

Development of a Healthy Bladder Education Program for Older Adults

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The Healthy Bladder Program was developed as part of an academic and health care partnership and was designed specifically for older adults residing in independent and assisted living. Program content was based on best practices that can be used by nursing staff to provide information about promoting and maintaining bladder health. One hundred eighty older adults, recruited from long-term care retirement communities, attended the 1-hour program. Findings showed that the program was successful in providing bladder health information that older adults could use immediately; suggestions are given for best practice applications. (*Geriatr Nurs* 2004;25:301-6)

The Agency for Health Research and Quality (AHRQ) guidelines for urinary incontinence first published in 1992, raised awareness about care and treatment of urinary incontinence (UI).¹ Since that time, research and anecdotal evidence have shown that incontinence can be improved or frequently cured with appropriate interventions. Despite the knowledge that UI is abnormal at any age, this message has not been translated into routine health care practices, especially for older adults. Improvements in bladder function are possible for 8 out of 10 cases, but fewer than half of those with UI ever seek professional care for the problem.¹ Health care professionals are ill prepared to recognize UI as a health concern of older adults, frequently attributing UI to normal aging.² Additionally, older adults are embarrassed by UI and reluctant to discuss it with their health care provider. UI is experienced by as many as 53% of homebound older adults, with women having a higher prevalence than men. UI is a leading cause of nursing home placement, and the associated costs exact a staggering toll not only within long-term care settings but also in the community. Annual costs of managing and treating persons with UI are estimated at \$28 billion annually in the United States.³

These data underline the rationale for development and implementation of the Healthy Bladder Program (HBP) discussed in this article. The HBP was designed as a component of a demonstration project funded by a grant from the Department of Health and Human Services, Administration on Aging (grant 90AM2508). An evidenced-based best practices approach was used to devel-

op the HBP specifically for older adults residing in independent and assisted living situations. The Gerontology Nursing Center housed in the College of Nursing, and a consortium of several long-term care facilities, formed a partnership with the specific aim to develop and disseminate best practice knowledge about UI. The academic and health care partnership was formalized by a written agreement that specified activities for which each partner was responsible. The academic partner provided training and onsite consultation to nursing staff about bladder health best practices, and made available education programs and individual assessments to older adults. The health care settings facilitated access to older adults and nursing staff, showed commitment to HBP activities by announcements and invitations, and scheduled meetings and training sessions. Nursing staff encouraged many older adults to attend, and helped promote the program to individuals who were likely to benefit. Six separate 1-hour programs were presented to older adults between March 2002 and October 2002, with a total of 180 older adults attending. Attendance ranged from a low of 7 attendees to a high of 75 attendees at a session.

HEALTHY BLADDER PROGRAM DEVELOPMENT

Content Development

Development of the HBP was based on Kolcaba's comfort theory⁴ and used the taxonomic structure of comfort to ensure coverage of the 4 domains that include physical, psychospiritual, sociocultural, and environmental.⁵ These domains were supported by findings that showed enhanced comfort for persons with UI was an important predictor of adherence to and success with health-seeking behaviors (HSBs).⁶ These enhancements also extended to outcomes such as satisfaction with care and the services provided.⁷

Additionally, a research-based literature review was completed. This information was integrated with clinical experience, expert opinion, and patient reports to develop HBP content. Uniform written content was developed so that any of the project's advanced practice nurses (APNs) could deliver the HBP and make modifications to accom-

moderate individual facility characteristics while maintaining standardization across presentations.⁸

Each session began with a welcome and introduction to the overall program, followed by an explanation of common UI issues in older adults and presentation of first-line strategies that help to improve bladder health. First-line strategies are noninvasive practices such as bladder training, pelvic muscle exercises, and food and fluid changes that people can institute on their own without medical intervention. Content about common UI issues included descriptions of urinary function, prevalence, myths, types, causes, and warning signs of incontinence. Various methods that older adults commonly use to manage UI were talked about and were used to engage participants in the discussion. These self-designed strategies include restricting fluids, using commercial absorbent products, contriving protection with towels or toilet tissue, or not taking diuretics as prescribed. Also mentioned were other approaches frequently used to cope with UI, such as avoiding social events with family or friends, withdrawing from interests for fear of “an accident,” or limiting travel outside the home to places where bathrooms are readily available.

The exposure older adults have to intense marketing on television and in magazines suggesting that commercial products are the ideal way to manage UI was acknowledged. Next, information on practices that have proven successful for managing UI^{6,9} was shared with older adults. These strategies included increasing water intake to 6 to 8 glasses per day unless limited by a medical condition, eliminating or decreasing irritating foods and drinks, maintaining physical fitness, doing pelvic muscle exercises, extending time between toilet trips to 2 hours or more, and encouraging positive thinking and self-talk about bladder management. The strategies were listed in a Bladder Health Information pamphlet that was distributed to and reviewed with all program attendees. The content of the pamphlet is shown in [Table 1](#).

Older Adults Attending

The primary purposes of the program were to provide information about promoting and maintaining bladder health and to offer an individualized healthy bladder assessment, intervention, and evaluation program. One hundred eighty older adults (153 women and 27 men) attended the 1-hour program, and 62 persons subsequently participated in a healthy bladder program. This individualized program included a comprehensive health assessment with voiding diary, fluid intake, bladder scan, and a dipstick urinalysis. Project APNs met individually with each participant to develop a plan for bladder management strategies.

Of the 180 attendees at the 1-hour healthy bladder program, three were African American, 1 was Asian, and the remainder were Caucasian. Other sociodemographic and health-related data were not collected. However, data

from the 62 individualized program participants showed an age range of 47 to 100 years and education levels of less than high school to professional graduate education.

Participants' initial reaction to the program ranged from enthusiasm to skepticism. Several individuals stated they had never heard this information about bladder health from their health care providers and were interested in knowing more. Others voiced doubt that simple interventions could work, but spoke of a willingness to try them.

FINDINGS

Program Satisfaction

A 10-item Satisfaction Survey was mailed in November 2002 to the 180 older adults who attended the presentation. This follow-up survey asked about changes in urinary patterns, adjustments in behaviors, and overall program satisfaction. Respondents also were invited to offer comments about their participation in the 1-hour program. A self-addressed stamped envelope for return of the survey and a “Bookmark” as a thank you were included. Bookmarks were pilot tested at 1 site, with the most preferred selected for distribution with the satisfaction survey. Bookmarks, shown in the [Figure](#), were printed in color and laminated. Each had illustrations and brief statements of encouragement that were based on principles taught in the HBP.

Of the 97 forms returned, 11 forms were not completed. [Table 2](#) shows the responses to the 10 items for 86 participants who completed the survey.

Perceptions About Bladder Function

Many participants identified noticeable improvements in bladder function, especially in managing the urge to go (50%) and emptying the bladder (50%). One individual expressed amazement that such simple strategies had positive success in managing urge sensations and control of sudden leakage with coughing. Another individual felt that the strategies were helpful to the extent that participation in the individualized healthy bladder program was not necessary. Over one-third of respondents had decreased urine leakage and 25% had fewer trips to the toilet. Nearly 30% had improvement in control of sudden leakage.

Behavior Changes That Occurred

About 30% of respondents increased the amount of water they drank, and about 34% reported a change in the type of foods or fluids consumed; whereas 70% indicated that water intake remained the same or decreased, and 63% said they did not make any changes in foods or fluids. The program content about bladder self-care (see [Table 1](#)) recommended consumption of at least 6 to 8 glasses of water in addition to other fluids, unless medically contraindicated. In addition, 52 participants wrote

comments about foods or fluids they eliminated or used in smaller amounts. Specific modifications included decreased consumption of caffeinated coffee, tea, colas, and citrus juices, and elimination or reduction of foods (i.e., citrus, chocolate, and tomato products) that may have an irritating effect on the bladder. Several mentioned that they reduced or eliminated alcoholic beverages.

Pelvic floor muscle exercises (PFME) were carried out regularly by only 16% of respondents, by 40% occasionally, and by 37% not at all. Program content emphasized that adequate exercise and consistent use of PFMEs are important for bladder health. Participants were taught also that gradual improvement would occur over 6 to 12 weeks. Respondents acknowledged that they understood the need for exercise, but frequently offered reasons why it was difficult to carry through with the practice, saying, "I'm so busy with other things, so I do PFMEs only occasionally," or "I found the program good, but I need to be more consistent with exercises. I'm still trying." One person noted that doing them even occasionally "is an improvement."

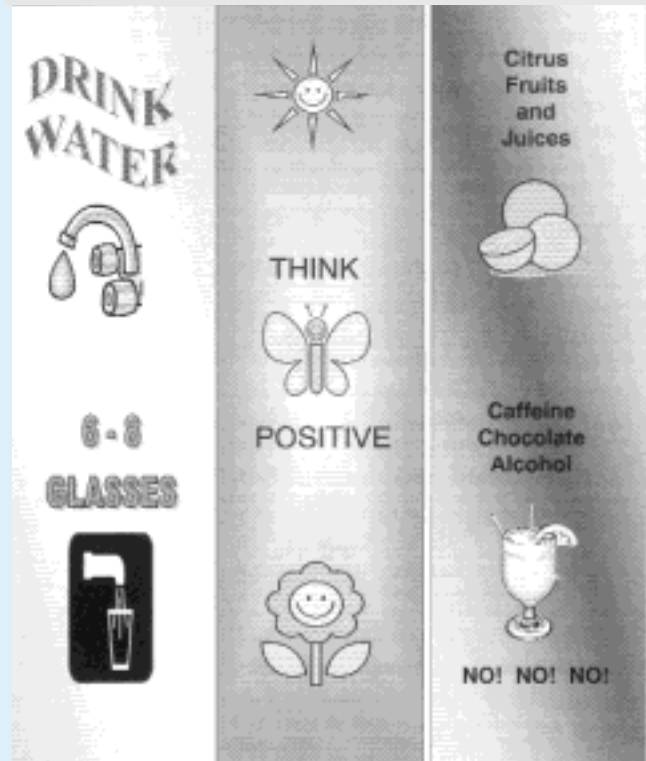
Cognitive strategies of positive self-talk were practiced by 56% and not at all by 36% of the respondents. Strategies emphasized in program content (see Table 1) included learning to delay toilet trips by changing self-talk messages. For example, the message "I have to go now" was changed to "I need to go to the toilet, but not now" or "my bladder is not full yet." Participants were advised to use such messages to extend time between toilet trips to at least 2 hours. The use of optimistic bladder messages such as, "I am managing my bladder well" and "I am in control" were suggested. These statements encouraged a positive attitude and promoted awareness that bladder control can be acquired.

The impact that use of cognitive strategies had on individuals was reflected in various ways. One person commented, "Having a positive attitude is most important." Another shared that even though "not a lot of improvement occurred in some areas, some ideas of how to improve were useful." Of interest is the comment, "even though I see little improvement, my mental attitude has improved. I'm not the only one with this problem." One participant summarized the result that behavior changes had saying, "The whole program surely made me aware that I had a major need to get better involved, using proper exercises and paying close attention to foods which should be avoided. Thank you very much for helping me improve my control."

Satisfaction With the Healthy Bladder Program

The majority ($n = 73$) of the 86 respondents expressed satisfaction with the program, with only 4 saying they were not satisfied and 9 giving no answer. Of these respondents, 50 made comments about their participation in the program. No specific tracking was done to determine who eventually participated in the individualized

Figure. Sample bookmarks mailed with Satisfaction Survey to participants



program. Consequently, it is likely that responses from the 62 participants in the individualized program influenced the overall satisfaction rating. Nevertheless, the following comments show the appreciation expressed by participants:

- "The program was very helpful and well organized. I appreciate the effort and was grateful for the help. I am more aware of methods to help problems."
- "The participation was helpful. I'm surprised at how many people have bladder problems."
- "I'm glad I went to the presentation which was very interesting and enlightening."

DISCUSSION

Changes in Bladder Function and Behaviors

For many persons the 1-hour HBP made a difference in their management of UI. For example, many participants found that simple modifications such as increasing water intake, decreasing caffeine drinks, or decreasing acid, spicy, or other bladder-irritating foods or fluids were all that were needed to improve bladder function. These findings suggest that preventing problems through health promotion and teaching are useful for many older persons.

To promote behavior changes effectively, getting the message out to more individuals is needed. In the HBP, only about one-third reported making adjustments in the types of food or fluids consumed or increasing water

Table 1. Bladder Health Brochure Information

BLADDER FUNCTION

1. The urinary bladder, a muscle with a unique capacity to expand and contract, receives the urine produced by the kidneys and holds it until the message is delivered from your brain to empty the bladder.
2. When the brain receives a message about a full bladder, you make plans to empty it. However, messages of partial fullness are often sent and may be confused with messages of a full bladder; and you may empty your bladder unnecessarily. To keep the bladder in good condition, it should hold about 1 1/2 cups of urine before being emptied.
3. When the bladder is irritable from infection, constipation, insufficient or irritating fluids, or tension, you will have more difficulty controlling your urine.
4. The muscles that support the bladder can function poorly due to inactivity, trauma, or obesity. Kegel exercises are specific exercises that tone the muscles that support the bladder and help to hold the urine in the bladder. General exercises for fitness tone all the muscles.

BLADDER SELF-CARE

1. Drink 6 to 8 glasses of water daily especially before 7 p.m. It is recommended that you avoid caffeine, alcohol, and nicotine.
2. Keep regular bowel habits. Constipation can increase bladder problems.
3. Keep weight at regular levels because excess weight can affect ability to maintain bladder control.
4. Keep physically active so as to exercise the muscles that support the bladder. Kegel exercises, if done correctly, can help improve bladder control.
5. Regular trips to the bathroom, about every 2 to 4 hours, can be helpful. Avoid toilet trips more often than every 2 hours.
6. Make sure to empty the bladder completely.
7. If you have a strong urge to urinate, do a Kegel exercise. When the perineal muscles are tightened, the bladder tends to relax, and the urge subsides, thus increasing the time between each toileting.

COGNITIVE STRATEGIES

Paying attention to bladder function and what you do and how you think is the first step to making the changes that can lead to urinary bladder health. Repeat the following statements to yourself several times a day.

1. If I have a sudden urge to go to the toilet, I can wait. To help me wait, I will relax my abdomen and do some Kegel exercises.
2. I will keep my bladder toned by holding 1 to 1 1/2 cups of urine before emptying.
3. If I feel like I am going to have some leakage, I say to myself "Not now, later." I will calmly proceed to the toilet.
4. I am optimistic and calm. I can interpret bladder messages correctly, control my messages to the bladder, and start the urinary process when it is convenient.
5. I am managing my bladder well. I am in control.

KEGEL EXERCISES

Kegel exercises are pelvic floor muscle exercises that were developed by a doctor. They are helpful to control most bladder urges and strengthen your bladder muscles. Here's how to do them:

1. Tighten the pelvic muscles that you use to prevent gas escaping. Continue tightening the muscles going to the front of the pelvic area. As you tighten the muscles, draw them in and up, so that the entire pelvic muscle floor is contracted. Hold for a count of 10 (long Kegels). Release and then do it again. Repeat this 5 to 10 times.
2. Also practice short Kegels, contracting and relaxing quickly for 10 seconds, 5 to 10 times.
3. Do these exercises morning, afternoon, and night.
4. Do not tighten the muscles of the abdomen or thighs while doing these.
5. Check to see if you are doing them correctly. Stop the flow of urine when on the toilet or feel the muscles directly to see if you are tightening. When you sneeze, cough, lift, or laugh, or if you have a sudden urge to urinate, do a Kegel exercise to prevent leakage.

consumption. On the other hand, a majority reported that practicing cognitive strategies by positive self-talk helped make a difference in how they dealt with UI. These

results suggest that health education emphasizing prevention and cognitive strategies can empower individuals to become involved in self-care. At the same time, behav-

iors such as increasing water intake or modifying a diet may require more effort.

BEST PRACTICES APPLICATION

The project provided an opportunity to demonstrate ways that nurses can intervene and promote bladder health in older adults by applying best practices. The findings offer evidence that inexpensive, noninvasive, self-directed behavior changes can improve bladder function for many older adults. Reports by older adults also suggested that for some individuals decreasing or eliminating substances known to irritate the bladder seemed sufficient to alleviate incontinence.

UI is a frequent but treatable problem for independent-residing older adults, and it negatively affects comfort and care. Convincing people to adopt simple strategies can be challenging when cultural norms favor pharmacological or technological solutions. Appropriate intervention requires willingness and encouragement to use proven self-care strategies in concert with traditional therapies. Knowledge of current and comprehensive evidence-based practice is imperative for UI care. This project provided tangible ways that nurses can translate evidence into practice and thereby promote comfort and quality care for older adults.

IMPLICATIONS AND RECOMMENDATIONS

The program goal to provide bladder health information that older adults can use immediately was achieved. Knowledge as empowerment can lead to change. As shown in this project, giving new information made a difference for many older adults. For some, the need for more invasive and expensive professionally directed care may have decreased. The materials developed for this project are available for immediate use and can be adapted readily for use in other settings. For example, community health nurses and parish nurses can disseminate the information for community-residing older adults. Such dissemination strategies to enhance quality of life were already being carried out at one facility. This setting printed the 1-hour healthy bladder information in their newsletter for residents. It served as a reminder for those who attended the session and offered information for those who were unable to attend.

Consistent and comprehensive education about UI to meet the needs of older adults requires application of best practices based on evidence.¹⁰ Myths remain prevalent among both professionals and society in general, however. Beliefs that UI is a normal part of aging or skepticism about the research lead health care professionals to put less energy into trying proven methods. Older adults also may believe that UI is a normal part of aging and extra efforts are futile. “Just live with it” becomes the mantra. Clearly, many older persons in this project wanted to make changes in dealing with UI, so that as one participant remarked, it would not continue to be a “provoking

Table 2. Healthy Bladder Program Survey Results (n = 86)

Item	Frequency	Percent
Urine leakage		
About the same	35	40.7
Decreased	32	37.2
Increased	8	9.3
Missing	11	12.8
Trips to toilet		
About the same	55	64.0
Decreased	22	25.5
Increased	9	10.5
Manage urge to go		
Improved	43	50.0
No change	36	41.9
Worse	3	3.5
Missing	4	4.6
Control sudden leakage when cough		
Improved	25	29.1
No change	45	52.3
Worse	3	3.5
Missing	13	15.1
Empty bladder		
Improved	43	50.0
No change	39	45.3
Missing	4	4.7
Amount of water drinking		
About the same	51	59.3
Decreased	8	9.3
Increased	27	31.4
Do pelvic floor muscle exercises		
Regularly	14	16.3
Occasionally	35	40.7
Not at all	32	37.2
Missing	5	5.8
Practice self-talk messages		
Yes	48	55.8
No	31	36.0
Missing	7	8.2
Changed the type of fluids or foods		
Yes	29	33.7
No	54	62.8
Missing	3	3.5
Satisfaction with program		
Satisfied	73	84.9
Not satisfied	4	4.7
Missing	9	10.4

nuisance.” Older adults need to be motivated to take on new living habits for a program on continence to be successful. Knowledgeable care providers can make these changes happen through application of best practices.

REFERENCES

1. U.S. Department of Health and Human Services. Urinary incontinence in adults: acute and chronic management. Agency for Health Care Policy and Research Publication No. 96-0682; March 1996.
2. The State of Aging and Health in America. Available at http://www.agingsociety.org/agingsociety/pdf/state_of_aging_report.pdf. Accessed May 22, 2003.
3. Newman DK. Managing and treating urinary incontinence. Baltimore, MD: Health Professions Press; 2002.
4. Kolcaba K. Comfort theory and practice. New York: Springer; 2003.
5. Kolcaba K. A taxonomic structure for the concept comfort: synthesis and application. *J Nurs Scholarship* 1991;23:237-40.
6. Dowd T, Kolcaba K, Steiner R. Using cognitive strategies to enhance bladder control and comfort. *Holistic Nurs Pract* 2000;14:91-103.
7. Kolcaba K. Evolution of the mid range theory of comfort for outcomes research. *Nurs Outlook* 2001;49:86-92.
8. Menten JC, Tripp-Reimer T. Barriers and facilitators in nursing home intervention research. *Western J Nurs Res* 2002;24:918-36.
9. Dowd T, Kolcaba K, Steiner R. The addition of coaching to cognitive strategies: interventions for persons with compromised urinary bladder syndrome. *J Wound Ostomy Continence Nursing* 2003;30:90-9.
10. Newman DK, Palmer MH, Eds. State of the science on urinary incontinence: executive summary. *Am J Nurs* 2003;3(suppl):4-8.

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Acknowledgements

A version of this paper was presented at “Best Practices Nursing Care of Older Adults: Innovations in Academic & Health Care Partnerships” Preconference of the National Gerontological Nursing Association (NGNA) Annual Meeting, October 8 and 9, 2003, Houston, Texas. Support for the Healthy Bladder Program was provided by grant 90AM2508 from the Administration on Aging of the Department of Health and Human Services. Grantees involved in projects under government sponsorship are encouraged to express freely their findings and conclusions. Points of view or opinion do not, therefore, necessarily represent official Administration on Aging policy. Other project participants included Donna Neff, PhD, RN, CS, assistant professor, and Wanda Franklin, MS, RN, research assistant.

0197-4572/\$ - see front matter

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doi:10.1016/j.gerinurse.2004.08.015