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Continence for Women: Evaluation of AWHONN's Third Research Utilization Project

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Objective: To develop an evidence-based protocol for initial evaluation and treatment of urinary incontinence and to design procedures that would facilitate the protocol's implementation into clinical practice.

Design: Descriptive report of the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) Continence for Women Project.

Setting: Twenty-one public, private, and other women's health sites.

Participants: Women in ambulatory care settings (N = 1,474) provided demographic statistics.

Methods: The protocol was developed, sites were selected, site coordinator training was provided, data collection was facilitated by project-specific teleforms, and the overall process was evaluated by the science team.

Main Outcome Measures: Site representation, patient representation, site coordinator feedback on the training program, and site coordinator experience during project implementation.

Results: The process yielded a representative mix of site and patient diversity appropriate for testing of the protocol. Site coordinators felt well-prepared to implement the protocol and experienced increased professional satisfaction because of therapeutic benefits achieved for patients and positive collaboration with physicians.

Conclusions: The Continence for Women Project demonstrated the potential for developing and testing evidence-based protocols for clinical practice when the resources of an organization such as AWHONN and the research community are combined. *JOGNN, 29,* 9–17; 2000.

Keywords: Continence—Evidence-based protocols—Research utilization—Urinary incontinence

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Over the past decade, urinary incontinence has received increased attention as a health problem that imposes considerable consequences for women's physical and mental well-being and contributes substantially to health care costs (Fantl et al., 1996; National Institutes of Health Consensus Development Conference Consensus Statement, 1988). A review of prevalence literature showed that urinary incontinence among older women living at home ranged from 17% to 55% (M = 34%) and among middle-aged and younger women from 12% to 42% (M = 25%) (Thom, 1998). Urinary incontinence occurs in nulliparous women, but even one vaginal birth increases the risk 2.5-fold (Jolleys, 1988; Sommer et al., 1990). In the United States, the direct costs of treatment for urinary incontinence have been estimated to exceed $16 billion per year (Wagner & Hu, 1998). Although the indirect costs imposed by this condition are more difficult to quantify, diminished capacity for physical activity (Nygaard, DeLancey, Arnsdorf, & Murphy, 1990) and decreased self-esteem (Wyman et al., 1997) are also compelling concerns to nurses interested in holistic women's health.

Based on the high proportion of women affected by urinary incontinence and the strong potential that successful treatment will benefit the quality of life of those affected, the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) selected continence for women as its third research utilization project. It is important to note that other organizations, specifically the Wound, Ostomy, and Continence Nurses Society, shared these goals and collaborated in the effort. In 1995, AWHONN dedicated organizational resources, with financial and intellectual support also committed by the Wound, Ostomy, and Continence Nurses Society, to support an effort focused on the problem of urinary incontinence in women. This report of the Continence for Women Project outlines the process initiated by the association with the intent to move current incontinence research into typical clinical practice settings.

Background

In 1996, a task force constituted by the Agency for Health Care Policy and Research (AHCPR) reviewed a wide array of research in order to define guidelines for the management of urinary incontinence in adults. Based on strong and convergent evidence, the clinical practice guideline *Urinary Incontinence in Adults: Acute and Chronic Management* recommended the incorporation of two specific behavioral techniques into women's health care:

- Bladder training is strongly recommended for management of urge and mixed incontinence. Bladder training is also recommended for management of stress urinary incontinence.
- Pelvic muscle exercises are strongly recommended for women with stress urinary incontinence. (Fantl et al., 1996, pp. 35 and 36)

These recommendations were reaffirmed by an interdisciplinary group of experts at the First International Consultation on Incontinence, which was sponsored by the World Health Organization in conjunction with the International Continence Society in summer, 1998. Subcommittee deliberations resulted in revised terminology for what has been identified as "pelvic muscle exercise," recommending instead the term "pelvic floor muscle training" in order to reflect the enhancement of function along with the building of strength and endurance. Pelvic floor muscle training was also recommended for treatment of women with a range of stress, mixed, and urge incontinence symptoms.

The evidence-base supporting the contribution of behavioral techniques in decreasing urinary incontinence has been well documented in the research setting. However, other elements must be in place if these practices are to be transferred effectively to the typical clinical setting. Women who will benefit from knowledge of such treatments must be identified. This is not a simple matter because embarrassment or low expectations for treatment efficacy lead many women to remain silent about having incontinence, not informing their health care providers. Recent studies underline the continuing problem of failure to seek treatment among adults 55 years and older (Burgio, Ives, Locher, & Arena, 1994; Goldstein, Hawthorne, Engeberg, McDowell, & Burgio, 1992). Fewer than half of those willing to disclose incontinence in a survey had, in fact, discussed the condition with their health care provider. In the surveys cited above, the percentages of those with urinary incontinence who had discussed the condition with their health care provider ranged from 37% to 41%.

Systematic screening for urinary incontinence should be a part of the patient's general health history. Furthermore, those who screen positive for urinary incontinence should receive the basic evaluation and follow-up care recommended in the AHCPR clinical guidelines (Fantl et al., 1996). In a busy clinical practice there are many reasons why this ideal is not always met. First, routine screening with baseline evaluation of those who are symptomatic can substantially add to the demands placed upon the clinician. Second, despite the documented value of behavioral techniques in ameliorating or eliminating incontinence, they are time-consuming to teach and may be sacrificed to other demands arising within a heavy caseload. Lack of reimbursement for behavioral therapy for urinary incontinence provides further disincentive. Third, even when behavioral techniques are taught, because of the complexity of overall clinical management the clinician might not follow up on client adherence nor document outcomes of care.

The aims of the project were to develop an evidence-based protocol for urinary incontinence and to design procedures to facilitate the protocol's implementation into clinical practice.

This is precisely the circumstance that a professional practice association such as AWHONN aims to address. Not only should the organization strive to channel the most up-to-date research to its members and others, but should also assist them to make research-based practice "do-able" in the reality of the everyday clinical world. Thus, the aims of the project were to develop an evidence-based protocol for initial

evaluation and treatment of urinary incontinence and to design procedures that would facilitate the protocol's implementation into clinical practice.

Methods

The timeline developed for the project consisted of three 1-year phases. Phase I, Planning, entailed development of the evidence-based protocol (Sampselle et al., 1997) and data management forms, as well as the plan for implementation of the project. Phase II, Implementation, began with site recruitment and training of the health care providers who would use the evidence-based protocol; throughout the year data from the various sites were compiled. In Phase III, Evaluation, the study findings were analyzed and interpreted.

Phase I: Planning

Protocol Development. The nurse scientist advisory team comprised of Patricia Burns, Molly Dougherty, Mikel Gray, Diane Newman, Carolyn Sampselle, and Jean Wyman was formed. During Phase I, the team identified relevant research upon which the protocol was based. The AHCPR clinical practice guideline (Fantl et al., 1996) provided a critical foundation, which was supplemented with additional literature searches. Newly identified studies were critiqued using the AHCPR method of scoring the quality and amount of evidence, the consistency of findings among studies, the clinical applicability of the evidence to women with urinary incontinence, and the evidence of harm or costs. A series of conference calls and two roundtable discussions over the 1st year of the project culminated in a protocol intended to provide clinicians with step-by-step practices for (a) assessing all women for urinary incontinence, (b) conducting a baseline evaluation of symptomatic women to identify complicating factors, (c) giving behavioral instruction for bladder training and pelvic floor muscle training, and (d) referring women for specialized care when indicated. The rationale, evidence base, and educational strategies for communicating this knowledge in the clinical setting were summarized in a previous publication (Sampselle et al., 1997). Continuous updates relevant to incontinence management can be found on the AHCPR web site:

http://www.hcfa.gov/medicaid/siq/siqipg.htm.

Data Management Form Development. The nurse scientist advisory team developed and refined data forms that addressed two goals. The primary goal was to assist clinicians with guideline implementation by expediting screening, basic evaluation, and follow-up. Teleforms were developed that facilitated computerized data entry. This simplified the clinical activities of screening and basic evaluation by providing forms to be included with routine paperwork completed by women presenting for ambulatory care. The ongoing evaluation was expedited by organizing the critical data to be collected by the clinician at the follow-up contact. Further, the forms standardized data collection. Data collection instruments were pilot tested at four sites and further refined. They were formatted for optical scanning and rapid data aggregation (see Figures 1-3).

Phase II: Implementation

Clinical Site Recruitment. A letter of invitation to participate as a site was mailed to the total AWHONN membership, and clinical sites were selected from the pool of respondents. Among criteria for site selection were the following: The site must be a general ambulatory women's health care setting; have a registered nurse with authority to conduct the screening and dispense educational materials as part of the health care team; provide institutional support for reproduction of instruments, mailing, and telephone follow-up; and specify providers with expertise in treating complex incontinence to whom referral could be made as indicated. Thirty-six sites from across the United States were selected.

Site Coordinator Training. Twenty-nine site coordinators attended a 6-hour training program in Washington, DC, on June 14–15, 1997. The program was taught by the nurse scientist advisory team who developed the protocol and project procedures.

In the first segment of the training program, presentations were made about the significance, prevalence, and impact of urinary incontinence in women's lives and known direct risks and contributing factors for the condition. In the second segment, the rationale for and conduct of the evidence-based protocol were discussed, including the basis for determining which women were good candidates for the behavioral intervention versus those for whom preliminary treatment for contributing factors such as urinary tract infection or referral was more appropriate (Sampselle et al., 1997). Program evaluations were completed by participants at the end of the training session (see Table 1).

Data Collection. Providers were asked to administer the screening questions (see Figure 1) to the first 100 women clients seen at their site who were 18 years or older and not pregnant. Women who answered any of the screening questions "always" or "sometimes" were to be asked to complete the basic evaluation (see Figure 2). The ongoing evaluation (see Figure 3) was to be used to obtain data on continence status at 4 months posttreatment.

Phase III: Evaluation

Teleforms were received in batches from the participating sites and were entered into the database as

AWHONN
Association of Women's Health, Obstetric and Neonatal Nurses

Date: ☐☐ / ☐☐ / ☐☐
Site: ☐☐☐
Participant: ☐☐☐

Continence for Women Project: Screening Questions

Losing urine/water is a problem for many women. Unfortunately, some women do not know that this problem is common and treatable. Your honest answers to these questions will help us to give you better care, and will be kept strictly confidential. Thank you for your help!

1. Do you ever leak urine/water when you don't want to? — ○ Always ○ Sometimes ○ Never
2. Do you ever leak urine/water when you cough, laugh, or exercise? — ○ Always ○ Sometimes ○ Never
3. Do you ever leak urine/water on the way to use the bathroom? — ○ Always ○ Sometimes ○ Never
4. Do you ever use pads, tissue, or cloth in your underwear to — ○ Always ○ Sometimes ○ Never
5. Age: ☐☐
6. What ethnic or racial group do you identify yourself as?
   - ○ African American
   - ○ Asian
   - ○ White or Caucasian
   - ○ Hispanic
   - ○ Native American
   - ○ Other _____
7. What is the highest level of education you completed?
   - ○ Didn't complete high school
   - ○ High school graduate or equivalent
   - ○ Some college but didn't graduate
   - ○ College graduate
   - ○ Graduate or professional school
8. Have you ever given birth? ○ Yes → How many times: ☐☐ Vaginally ☐☐ Cesarean
   ○ No
9. Have you had a hysterectomy (uterus/womb removed)? ○ Yes ○ No

Thank you for completing these questions! Please give this to the nurse, who will discuss any need for follow-up with you.

FIGURE 1
Continence for Women Project: Screening Questions.

Date: ☐☐ / ☐☐ / ☐☐ Site: ☐☐☐ Participant: ☐☐☐

Continence for Women Project: Basic Evaluation

1. How long have you had the problem of leaking when you don't want to? ☐☐ months ☐☐ years

2. On average, how often do you lose urine/water during a typical week?
   - ○ Less than once a week
   - ○ Once a week
   - ○ More than once a week
   - ○ Once a day
   - ○ More than once a day

3. How would you describe the amount of urine you usually leak?
   - ○ Damp/ a few drops
   - ○ Wet/enough to wet underpants
   - ○ Quite wet/a cupful (soaks pads/other protection)
   - ○ Very wet/floods/soaks through outer clothes

4. How much does this leakage bother you? Not at all ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Much

5. Are you currently using pads for protection against urine leakage?
   - ○ No — Skip to #6
   - ○ Yes

   What type?
   - ○ Panty liner
   - ○ Sanitary pad
   - ○ Larger pad
   - ○ Absorbent pant

   How many times **per day** do you need to change pads?
   - ○ 1 or fewer ○ 4
   - ○ 2 ○ 5
   - ○ 3 ○ 6 or more

6. How many days **last week** did you leak urine? ○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

7. Are you avoiding certain activities because of a urine/water loss problem?
   - ○ No — Skip to #8
   - ○ Yes
     - ○ Shopping ○ Dating
     - ○ Exercising ○ Having sex
     - ○ Traveling ○ Dancing
     - ○ Visiting friends/family ○ Playing sports

8. On average, how many times do you urinate/pass water during the day? ☐☐ night? ☐☐

9. Are you having burning or discomfort when you urinate/pass water? ○ Yes ○ No

10. Do you have a history of: *(check as many as apply)*
    - ○ Diabetes ○ Constipation
    - ○ Stroke ○ Problems walking
    - ○ Multiple Sclerosis ○ Previous treatment for urine loss
    - ○ Spinal cord injury or surgery

11. Do you feel that your bladder is empty after you urinate/pass water? ○ Yes ○ No

12. Do you ever push down or strain to urinate/pass water? ○ Yes ○ No

13. Please list any medications that you are currently taking, either prescribed or purchased over the counter.

14. Who completed this form? ○ Myself ○ Nurse ○ Someone else

The nurse will talk with you about plans for follow-up.

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FIGURE 2
Continence for Women Project: Basic Evaluation

Date: ☐☐ / ☐☐ / ☐☐ Site: ☐☐☐ Participant: ☐☐☐

Continence for Women Project: Ongoing Evaluation

1. On average, how often do you lose urine/water during a typical week?
   - ○ Less than once a week
   - ○ Once a week
   - ○ More than once a week
   - ○ Once a day
   - ○ More than once a day

2. How would you describe the amount of urine you usually leak?
   - ○ Damp/ a few drops
   - ○ Wet/enough to wet underpants
   - ○ Quite wet/a cupful (soaks pads/other protection)
   - ○ Very wet/floods/soaks through outer clothes

3. How many days **last week** did you leak urine?
   ○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7

4. How much does this leakage bother you?
   Not at all ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 Very Much

5. Are you currently using pads for protection against urine leakage?
   - ○ No — Skip to #6
   - ○ Yes

   What type?
   - ○ Panty liner
   - ○ Sanitary pad
   - ○ Larger pad
   - ○ Absorbent pant

   How many times **per day** do you need to change pads?
   - ○ 1 or fewer
   - ○ 2
   - ○ 3
   - ○ 4
   - ○ 5
   - ○ 6 or more

6. Are you avoiding certain activities because of a urine/water loss problem?
   - ○ No — Skip to #7
   - ○ Yes

   - ○ Shopping
   - ○ Exercising
   - ○ Traveling
   - ○ Visiting friends/family
   - ○ Dating
   - ○ Having sex
   - ○ Dancing
   - ○ Playing sports

7. On average, how many times do you urinate/pass water during the day? ☐☐ night? ☐☐

8. Do you want additional treatment such as:
   - ○ medication
   - ○ surgery

The nurse will talk with you about plans for follow-up.

19819

RU3-B follow-up

☐ 1 mo. ☐ 4 mo.

FIGURE 3
Continence for Women Project: Ongoing Evaluation.

TABLE 1
Participant Evaluation of Site Coordinator Training (N = 29)

Learning Objectives	*Percentages*				
Now that you have completed training, are you able to:	*No (1)*	*(2)*	*Sort of (3)*	*(4)*	*Yes (5)*
1. Discuss the goals and potential of the research utilization project			8.6	17.1	74.3
2. Describe the incidence, prevalence, reasons for underreporting and social and health care implications of incontinence among women				11.4	88.6
3. Identify normal anatomy and physiology and pathophysiology of the bladder			2.9	31.4	65.7
4. Differentiate among various types of incontinence and their predisposing factors		2.9		22.9	62.9
5. Use the provided protocol and data collection tools to evaluate incontinence in women		2.9	11.4	22.9	62.9
6. Teach women who will benefit about bladder training and pelvic muscle exercise			5.7	22.9	71.4
7. Evaluate change in women's continence behavior and clinical practice using the provided evidence-based protocol and data collection tools		2.9	11.4	20.0	65.7

they were received at AWHONN headquarters. AWHONN staff maintained periodic contact with sites, providing encouragement and triaging requests for assistance. The primarily descriptive statistics presented here were generated using the Statistical Package for the Social Sciences (Norusis, 1994). The team of scientists met twice by conference call and once face-to-face to interpret the results. An evaluation conference call was conducted with site coordinators when Phase II was completed to gain insights into the experiences encountered by the participating nurses. Six site coordinators contributed to that discussion, which was audiotaped, transcribed, and reviewed at the team of scientists' evaluation meeting in order to identify relevant themes. Written reports, received from six site coordinators, also were reviewed and supplemented that discussion.

The process used for this project effectively combined the resources of an organization such as AWHONN and the research community.

Results

Site and Patient Representation

In the course of the implementation year, 15 of the initial 36 sites elected not to continue participation in the study: Eight sites formally withdrew, citing difficulty with human subject committees and time constraints; three sites had no contact with the project coordinators after the training session; and four sites never sent data, despite several requests. The results reported here are based on complete or partial data from the remaining 21 sites. Of these 21 sites, 19% (n = 4) were federally qualified health centers providing care to underserved populations, 33% (n = 7) were public clinics, 33% (n = 7) were private practices, and the remaining 14% (n = 3) were other types of ambulatory care settings such as nurse-managed clinics. This mix reflects the range of ambulatory care sites in the United States. The composition of the 15 sites that did not continue participation in the project was 20% (n = 3) federally qualified, 27% (n = 4) public, 33% (n = 5) private, and 20% (n = 3) other. This mix was comparable to that of the sites that continued with the project.

Site coordinators reported an average of 65 visits per day, with a range of 3–300 visits among the sites. The demographic data reported here were drawn from the 1,474 cases initially screened across the 21 participating sites. The age distribution of clients served across

the various sites and the racial/ethnicity composition of the aggregate population served are depicted in Figures 4 and 5, respectively.

Experiences Reported by Site Coordinators

Several positive outcomes were identified by the participating nurses. They reported increased respect for the importance of evidence-based practice in general. More specifically, they experienced a greater awareness of urinary incontinence as an important focus through which nurses in ambulatory settings can benefit women's health. Many examples were provided in which the initial screening and basic evaluation process was characterized as a "seed" that later flourished into more extensive contacts that were both therapeutic for the patient and professionally satisfying for the nurse. Participants indicated that their work with the Continence for Women Project also had resulted in greater professional satisfaction through increased opportunities and more positive collaboration with physician colleagues.

The most salient negative experiences resulting from project participation were the increased demands that data collection and intervention imposed on the already limited time of the clinician. Major contributors to this negative outcome were billing practices. If the nurses could not bill for patient education it was more difficult to justify the time it required. Office staff were identified as a key factor in consistent distribution of the screening teleforms. If staff viewed this as a burden they were less conscientious about ensuring that the forms were included in the written history women were asked to provide. Staff awareness of the screening goals and physician support of the overall goals of the Continence for Women Project were seen as important factors in facilitating the support of office staff.

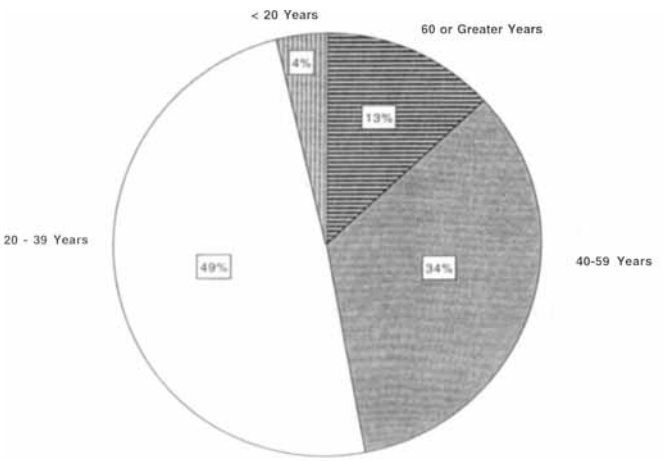

FIGURE 4
Age distribution of female caseload (N = 1,474).

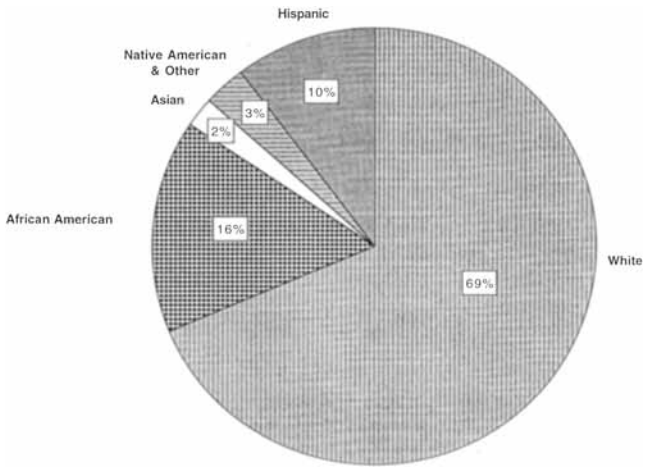

FIGURE 5
Race/ethnicity distribution of female caseload (N = 1,474).

Discussion

The process used to support the Continence for Women Project combined the scientific expertise of members of AWHONN with key staff and financial resources of the organization. The team of scientists brought the research expertise needed to specify the evidence-based protocol, incorporate sound research methods, interpret the findings, and evaluate the overall process. Organizational resources that facilitated project activities were ready access to AWHONN members who provided the pool of potential sites, development of teleforms, and coordination of ongoing communication with sites and of data analysis.

Despite attrition of more than one third of the selected sites, the process resulted in a representative range of clinical settings and a satisfactory range of client diversity. The comparability of the sites that dropped with those that continued allays concerns about possible systematic attrition. The composition of site type and client diversity increases confidence that a realistic environment was present in which to test the evidence-based protocol.

Insights were gained from the participant evaluation immediately after the training program and from the overall project evaluation. Although the training program evaluations suggested that the learning experiences provided site coordinators with the necessary knowledge to participate fully in the project, some content additions are recommended for future training sessions. Inclusion of case studies could increase participant efficacy in evaluation of patient status, use of the specified protocol, and identification of behavior and practice changes. Given that the roles of collaborating physicians and office staff were identified as crucial to

supporting nurses carrying out such a protocol, dedicated time should be spent during training to discuss strategies for developing the support of these individuals. For future research utilization projects letters of support should be requested, not only from the agency itself as was done in the present project, but from individuals whose support of the nurses' activities will have a major impact on their success. During the planning phase, informational materials could be prepared to help explain the project and increase the ease of obtaining such support.

The research utilization process followed by AWHONN permitted an effective test of the evidence-based protocol.

Billing practices were a significant impediment in the current project. Future projects should be scrutinized for the presence of such a financial disincentive. The experience of agencies that have developed ways to bill for requisite services should be compiled to assist the work of participating sites.

In summary, this research utilization project effectively combined the resources of AWHONN and the research community to conduct a scientifically rigorous investigation of an evidence-based protocol. The successful test of the protocol developed to enhance continence for women is presented in the article that immediately follows (Sampselle et al., 2000).

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