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Knowledge and Practice Behaviors Regarding Urinary Incontinence Among Korean Healthcare Providers in Long-term Care Hospitals

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Purpose: The purpose of this study was to assess the current management status of patients with urological issues and to examine the level of knowledge and practice behaviors regarding urinary incontinence (UI) among Korean healthcare providers in long-term care hospitals.


Methods: This study used a cross-sectional descriptive design with a written questionnaire to assess knowledge and practice behaviors of 756 healthcare providers in 11 long-term care hospitals in Korean metropolitan areas.

Results: A total 42.6% of participants reported that more than 50% of patients had urologic issues, and that 68.1% of patients were regularly sent to urologists; no participants reported an on-site urologist in their facility. Participants identified collaboration with other hospitals and regular consultations by urologists as important factors in improving urologic care. Although the overall UI knowledge score was upper intermediate, a knowledge deficit was found for risk factors of UI. The knowledge level of physicians was significantly higher than that of other healthcare providers. Practice behaviors of nurses seemed to be better than those of other healthcare providers.


Conclusions: Systematic collaboration between healthcare providers and urologic specialists, enhancing staff competence, and patient-tailored intervention should be recommended to improve quality of care for patients with urologic issues in long-term care hospitals.

Keywords: Urinary Incontinence; Knowledge; Professional Practice; Health Personnel; Long-Term Care

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INTRODUCTION

Urinary incontinence (UI) can be defined as a complaint of involuntary leakage of urine and is a highly prevalent condition [1]. The prevalence of UI was reportedly 30% among women aged 30–60 years in Europe [2], and about 40% among women aged 30 years and over in the United States [3]. In Korea, the prevalence of UI has been reported as 21% in individuals aged 20–40 years, 40%–60% in those aged 50–70 years, 64.7% in those in nursing homes [4], and 48.1% in individuals aged 65 and over in long-term care hospitals [5].

UI is associated with adverse effects on the quality of life even though it is not a life-threatening disease [6,7]. Medical staff competence, knowledge, and practice skills are associated with both general and urologic quality of care. However, the level of confidence in providing urologic care may differ among healthcare providers. Previous studies reported that the level of UI knowledge and attitudes of nurses were better than those of nursing assistants in nursing homes, and that this difference might be associated with the quality of care. However, a knowledge deficit was found in both of these healthcare provider groups [8,9]. According to one study, some treatments are provided without evidence of benefit, even when physicians other than urologists feel confident in the management of UI [10]. Therefore, education of medical staff is important to improve the quality of care for patients with UI.

A previous study assessed UI management in a Korean long-term care hospital, and reported that patients received standardized interventions rather than personalized care based on a patient's needs and characteristics [5]. However, there are no data concerning UI knowledge and practice behaviors among healthcare providers in long-term care hospitals in Korea.

The purpose of this study was to assess the current management status of patients with urological issues and to examine the level of knowledge and practice behaviors regarding UI among Korean healthcare providers in long-term care hospitals.

MATERIALS AND METHODS

Design and Study Subjects

This study used a cross-sectional descriptive design with a written questionnaire to assess knowledge and practice behaviors. A total 756 healthcare providers in 11 long-term care hospitals in Korean metropolitan areas were studied. Data collection was conducted from January to March 2015 with approval from the

Institutional Review Board of Seoul National University Hospital (IRB No.: E-1410-080-618).

Measurements

This study assessed the management of patients with UI and knowledge and practice behaviors about UI among healthcare providers. Management status was developed by the research team and it determined from the number of patients with urologic issues, the need for an urologist for UI management, priorities to improve urologic care, and information about healthcare providers for patients with UI. To identify perceived importance for improving urologic care, participants were asked the level of importance (range, 1–4; 1, least important; 4, most important) among three items; collaboration with other hospitals, regular consult by urologist, and residence of urologist. We also assessed the satisfaction for their current management regarding urologic care (1, very insufficient; 2, insufficient; 3, sufficient; 4, very sufficient).

To assess knowledge and practice behaviors regarding UI among healthcare providers, a questionnaire was revised by a research team based on knowledge and practice instruments [8]. This consisted of 18 items related to knowledge and five related to practice behaviors regarding UI among healthcare providers. Each item was answered “yes” or “no”.

Data Analysis

All statistical analyses in this study were performed using IBM SPSS Statistics ver. 22.0 (IBM Co., Armonk, NY, USA). Descriptive statistics were used for demographic characteristics, management status, knowledge, and attitudes. Differences in knowledge and attitudes by type of healthcare provider were determined using analysis of variance and chi-square tests. Statistical significance was preset at an alpha level of 0.05.

RESULTS

Demographic Characteristics and Management Status of UI

The demographic characteristics and UI management status of participants in this study are presented in Table 1. The mean age was 39.9 years (standard deviation [SD], 8.4; range, 22–61 years), and 90.7% of participants were women. Among participants, 57.4% were nurses and 28.2% were certified caregivers. The mean length of work experience in a long-term care hospital was 51.5 months (SD, 35.0; range, 1–168 months) in this study sample.

Table 1. Demographic characteristics and management status of urinary incontinence (n = 756)

Variable	Value
Age (yr)	39.9 ± 8.4 (22–61)
Sex	
Men	70 (9.3)
Women	686 (90.7)
Occupation	
Physician	61 (8.0)
Nurse	434 (57.4)
Certified caregiver	213 (28.2)
Physical therapist	48 (6.3)
Length of work experiences (mo)	51.5 ± 35.0 (1–168)
No. of patients with urologic problems	
≥ 5 of 10	322 (42.6)
3–4 of 10	279 (36.9)
1–2 of 10	88 (11.6)
< 1 of 10	67 (8.9)
Management pattern for patients with urologic problems	0 (0)
Residence of urologist	7 (0.9)
Regular check-up by visiting urologist	223 (29.5)
Patient's regular visit to urologist	515 (68.1)
Refer to urologist in patents occurred	11 (1.5)
None	
Effectiveness of current urologic management	
Less effective	21 (2.8)
Moderate	346 (45.8)
Effective	382 (50.5)
Very effective	7 (0.9)
Need of management by urologist	
No need	34 (4.5)
Moderate	302 (39.9)
Needed	404 (53.4)
Much-needed	16 (2.1)
Care provider for urologic management	
Physician only	340 (45.0)
Physician and nurse	277 (36.7)
Nurse only	114 (15.1)
Family only	8 (1.1)
Nurse and family	8 (1.1)
Physician and family	6 (0.8)
Certified caregiver only	3 (0.4)

Values are presented as mean ± standard deviation (range) or number (%).

A total 42.6% of participants reported that the prevalence of patients with urologic issues was greater than 50%. Of those patients with urologic problems, 68.1% were regularly sent to an urologist, and no participants reported an on-site urologist in their hospital.

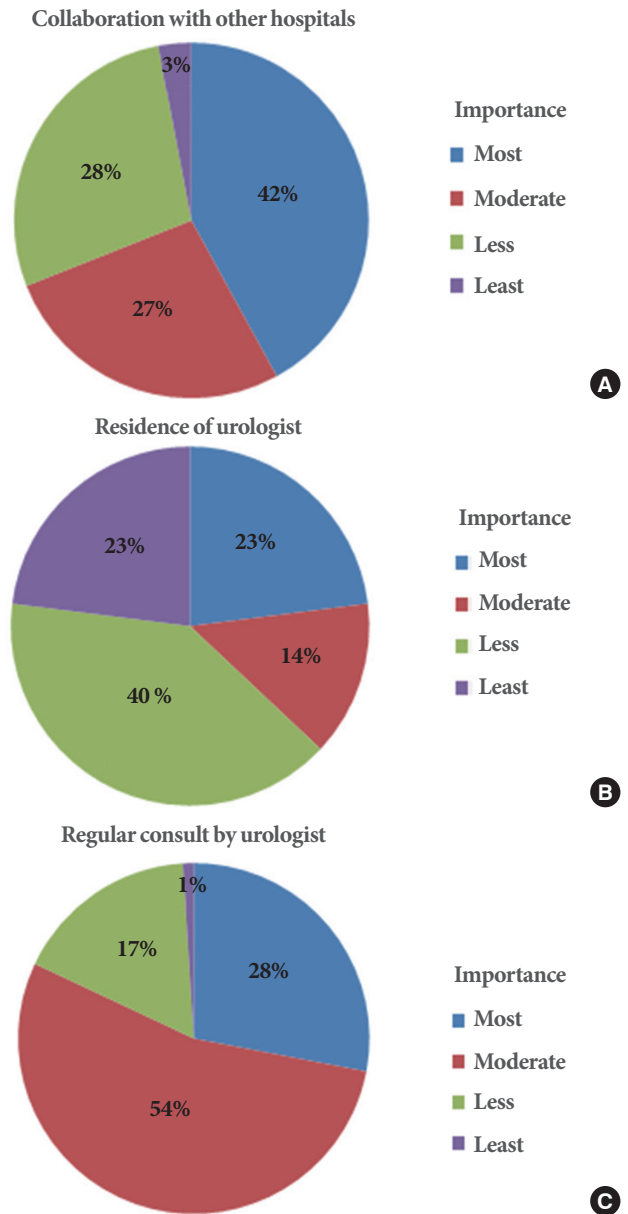


Fig. 1. Perceived importance for improving urologic care (%). The participant responded to the level of importance among four items (A, collaboration with other hospitals; B, residence of urologist; C, regular consult by urologist).

Perceived importance for improving urologic care

To improve urologic care, 42% of participants reported the item of “collaboration with other hospitals” was the most important, while 3% of them answered it was the least important in this study. Twenty eight percent of participants responded the item of “regular consult by urologist” as the most important item to improve urologic care. In the item of “residence of urologist”,

Table 2. Knowledge and practice behaviors of urinary incontinence (n = 756)

Variable	No. (%)
Knowledge	
1. On admission to hospitals, more women are incontinent than men.	721 (95.4)
2. Having a stroke may lead to urinary incontinence.	699 (92.5)
3. Demented residents are more often urinary incontinent than nondemented residents.	689 (91.1)
4. Toilet training can improve incontinence in older people requiring care.	679 (89.8)
5. Older people who have Parkinson are also often incontinence.	676 (89.4)
6. Stress incontinence is caused by psychological problems.	666 (88.1)
7. A bladder infection can cause urinary incontinence.	655 (86.6)
8. Older men may suffer from urinary incontinence after a prostate surgery.	654 (86.5)
9. Urinary incontinence can occur more often in sneezing, coughing or walking.	638 (84.4)
10. Some antihypertensive or sleep medications can cause urinary incontinence.	634 (83.8)
11. Urinary incontinence improves in most residents with suitable treatment.	619 (81.9)
12. Diabetes can cause urinary incontinence.	601 (79.5)
13. Certain medications can treat urinary incontinence.	589 (77.9)
14. Mobility-limited residents are equally often urinary incontinent as mobile residents.	547 (72.4)
15. Urinary incontinence is a more part of aging (over 65 years).	542 (71.7)
16. When awake, most people need to empty the bladder every 2–4 hours.	485 (64.2)
17. More than 80% of all residents in nursing homes suffer from urinary incontinence.	472 (62.4)
18. More residents suffer from urinary incontinence after being in a nursing home for a year than at admission.	416 (55.0)
Practice behaviors	
1. If incontinent residents express a wish to go to the toilet, I help them if necessary.	724 (95.8)
2. If a resident become incontinent, I inform the doctor.	709 (93.8)
3. On admission and if the health status changes, I ask the resident how long he/she has been incontinent.	625 (82.7)
4. I note in the documentation the times at which the incontinent residents drink.	516 (68.3)
5. I know whether the residents drink beverages with caffeine or other beverages with diuretic effects (e.g., coffee, coke, etc.).	465 (61.5)

Table 3. Differences of urinary incontinence knowledge by healthcare providers (n = 756)

Healthcare providers	Mean ± SD	F	P-value	Scheffe
Physician ^a	15.02 ± 1.63	16.973	<0.001	a > b, c > d
Nurse ^b	14.14 ± 2.14			
Certified caregivers ^c	14.03 ± 1.94			
Physical therapist ^d	12.19 ± 2.72			

SD, standard deviation.

23% of participants answered it was the least important even though 23% of them reported it was the most important item for improving urologic care (Fig. 1). In the satisfaction for their current management of urologic care, 73% of participants were very insufficient. 15% of them were insufficient, and 5% of them were sufficient. Only 7% of them responded that the current management was very sufficient.

Knowledge and Practice Behaviors

The mean score for UI knowledge was 14.6 (SD, 2.15; range, 4–18) which is an 81% correct rate. The item with the highest correct rate was: “On admission to hospitals, more women are

incontinent than men,” which 95.4% of participants answered correctly. The item with the lowest correct rate was: “More residents suffer from urinary incontinence after being in a nursing home for a year than at admission,” with a correct rate of 55.0% (Table 2). The mean score for UI knowledge was highest among physicians and lowest among physical therapists (Table 3).

Regarding UI practice behaviors, 93.9% of participants reported that they informed the physician about a patient’s UI, and 61.5% of participants knew the fluid intake patterns of patients (Table 4). However, there was no relationship between the mean knowledge score and length of work experience in a long-term care hospital.

Table 4. Differences of urinary incontinence practice behaviors by healthcare providers (n = 756)

Practice behaviors	Healthcare providers	Yes	No	P-value
Help incontinent patient to use toilets	Physician	61 (100)	0 (0.0)	0.003
	Nurse	421 (97.0)	13 (3.0)	
	Certified caregivers	201 (94.4)	12 (5.6)	
	Physical therapist	41 (87.2)	6 (12.8)	
Informing incontinence to physician	Physician	61 (100)	0 (0.0)	< 0.001
	Nurse	414 (95.4)	20 (4.6)	
	Certified caregivers	196 (92.0)	17 (8.0)	
	Physical therapist	39 (80.9)	9 (19.1)	
Confirmation of incontinence on admission	Physician	38 (62.3)	23 (37.7)	< 0.001
	Nurse	374 (86.4)	59 (13.6)	
	Certified caregivers	180 (84.5)	33 (15.5)	
	Physical therapist	33 (68.8)	15 (31.2)	
Documentation of the drinking time of patients	Physician	41 (67.2)	20 (32.8)	0.239
	Nurse	309 (71.2)	125 (28.8)	
	Certified caregivers	135 (63.4)	78 (36.6)	
	Physical therapist	31 (66.0)	16 (34.0)	
Known patient's fluid intake	Physician	32 (52.5)	29 (47.5)	0.150
	Nurse	280 (64.5)	154 (35.5)	
	Certified caregivers	128 (60.1)	85 (39.9)	
	Physical therapist	25 (53.2)	22 (46.8)	

Values are presented as number (%).

Each item of total numbers was different because of missing data.

DISCUSSION

In this study, we assessed the current management status of patients with urologic issues and examined the level of knowledge and practice behaviors regarding UI among Korean healthcare providers in long-term care hospitals. There were three key findings in this study. First, the participants reported that no long-term care hospital had an on-site urologist and that collaboration with another hospital was the most important factor in improving urologic care in this study. Second, the score for UI knowledge was upper intermediate, and the mean score of physicians was highest. Third, practice behaviors of nurses seemed to be better than those of other healthcare providers.

Although urologic health issues including UI are common in long-term care hospitals, the medical interventions for these issues may be insufficient. Only half of participants stated that current urologic management was effective. This is consistent with previous studies performed in other counties [10-12]. Healthcare providers who do not practice a specialty related to urologic care may overlook urologic issues or provide inadequate care, both in long-term care facilities and in family practice. Trained staff and proper medical equipment are essential to provide effective care for patients with urologic health issues

including UI [13]. However, long-term care facilities are slow to integrate technology and train medical staff because of cost and lack of skilled personnel [12]. As shown in this study, an efficient system of collaboration with urologists should be developed to improve health outcomes in long-term care facilities.

The participants of the current study answered about 81% of knowledge questions correctly on average, a level higher than in previous studies [8,9]. Prior studies assessed UI knowledge of nurses and nursing assistants in long-term facilities such as nursing homes; therefore, the level of knowledge might have been lower than in our study. Although the overall mean scores for UI knowledge were upper intermediate, knowledge deficiencies were observed for the prevalence and risk factors of UI. In addition, there were no differences in knowledge scores between nurses and certified caregivers who were not health professionals. Almost 50% of participants in this study reported that nurses were involved in urologic management; therefore, nursing knowledge would influence the quality of UI care. Insufficient knowledge of UI due to lack of training has been shown to influence the decision-making process in UI care [14].

The overall practice behaviors of nurses seemed to be better than those of other healthcare providers. This resulted from a

discrepancy related to the differences of the mean score for knowledge among different types of healthcare providers. Moreover, practices of participants might be focused on notification and documentation of UI status rather than prevention or treatment of symptoms. A previous study reported that staffs in long-term care facilities are more concerned about documentation, but UI care is often not consistent with current clinical practice guidelines [15]. We suggest that a goal of patient participation and tailored educational programs based on individual patient needs should be developed to improve UI care. A staff training program to improve competency in urologic care including UI should be developed in long-term care hospitals.

This study has some limitations. This study employed a purposive nonrandom sampling method. The findings of this study may have compromised external validity and have limited generalization. Finally, the research results of management status, knowledge, and practice behaviors were measured using self-reporting questionnaires. In addition, questionnaires to assess practice behaviors only included five items. Self-reported data may partially reflect participant clinical practices. However, this research is significant because it is the first study to assess the current management status of patients with urologic issues and to report UI knowledge and practice behaviors among Korean healthcare providers in long-term care hospitals.

Long-term care hospitals focus on palliative and geriatric care [16], where UI is an important and common health problem. The findings of this study present basic information related to UI management competence of healthcare providers in Korean long-term care hospitals. Systematic collaboration between these providers and urologic specialists, enhancing staff competence, and patient-tailored intervention should be recommended to improve quality of care for patients with urologic issues in long-term care hospitals.

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