NH), and (3) identify physician views and attributes associated with referral of elderly patients with FI to a NH.

**DESIGN**—Cross-sectional.

**SETTING**—United States.

**PARTICIPANTS**—Physician members of the American Geriatrics Society.

**MEASUREMENTS**—Questionnaire pertaining to physician views on (1) their own FI management practices, (2) management of FI in NHs, and (3) referral of an elderly patient with FI to a NH.

**RESULTS**—Of the respondents (N=606), 54.1% reported screening for FI and 59.3% thought FI could be managed conservatively on an outpatient basis. Only 32.9% believed NHs provide good care for FI, and 27.1% believed NH care conditions exacerbate FI. Responding to a hypothetical vignette, 10.6% would probably or definitely refer an older adult patient with only FI to a NH, and 17.2% were uncertain about whether or not to refer. Logistic regression analysis identified physician characteristics associated with decreased likelihood of NH referral as the belief that FI can be managed conservatively, the belief that NHs provide poor care for FI, longer practice experience, and practicing in an academic medical center.

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**CONCLUSION**—Most geriatricians believe FI can be managed conservatively and that NH provide poor care for FI. These beliefs plus longer years of practice and practice in an academic setting decrease the likelihood of referral to NH for patients with FI.

### Keywords

Fecal incontinence; nursing home admissions; physician perspectives

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## INTRODUCTION

Fecal incontinence (FI), which afflicts an estimated 15% of community-dwelling people aged 70 or older<sup>1</sup>, increases the likelihood that an elderly patient will be admitted to a nursing home (NH)<sup>2-4</sup>. This is important for clinical care because NH stays are often associated with lower quality of life and greatly increased morbidity and mortality for the patient<sup>5, 6</sup>. Further, Medicaid bears a high proportion of the financial costs for NH stays. To the extent that NH placements related to FI can be prevented or delayed through early detection and treatment, the quality of life of older adult patients could be greatly enhanced<sup>7</sup> and savings in Medicaid expenditures for NH care may be realized.

We surveyed members of the American Geriatrics Society (AGS) in order to better understand the role of FI in the decision to refer older adult patients to a nursing home. In an initial report on this survey<sup>4</sup>, we documented that about 10% of geriatrician respondents would probably or definitely refer an elderly patient to a NH if their only chronic health problem was FI and that this proportion increased to 35% if the FI consisted of frequent loss of large volumes of stool. We also reported that FI is an independent risk factor for referral to a nursing home which increases by approximately 17% the proportion of geriatricians who would refer a patient who has dementia, mobility impairments or multiple chronic illnesses to a NH.

The goal of this study was to understand how physician views and attributes – rather than patient characteristics – may be associated with referral to a NH of an elderly patient with FI at the time of hospital discharge. Specific aims were: (1) to characterize physicians' management practices for FI in elderly patients, (2) to describe physician perceptions of the quality of care for FI provided in NHs, and (3) to identify physician characteristics associated with referral of elderly patients with FI to a NH.

## METHODS

### Sample

This is a cross-sectional study conducted with members of the American Geriatrics Society (AGS) in Spring/Summer 2008. Additional information regarding the methodology for this study is provided elsewhere<sup>4</sup>. Data were collected through two questionnaires (conducted at the same time), each taking 5–10 minutes to complete, and respondents received \$10 for each completed questionnaire. The first questionnaire included a clinical vignette and assessed whether the presence of FI would influence the likelihood that the respondent would refer the patient to a NH. The second questionnaire inquired about respondent practices in managing FI and their views on NH care for patients with FI.

AGS members were first emailed an invitation to complete the questionnaires on-line. Non-responders were mailed a printed copy of the questionnaires, followed by a post card reminder. The final step in the recruitment process was a booth at the 2008 annual conference of the AGS where research staff encouraged conference attendees to complete the questionnaires. Names of volunteer respondents at the conference were checked against

the membership roster to confirm that they were AGS members and against a list of people who had already completed the questionnaires to avoid duplicate respondents. The final response rate was 33.0% for the first questionnaire and 31.4% for the second. The analyses presented in this paper are limited to the 606 physician respondents who completed both questionnaires. The study protocol was approved by the institutional review board of the University of North Carolina at Chapel Hill.

## Variables

To ascertain physician views on NH referral of older adult patients with FI, the following clinical vignette was presented:

A 70-year-old Caucasian female is hospitalized for community acquired pneumonia. She has a past medical history of coronary artery disease and hypertension. During this hospitalization, she was found to be incontinent of feces, which she admits has been going on for the past 2 years. She was living at home alone prior to this admission. She has recovered well after 10 days stay and is now ready for discharge.

On a 5-point Likert-type scale (0 = definitely not, 1 = probably not, 2 = uncertain, 3 = probably yes, 4 = definitely yes), respondents were asked what decision they would make regarding NH or skilled care referral for this elderly patient. "Referral to a NH" is the outcome variable for analyses presented in this study. For most analyses (Chi-square and logistic regression), responses of "probably yes" and "definitely yes" were combined to estimate the proportion of physicians who would refer to a NH.

The survey vignette was pretested with a group of geriatric medicine fellows and faculty from the University of North Carolina at Chapel Hill and the University of Alabama at Birmingham. It was tested for face and content validity and for time required to complete the survey in a total of 5 fellows and 5 faculty geriatricians. When respondents identified problems or ambiguities and made suggestions for revision, the investigators discussed the feedback, modified the questionnaire when appropriate, and retested it in additional respondents. A 10-day stay was intentionally chosen for the scenario to suggest the hypothetical patient had a lengthy stay and might have gotten deconditioned, and to accommodate a variety of other variables described in subsequent clinical scenarios (reported elsewhere)<sup>4</sup>. The 10 day stay was discussed during the pre-testing and confirmed as appropriate.

Physician practices regarding the efficacy of outpatient medical management of FI were investigated by asking respondents to estimate how often the following statements applied to their patients. Response options were on a 5-point Likert-type scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = always):

1. I screen my patients with FI most of the time
2. I document FI in the patient's chart
3. I find it necessary to further investigate the cause of FI in my patients
4. The FI of my patients can be managed conservatively.

On a similar 5-point scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = always), respondents were asked to describe their patients with FI as follows:

1. FI in my patients has a significant negative impact on their quality of life.
2. My patients are comfortable telling me about their FI.

Physician perspectives on the adequacy of care for FI in NHs were queried by the following questions, with response options on a 5-point Likert-type scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = always):

1. In your experience, do nursing homes take good care of patients' fecal incontinence problems?
2. In your experience, do nursing homes lack proper experience to care for patients with fecal incontinence?
3. In your experience, do the patient care conditions in nursing homes lead to exacerbation of patients' fecal incontinence problems?

To characterize the physicians who responded to the survey, data were collected on the following demographic and practice descriptors:

1. Gender – male, female
2. Age group – 25–35, 36–45, 46–55, 56–65, 66+ years (10-year increments)
3. Practice setting – urban, suburban, rural
4. Practice type – private practice solo, multi-specialty, academic, hospitalist, other
5. Years in practice – 0–5, 6–10, 11–15, 16–20, 20+ years (5-year increments).

### Data Analysis

Descriptive statistics were used to characterize the sample of physician respondents. Variables were assessed for statistically significant relationships using Chi square. Logistic regression analysis was used to identify physician views and attributes associated with the likelihood of physician referral to a NH for patients with FI alone. All analyses were conducted using SPSS 17.0<sup>8</sup>. An alpha value of 0.05 defined statistical significance.

## RESULTS

### Characteristics of Physician Responders to the Survey

The sample consists of 606 physicians, of whom 329 (54.5%) were male. Respondents were about evenly distributed among four age groups: ages 25–35 years, 139 (23.2%); ages 36–45, 162 (27.0%); ages 46–55, 155 (25.8%); and ages 56 and above, 144 (24.0%). Years in practice were evenly distributed among three groups: 0–5 years, 200 (33.0%); 6–20 years, 203 (33.9%); and over 20 years, 195 (32.6%).

Most respondents practiced in an urban setting (n=364, 61.3%), and the remainder practiced in a suburban (n=169, 28.5%) or rural setting (n=61, 10.3%). Half of the respondents were in practices that are associated with academic institutions (n=295, 49.5%). The remainder were in multi-specialty practice (n=74, 12.4%) or in private solo practice (n=71, 11.9%), or they were hospitalists (n=24, 4.0%) or in other practice settings (n=132, 22.1%).

Female respondents were significantly younger than male respondents; 61.8% of the female respondents were under 45 years of age compared to 40.3% of male respondents (Chi-square = 48.426,  $p < .001$ ). Consistent with these age trends, women were over-represented among respondents with less than 5 years of practice experience (44.% of females versus 24.0% of males), while men were more likely than women to have 20 or more years of practice experience (46.2% of males versus 17.6% of females; Chi-square = 64.452,  $p < .001$ ). Female physicians in our sample were also more likely to practice in academic medical centers (56.9% of females versus 43.4% of males) or as a hospitalist (4.8% of females versus 3.4% of males), while the male physicians were more likely to be in private solo practice (15.4%

of males versus 7.4% of females) or multi-specialty practice (15.4% of males versus 8.9% of females; Chi-square = 19.023,  $p=.001$ ).

### Management of FI

A majority of respondents reported that they screen their patients with FI often or always (54.1% of physicians), document FI in the patient's chart (73.8%), and find it necessary to further investigate the cause of FI in their patients (66.5%) (Table 1). A majority of respondents also endorsed the belief that their patients' FI can often or always be managed conservatively (59.3%). A substantial majority (89.7%) believe FI has a negative impact on quality of life. However, only 21.0% believe their patients are comfortable telling them about their FI.

### Perceptions of NH Care for FI

Only a third of respondents (32.9%) believe that NHs often or always take good care of patients with FI. As shown in Table 2, more than a third (34.2%) believe NHs often or always lack expertise in caring for patients with FI, and a quarter (27.1%) believe the care provided by NHs often or always exacerbates the FI of patients.

### Referral to a Nursing Home

Responding to the clinical vignette, most physicians ( $n=417$ , 72.3%) would "definitely not" or "probably not" refer an older adult patient to a NH merely on the basis of a history of FI if no other relevant factors were present, such as comorbidities or the patient's social circumstances. On the other hand, 10.6% ( $n=61$ ) probably or definitely would refer this patient to a NH, and 17.2% ( $n=99$ ) responded that they were "uncertain".

### Factors Associated with Physician Referral to a Nursing Home

Table 3 shows the results of a logistic regression analysis used to identify independent predictors of physician referral of a patient with FI to a NH. For this analysis, responses of "definitely not," "probably not," and "uncertain" were coded 0 while responses of "probably yes" and "definitely yes" were coded 1. Variables that significantly and independently predict lesser likelihood of NH referral are (a) the belief that FI can be managed conservatively on an ambulatory basis, (b) concerns about the quality of NH care for FI, (c) more years in practice, (d) practice in an academic setting, and (e) female gender. Nagelkerke's  $R^2$  estimate of the amount of variance explained was 16.6%. A sensitivity analysis in which the responses were grouped differently (responses of "definitely not" and "probably not" were coded "no" and responses of "uncertain" were grouped with "probably yes" and "definitely yes" and were coded "yes") generally confirmed the analysis reported above: The belief that FI can be managed conservatively and the number of years in practice were significant predictors of NH referral ( $p<0.001$  and  $p=0.031$  respectively), and practice in an academic setting and female gender approached significance ( $p=0.080$  and  $p=0.121$  respectively). The belief that the NH does not provide good care for FI was not significant in this analysis ( $p=0.348$ ), but a related variable, namely the belief that NH practices exacerbate FI, was significant ( $p=0.009$ ).

## DISCUSSION

The literature concerning incontinence among older adults often includes the statement that FI is one of the leading factors in NH placement. In our sample of physicians, the proportion likely to refer the elderly patient described in a clinical vignette for FI alone was relatively modest at 10 percent. However, the base clinical scenario used in our study did not specify the severity of FI, and as we have noted in an initial report on this sample, when the scenario

was modified to specify the frequent loss of large volumes of stool, the proportion of respondents who would refer to a NH for FI alone increased three-fold<sup>4</sup>.

There were 17.2% of physicians in our sample who were “uncertain” whether they would refer the elderly patient in the vignette to a NH for FI alone. “Uncertainty” could reflect the respondent’s need for additional information about the hypothetical patient’s clinical status or true uncertainty about the importance of FI in a decision to refer to a nursing home.

In our sample, over half of the physicians reported that they often or always screen for FI in their patients, and  $\frac{3}{4}$  of them said they document FI in the patient’s chart and often find it necessary to further investigate the cause of FI in their patients. These observations suggest that the physicians in our sample – all members of the American Geriatrics Society – report behaviors that are quite different from primary care physicians. For example, in a previous study using chart review and a patient survey in a large health maintenance organization, we found that only 2.7% of 550 patients who disclosed on a questionnaire that they were incontinent of feces had a diagnosis of FI noted in their medical record<sup>9</sup>, which implies a very low rate of screening and/or documentation for FI. Thus the discharge decisions of the geriatricians in our sample and the factors that influence their decisions may not be generalizable to other professional groups such as hospitalists and social workers who are involved in hospital discharge decisions. Studies of these other professional groups are needed.

Only 21% of respondents in the current survey thought their patients were often or always comfortable telling them about their FI. This is consistent with population-based surveys which show that only 10%<sup>10</sup> to 30%<sup>11</sup> of individuals who self-disclose FI on a questionnaire have discussed this symptom with their physician. The reasons for this low rate of health care seeking are unknown, but we speculate they include embarrassment in talking about this symptom and the erroneous belief that little can be done to correct it. Reluctance to tell physicians about their FI is an important barrier to providing effective care for this patient population.

In general, physician perceptions of the adequacy of NH care for patients with FI were negative in our sample. A third of respondents believed that NHs often or always lack the expertise to care for patients with FI, and a quarter believed that NH care conditions actually make the patient’s FI worse. Only a third of the respondents believed that NHs take good care of patients with FI. This study does not address whether these negative perceptions of NH care of patients with FI are justified. However, indirect evidence is consistent with these views: Chassagne and colleagues<sup>12</sup> reported that 20% of 1186 NH residents who were continent of stool when they arrived at a NH developed FI within 10 months of their arrival. Furthermore, Schnelle<sup>13</sup> observed that conservative management regimens that are known to reduce both bowel and bladder incontinence are not implemented in most NHs due to staff shortages.

Table 2 shows that, when they were asked to describe their beliefs regarding NH care for patients with FI, approximately half choose “sometimes” as their response. This may suggest that individual physicians believe there is wide variation in the management of FI in long term care facilities.

Logistic regression analysis identified geriatricians’ perspectives on their ability to manage FI conservatively and their views on the quality of NH care for FI as significant factors that influence their decision to refer a patient to a NH for FI alone. Physicians who believe FI can be managed conservatively were less likely to refer to a NH, as were those who believe NHs provide poor care for FI.



Physician characteristics were also significantly associated with NH referral of an elderly patient with FI. After adjusting for possible confounders, physicians with the fewest years in practice (less than five years) and male physicians were the most likely to refer to a NH. Physicians practicing in academic medical centers were less likely to refer to a NH than their counterparts in other settings.

Although regression analysis identified a number of physician characteristics that are significant predictors of referral to a NH for FI, the overall amount of variance explained by these physician characteristics was relatively small (Nagelkerk's  $R^2=.166$ ). This was as expected because this analysis specifically excluded patient-related factors such as the severity of their FI, their other health problems, and the family and financial situations in which they find themselves. For a discussion of these factors, see our earlier report<sup>4</sup>.

## CONCLUSION

The findings from our study have important implications for the training of fellows in geriatrics and residents in internal medicine or family practice. They suggest that less experienced physicians may benefit from information on conservative management techniques and their effectiveness<sup>14–16</sup>. Norton et al<sup>17</sup> provide an evidence based review of conservative treatments for FI. Less experienced physicians may also benefit from exposure to the care practices and decisions of more experienced geriatricians in order to understand their reluctance to refer patients to NHs for a condition that can often be managed effectively on an outpatient basis without placement in a NH.

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**Table 1**

## Management of Fecal Incontinence (Percent)

<b>Variable</b>	<b>Never/Rarely</b>	<b>Sometimes</b>	<b>Often/Always</b>
I screen my patients with FI	17.9	27.9	54.1
I document FI in the patient's chart	8.4	17.9	73.8
I further investigate the cause of FI	5.9	27.6	66.5
FI can be managed conservatively	3.3	37.3	59.3
FI has a negative impact on QoL	1.2	9.1	89.7
My patients are comfortable telling me about their FI	31.8	47.3	21.0

**Table 2**

Physician Beliefs Regarding NH Care of Patients with FI (Percent)

<b>Always</b>	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>
Care is Good 2.1	0.3	12.2	54.5	30.8
Lack Expertise 1.2	1.4	14.8	46.6	33.0
Care Exacerbates FI 2.3	1.4	16.9	54.6	24.8

**Table 3**

## Logistic Regression for Referral to a NH for FI Alone

Variable	Beta	P	OR (95% CI)
<b>Management of Fecal Incontinence</b>			
Screen for FI	.113	.562	1.120 (.763–1.643)
Document FI	–.064	.747	.938 (.635–1.385)
Investigate FI	–.216	.261	.806 (.553–1.174)
Manage Conservatively	–.556	.026	.573 (.351–.936)
Quality of Life	.078	.727	1.081 (.697–1.678)
Talk About FI	–.040	.840	.961 (.650–1.419)
Further Education	.499	.252	1.647 (.701–3.86)
<b>Perspective on Nursing Home Care for Fecal Incontinence</b>			
Poor Quality of Care for FI	–.668	.013	.513 (.303–.868)
Lack Expertise	.201	.429	1.223 (.742–2.015)
Exacerbate FI	–.222	.334	.801 (.510–1.257)
<b>Physician Characteristics</b>			
Years in Practice	–.526	.003	.591 (.418–.835)
Practice Type		.179	
Private Practice	.138	.789	1.148 (.419–3.140)
Multi-Specialty	–.404	.436	.667 (.241–1.848)
Academic	–.875	.033	.417 (.187–.930)
Hospitalist	–.212	.782	.809 (.179–3.647)
Practice Setting		.989	
Urban	.078	.883	1.081 (.384–3.046)
Suburban	.074	.892	1.077 (.368–3.148)
Gender – Male	–.828	.014	.437 (.226–.846)
Age	.133	.578	1.143 (.715–1.827)