Environmental Scan

Managing Urinary Incontinence for Women in Primary Care

Report Update for the Managing Urinary Incontinence Initiative (Option Year 2)

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Prepared by:
RAND Corporation
Santa Monica, CA

Authors:
Jeannette Tsuei, M.Phil.
Sarah Asiedu, B.A.
Jody Larkin, M.S.
Aneesa Motala, M.S.W.
Gena Dunivan, M.D.
Sangeeta C. Ahluwalia, Ph.D.

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Preface

Urinary incontinence (UI) is a highly prevalent condition among women worldwide. Many effective evidence-based treatments exist, including pharmacological, behavioral, and physical therapy treatments. Yet many women with the condition never seek care because of stigma, a lack of information, inadequate clinician communication, and the absence of regular screening in primary care. Moreover, those who are diagnosed might not receive or adhere to treatment because of a lack of follow-up, poor knowledge regarding treatment, and reluctance to try potentially time-consuming or intensive interventions.

To address these gaps, the Agency for Healthcare Research and Quality (AHRQ) is sponsoring the Managing Urinary Incontinence (MUI) initiative. Using the AHRQ's EvidenceNOW model, the MUI initiative is funding five cooperative agreement (U18) grantees to disseminate and implement evidence-based nonsurgical UI treatment for women—including screening, diagnosis, management, and specialty referral—within primary care practices in separate regions across the United States. As part of the MUI initiative, AHRQ has contracted with RAND, in partnership with AcademyHealth, to support the MUI grantees and evaluate the initiative as a whole. This contract includes conducting an environmental scan on existing evidence and tools from patient-centered outcomes research on disseminating and implementing nonsurgical UI treatment for female patients in primary care, with the specific intent to inform the work of the grantees. The initial scan was completed in the Base Year of the MUI initiative and designed to be updated annually for two years. This report summarizes and synthesizes the results of the Base Year, Option Year 1, and Option Year 2 scans of the initiative.

Maya Gerstein, DrPH
Division of Practice Improvement
Center for Evidence and Practice Improvement
Agency for Healthcare Research and Quality

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Peer Reviewer

Prior to publication, this environmental scan report underwent RAND's quality assurance process, which included input from an independent peer reviewer outside RAND, who was not involved in the study and does not have any financial, business, or other professional conflicts of interest. However, the conclusions and synthesis of the scientific literature presented in this report do not necessarily represent the views of the individual reviewer. The peer reviewer was

Peter Jeppson, M.D.
Associate Professor, Division of Urogynecology
University of New Mexico
Albuquerque, New Mexico

Report Attribution

This report updates findings from the *Managing Urinary Incontinence for Women in Primary Care: Environmental Scan (Base Year)* and *Managing Urinary Incontinence for Women in Primary Care: Option Year 1 Update Report for the Managing Urinary Incontinence Initiative*, and, therefore, includes prior information from those reports, as well as newly identified material in this version. Much of the text in this report, especially, but not limited to, "Chapter 1 Introduction" and certain sections of "Chapter 2 Methods, is repeated verbatim from the two prior reports generated by our project team.

Contents

Figures

Tables

Executive Summary

Key Findings

This environmental scan covering literature published between 1996 and 2024 found 30 studies addressing the dissemination and implementation (D&I) of interventions to manage urinary incontinence (UI) in women in primary care.

- Several clinical care interventions that were disseminated and implemented in primary care settings were associated with improved rates of screening, management, or referral of patients with UI. Clinical care interventions included UI screening or prescreening; lifestyle modifications; behavioral therapies, such as pelvic floor muscle training (PFMT); provider upskilling; pharmacological therapies; provider and patient education; and self-management tools. However, the number of studies were small and findings were not consistent.
- Most D&I interventions focused on provider and staff education and training. Other D&I interventions included onsite coordination or technical assistance; the dissemination of evidence-based clinical guidelines; the integration of advanced practice practitioners in the UI care pathway; the use of apps, electronic platforms, or telehealth; UI risk prediction tools; and small group community-based programs. When reported, outcomes related to D&I focused mainly on implementation facilitators or barriers rather than the effectiveness of the D&I approach. Implementation barriers included a lack of resources, limited time during patient visits, and difficulties integrating new tools into existing workflows.
- Regarding health outcomes, several studies reported improvements on at least one indicator of UI symptoms after the delivery of an intervention that involved prescreening or screening during visits, nurse practitioner (NP) involvement in treatment, the provision of educational materials on PFMT, or the use of an app, with some symptom improvements lasting at least one year. Studies that assessed quality of life after the use of screeners, an app, small group community-based intervention, or NP involvement in treatment reported improvements.
- Information on the characteristics of primary care practices or the number and characteristics of practitioners involved in the studies was limited, making it difficult to contextualize the findings of D&I interventions. Those studies that did report on practitioner behavior, provider acceptance of interventions, and the integration of a process change in practices found generally positive results.
- Many studies were conducted in countries with more generally integrated health care systems and near universal insurance coverage, which might limit their direct generalizability for primary care settings in the United States.
- Last, the number of studies that are relevant to the dissemination of interventions to manage UI for female patients in primary care is relatively small.

Background and Purpose

In 2022, the Agency for Healthcare Research and Quality (AHRQ) began the Managing Urinary Incontinence (MUI) initiative. Based on its EvidenceNOW model, the initiative is funding five cooperative agreement (U18) grantees to disseminate and implement evidence-based nonsurgical UI treatment for women—including screening, diagnosis, management, and specialty referral—within primary care practices in separate regions in the United States. As part of the initiative, AHRQ contracted with RAND, in partnership with AcademyHealth, to support the MUI grantees and evaluate the initiative. To help inform the work of the grantees, RAND conducts an annual environmental scan on existing patient-centered outcomes research evidence and tools for disseminating and implementing nonsurgical UI treatment of women in primary care. In this report, we summarize and synthesize the results of the scan conducted in the third year of the initiative.

The initial scan, conducted in the Base Year of the contract (2022) sought to identify studies conducted in the United States or higher-income countries with similar practice guidelines that were published from 2012 to 2022. The Base Year scan identified 14 relevant studies in 30 publications (Newberry et al., 2023). The second scan, conducted in Option Year 1 (OY1) of the contract (2023), reran the initial search over an expanded time frame of 1996 to 2023 and identified a total of 27 studies in 48 publications (Newberry et al., 2024). In addition, the second scan included three supplemental searches suggested by the project's technical expert panel as being potentially relevant to the work of the MUI grantees: referral by UI specialists to physical therapy, referral by primary care provider (PCPs) to physical therapy for non-UI conditions, and referral by PCPs to nonsurgical treatment for obesity and weight loss. These supplemental searches identified 18 studies in 19 publications that ultimately were limited in their applicability to nonsurgical UI treatment in primary care.

Approach and Methods

In Option Year 2 (OY2) of the contract, we again reran the initial search for the extended time frame of 1996 to 2024 (i.e., adding 2023 and 2024) of English-language, peer-reviewed, and gray literature that assessed D&I approaches to improving UI care for women in primary care settings, including community and home settings in which treatment is managed by PCPs. We did not rerun the three supplemental searches conducted in OY1 given the limited relevant yield. In addition, we collected and summarized materials developed by the five grantees related to the 5 interventions to offer potentially useful information to future health system efforts regarding managing UI in primary care.

Results

Descriptions of the Studies

We found 30 studies across 52 publications in the OY2 scan. Figure 1 displays the literature yield between the Base Year, OY1, and OY2 as we expanded our search time frame. In the OY2 scan, three new studies were identified that focused on the D&I of UI screening, management, and referral interventions. One of these studies retrospectively reviewed medical records to evaluate UI care quality in primary care practices, comparing safety-net and non–safety net settings. The study aimed to improve adherence to several quality indicators with dissemination

strategies, including the use of an eConsult portal (eConsult, undated). It revealed that women in non–safety net clinics received significantly worse UI care. compared with those in safety-net clinics. The second study found that the use of longer and more intensive PFMT led to improved treatment outcomes. The third newly published study implemented a clinical dashboard that facilitated a user-driven approach to address gaps in UI care, offering data visualization and workflow integration.

Figure ES.1. Published Literature Yield

Most of the 30 identified studies on managing UI in primary care settings were conducted in the United States or the Netherlands. Most studies that assessed referral to physical therapy were conducted in the United Kingdom. In addition to such primary care settings as primary care clinics, offices, and community health centers, several studies also included community-based and virtual settings operated by or available to primary care services. Few studies reported on whether practices were located in urban, suburban, or rural settings. There was limited information on practice characteristics (such as the total numbers and types of practitioners or total number of patients eligible for study enrollment). In the studies that reported the age of enrolled female patients, the mean age was 61 (a range of 21 to 90 years old); most studies included patients with a combination of stress, urgency, mixed, and/or other type of UI.

Most studies focused on the implementation of specific clinical interventions (such as voiding diaries) rather than on testing broader dissemination strategies (such as the use of practice coaches, learning collaboratives, or practice redesign) or implementation strategies (such as continuous quality improvement). Examples of these clinical interventions included the implementation of a screening tool or change in the screening process, the use of NPs or nurses with specialized training to manage UI care, a review of evidence-based clinical guidelines, or the dissemination of provider and/or patient education materials. Nearly two-thirds of the studies implemented educational programs. One study employed a multicomponent practice redesign intervention that included screening, patient and provider education, and enhanced follow-up. Several studies implemented clinical process changes, such as including physical therapists or nurses who performed triage related to physical therapy (PT) referral or other specialty care or networked with a community-based continence service. Several of the recently identified studies discussed the use of an electronic platform or tool in support of screening, management, and referrals, such as the use of the electronic health record (EHR) platform to deliver behavioral self-management tools to patients.

Most studies addressed multiple levels and groups of participants in health care systems. For example, many studies incorporated interventions for both patients and providers or for both the practice and clinician levels. The stages of care addressed by the studies that focused on UI (screening and diagnosis, management, and specialty referral) also varied. Most studies focused on screening or diagnosis and UI management while a small number directly addressed referral to specialty care; some studies addressed all aspects of UI care.

In addition to relevant findings from the literature scan, we found that the five MUI grantees had developed a variety of materials to support the D&I of UI interventions. Provider education tools were the most common. These included pocket guides that provide key pieces of information on UI diagnosis and management and training on how to use the EHR to support UI care. Other tools included care pathways and algorithms to visually guide providers to varying levels of UI treatment based on UI type and severity, a multi-language screening tool, and dual-purpose educational tools that connected providers and patients with various resources focused on UI management and the sustainability of UI interventions.

Outcomes

Various outcomes were assessed using validated tools across the 30 included studies: care process outcomes, health outcomes, health system outcomes, and economic outcomes.

Care Process and Health Outcomes

Care process outcomes: Various process changes and educational efforts aimed at increasing UI screening tended to improve screening rates, but the number of studies were too small to draw definitive conclusions about any specific type of intervention. Several studies designed to examine the effects of an intervention on referral to specialty care (e.g., PT) reported mixed results. Although evaluation of D&I approaches was limited, several studies described implementation barriers, such as a lack of resources or time, and facilitators, such as process maps to support the integration of an intervention into providers' workflows.

Health outcomes: Most studies reported improvements in at least one indicator of UI symptoms and quality of life in groups of women who received any of the interventions—specifically, prescreening, nurse or NP involvement in treatment, or provider or patient education.

Health System and Economic Outcomes

Health system outcomes: Health system outcomes included provider behavior change, provider acceptance of the intervention, and integration of a process change into practices. Too few studies assessed these outcomes to enable any firm conclusions to be drawn; however, the studies did note directionally positive changes in screening rates and adherence to recommended care. No studies reported on the sustainment of practices or outcomes.

Economic outcomes: Four studies that assessed the various economic outcomes of practice changes reported positive impacts in terms of cost-effectiveness compared with those of usual care. Two studies assessed quality-adjusted life years, one compared costs with those for usual care, and one considered the reduced need to refer to specialty care.

Strengths and Limitations of the Scan

This updated scan covered nearly 30 years of literature on D&I approaches for managing UI in primary care across the UI care continuum that may be applicable to the work of MUI grantees on the D&I of their interventions. It also provides concrete examples of how the five MUI grantees have developed various tools targeted at both provider and patient audiences to disseminate and implement their interventions.

Literature searches for D&I intervention studies have some limitations. There are no universally recognized key terms for D&I interventions; therefore, we may not have identified some studies that examined interventions of interest, even with the use of terms specifying the health condition and outcomes of interest. This scan was also limited with regard to gray literature because of time and resource constraints (e.g., it included Google searches but not conference proceedings or abstracts). Another limitation is that we could not comprehensively assess study quality because of the scoping review methods and lack of systematic guidelines for grading the quality of D&I studies. However, this updated scan, like its predecessor, provides methodological and other details (e.g., sample sizes, the use of randomization procedures and comparator groups, and fidelity to the implementation strategy or clinical intervention) that allow readers to assess aspects of the general quality of individual studies.

Implications and Conclusions

This comprehensive scan examining literature from 1996 to 2024 identified 30 studies on the D&I of UI treatment for female patients in primary care, including three new studies since the OY1 scan was conducted, that provide more insights into the implementation barriers and facilitators of UI interventions. This updated literature review identified potential factors, such as usability, use levels, supportive technologies, workflow integration, and integrated referral processes, that could be further evaluated to determine their role in the efficacy and sustainability of D&I interventions.

The number of relevant studies on the D&I of UI treatment at the primary care level in women remains relatively small. Additional attention should be paid to understanding the characteristics of that practices that are involved in these studies, as well as tailoring UI interventions and adapting referral processes from other countries to ensure the effective adoption of these UI interventions across a variety of primary care settings in the United States. The limited evidence underscores the opportunity for the MUI initiative and grantee projects to substantially expand the knowledge base on tactics to support the broader adoption of effective interventions across the diverse landscape of primary care practices to ultimately improve the management of UI for female patients in primary care.

Chapter 1. Introduction

1.1 Background and Rationale for the Environmental Scan

Urinary incontinence (UI) is a highly prevalent condition among women. Studies in the United States note that close to 50 percent of women aged 40 and older report symptoms that are consistent with UI (Minassian et al., 2012). These estimates include all types of UI: stress urinary incontinence (SUI), associated with effort or physical exertion, sneezing, or coughing; urge urinary incontinence (UUI), associated with a sudden and compelling desire to void; and mixed UI, which includes symptoms of both stress and urgency (Aoki et al., 2017). The prevalence of UI increases with age, although pregnancy and the postpartum period are also associated with a significant increase in UI (Thom and Rortveit, 2010).

UI also significantly affects a patient's quality of life, morbidity, and mortality. Individuals with UI report lower quality of life scores and higher sexual dysfunction than those without UI (Coyne et al., 2008). UI is associated with high rates of depression (Hung, Awtrey, and Tsai, 2014). UI in women over age 60 is associated with greater sedentary behavior and increased risk for falls and fractures (Jerez-Roig et al., 2020), all of which cause significant morbidity, mortality, and high health care costs (Brown et al., 2000). UI also can lead to poorer management of chronic medical conditions, such as heart failure and diabetes, because the treatment of these conditions (e.g., diuretics and sodium glucose cotransporter 2 [SGLT-2] inhibitors[1]) can exacerbate untreated UI. Consequently, patients might choose to forgo treatment for other chronic conditions as a way of controlling their incontinence symptoms.

There may be some differences in the prevalence and management of UI that warrant additional research (Nelson et al., 2018). For example, the prevalence of overactive bladder (OAB) is higher in Black and Hispanic women than in White women. White, non-Hispanic women are much more likely to seek care for UI—particularly specialty care—than are Black, Hispanic or Latina, and Asian women (Mckellar et al., 2019; Morrill et al., 2007).

1.1.1 Evidence-Based Nonsurgical Treatments for UI

This highly prevalent condition has several evidence-based, effective, nonsurgical, and potentially low-cost treatments (Balk et al., 2018; Imamura et al., 2015). Lifestyle changes, such as reduction in the consumption of caffeinated beverages and other bladder irritants, can reduce the symptom burden of UUI in particular. Weight loss for women with obesity can reduce episodes of both SUI and UUI. Pelvic floor muscle training (PFMT) is a highly effective treatment for both SUI and UUI and can be done by a patient with no or limited equipment (Culbertson and Davis, 2017). For women with difficulty performing these exercises on their own or who do not improve with self-conducted exercises, pelvic floor physical therapy (PT) can be effective. Finally, several medications (including antimuscarinics and beta-3 agonists) can be used to treat UUI, although many of these medications might have side effects, making them less appropriate for certain populations (Culbertson and Davis, 2017).

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[1] SGLT-2 inhibitors are a class of drugs for the treatment of type 2 diabetes. They prevent the kidneys from reabsorbing sugar so that it passes out of the body in urine and, in doing so, increase urine output.

1.1.2 Barriers to Urinary Incontinence Screening and Diagnosis

Despite the availability of effective and low-cost noninvasive treatments, many women with UI do not receive appropriate treatment for this highly prevalent and burdensome condition. Women might not report symptoms of UI to their health care providers. This hesitancy to reveal symptoms could be because of a belief that incontinence is a normal part of aging or a feeling of shame or embarrassment in speaking to their health care provider about such stigmatized symptoms (Hägglund et al., 2003). Women experiencing UI might also face barriers to care. For example, many women first develop UI in the postpartum period, yet most women in the United States do not receive postpartum care until six weeks after giving birth, and some 40 percent or more do not even attend a postpartum visit (Bennett et al., 2014). This results in a missed early opportunity to address UI.

Several screening tools for UI have been validated, and the Women's Preventive Services Initiative recommends routine annual screening (Nelson et al., 2017; Nelson et al., 2018). However, evidence on how best to conduct such a screening and the effectiveness of routine screening for UI is lacking.

1.1.3 The Role of Primary Care Providers in Urinary Incontinence Treatment

Primary care clinicians are often best positioned to screen, diagnose, and initiate treatment for UI. However, primary care clinicians do not routinely ask patients about this problem. One reason might be a lack of comfort with—or knowledge about—assessing and treating UI (Mazloomdoost et al., 2017; Schüssler-Fiorenza Rose et al., 2015). Primary care providers (PCPs) might vary in their knowledge about UI and which questions to ask to distinguish differences among types of UI (e.g., stress versus urge). This knowledge is important to determine treatment options and plans.

In addition, primary care payment models might not provide adequate reimbursement for clinicians to counsel on UI (Jabbarpour et al., 2019, pp. 1–8). Moreover, addressing UI often requires a multimodal approach, including counseling on lifestyle modification and adherence to treatment regimens. For some patients, managing UI also requires referral to specialists, which can be especially difficult for patients in rural or underserved settings. Primary care practices, particularly smaller ones, often have limited staffing, expertise, or other resources for quality improvement (QI) and practice change, and thus likely require external facilitation, support, and multilevel systems infrastructure to successfully develop and implement interventions to address the high burden of UI on their patient population (Damschroder et al., 2009; Mendel et al., 2018).

PCPs often are responsible for determining when patients with UI require referral to specialty care—that is, care that exceeds the noninvasive management interventions that are provided in primary care settings. Although UI guidelines outline the clinical characteristics that should prompt referral, little evidence exists regarding the proportion of patients who are appropriately referred and the factors that might prevent necessary referral (e.g., age; cognitive functional status; such comorbidities as obesity, race or ethnicity; or other contextually relevant factors). A cohort study conducted in the United Kingdom identified some factors associated with a lack of referral (e.g., age over 80, obesity). But the UK and U.S. health care systems have different payment models, which might render these findings less applicable to U.S. primary care settings (Gurol-Urganci et al., 2020).

1.1.4 The EvidenceNOW Managing Urinary Incontinence Initiative

The Agency for Healthcare Research and Quality's (AHRQ's) Managing Urinary Incontinence (MUI) initiative builds on the success of the agency's EvidenceNOW model to address these important gaps in nonsurgical UI care for women in the primary care setting. EvidenceNOW uses the health extension concept, which seeks to provide primary care practices with continued, relationship-based outreach and support for improving health care quality and implementing new evidence from patient-centered outcomes research into care delivery (AHRQ, 2019). As part of the MUI initiative, AHRQ is funding five U18 grantees to develop primary care extension services to disseminate and implement improved nonsurgical treatment of UI for women—including screening, diagnosis, management, and specialty referral—within primary care practices in separate regions of the United States.

AHRQ has contracted with RAND, in partnership with AcademyHealth, to support the MUI grantees and evaluate the initiative. This contract includes (1) convening a technical expert panel (TEP) to provide guidance over the course of the support and evaluation of this project, (2) facilitating a learning community and providing technical assistance to the grantees, and (3) conducting an annual environmental scan on the latest evidence and tools for the dissemination and implementation (D&I) of nonsurgical UI treatment of female patients in primary care to help inform the work of the grantees.

1.2 Goals of the Environmental Scan Update

The purpose of the environmental scan is to identify current evidence and tools from patient-centered outcomes research on the D&I of nonsurgical UI treatment of female patients in primary care, with the specific intent to inform the work of the MUI grantees. The first scan was completed in the Base Year (2022) of the MUI initiative and was designed to be updated annually over the planned course of the initiative to capture the latest information. In this report, we summarize and synthesize the results of the scan update for the third year (Option Year 2 [OY2]) of the initiative.

For context, the Base Year scan established the literature search strategy and covered English-language literature published in the United States and select Organisation for Economic Co-operation and Development (OECD) countries from 2012 to 2022 (Newberry et al., 2023). A key result of the Base Year scan was the relative dearth of literature—only 30 articles representing 14 studies were identified as relevant (i.e., met the study inclusion criteria). Another key takeaway was that, although many of the studies addressed UI screening, evidence on D&I strategies to improve diagnosis, management, and referral processes for UI in primary care was noticeably lacking (Newberry et al., 2023).

The Option Year 1 (OY1) scan in 2023 replicated the Base Year literature search but, based on TEP feedback, expanded the search time frame from January 1996 through August 2023 to identify more relevant literature that could usefully inform grantee efforts (Newberry et al., 2024). The OY1 scan update also added three supplemental literature searches focused on referrals to specialty services for UI and other conditions to identify additional potentially relevant articles because of the limited number of articles identified in the Base Year scan. However, despite adding 16 years of literature to the search, only 27 studies in 48 publications were identified (13 more studies and 18 more publications than were found in the initial ten-year search), reinforcing the dearth of evidence in this space. Moreover, the supplemental searches were significantly limited in their yield and relevance to the work of the MUI grantees in terms of D&I.

The OY2 scan searches from January 1996 to the present (i.e., through September 2024, when the search was initiated, adding an additional year to our prior results). The supplemental searches conducted in OY1 were not replicated because of a lack of relevant yield. However, as part of this scan, we collected and summarized information from each of the five grantees regarding the tools and resources each grantee had developed and made available to other providers as part of the MUI initiative.

1.3 Organization of This Report

In Chapter 2, we describe our approach to the OY2 the environmental scan. In Chapter 3, we present the results of the OY2 literature search and contextualize our findings within the prior two literature searches. In Chapter 4, we summarize the tools and grantee-developed resources that have been made available to other providers as part of the EvidenceNOW MUI initiative. In Chapter 5, we conclude with a discussion of the findings of the updated scan, their limitations, and remaining gaps in the literature.

Several appendixes provide additional detail on the methods and results of the OY2 scan. Appendix A lists the key search concepts, terms, and specific search queries for the replicated and supplemental literature reviews. Appendix B provides the evidence tables of the studies included in the Base Year, OY1, and OY2 literature reviews. Appendix C presents a bibliography of background articles that did not meet the full inclusion criteria of the OY2 literatures searches but do include information deemed relevant to the design and D&I of interventions to improve the management of UI in primary care. Appendix D contains the fields and form used to abstract data from the relevant publications identified in the literature scoping reviews. Appendix E contains a detailed narrative review table used to generate the summary of the grantee-developed tools and resources.

Chapter 2. Approach and Methods

In this chapter, we describe the process for updating the scope of the environmental scan and the methods used to conduct the literature review for OY2.

2.1 Updating the Scope for the Option Year 2 Scan

Scope of Previous Scans (Base Year and Option Year 1)

The Base Year scan was designed to identify evidence and tools that are applicable to UI care improvement and the work of the MUI grantees in English-language literature published in the United States and select OECD countries from 2012 to 2022.[2] A key result of the Base Year scan was the limited number of articles that addressed the D&I of nonsurgical UI treatment for women patients in primary care. Another key finding was that, although many of the studies addressed UI screening, evidence on D&I strategies to improve diagnosis, management, and referral processes for UI in primary care was noticeably lacking (Newberry et al., 2023). Because of the relative dearth of literature—only 30 articles, representing 14 studies—that met the scan's full inclusion criteria of addressing the D&I of nonsurgical UI treatment for female patients in primary care, the OY1 scan expanded the time frame of the Base Year search from 1996 to 2023 based on feedback from the TEP. In addition, we undertook three supplemental searches to identify potentially relevant evidence and tools. These three supplemental searches focused on the referral process: (1) referrals by UI specialists to PT; (2) referrals by PCPs to PT for non-UI conditions; and (3) referrals by PCPs to nonsurgical treatment for obesity and weight loss, which was identified as an analogous condition by our TEP members. The updated time frame of the original scan nearly doubled the number of identified studies on the D&I of UI treatment for women in primary care settings in OY1. However, the supplemental searches on the referral process in other settings yielded a small and varied set of studies. Moreover, many of the studies were set in countries with more integrated health care systems and near universal health care coverage, which limited their direct generalizability to interventions for UI and for primary care settings in the United States (Newberry et al., 2024).

Scope of Option Year 2 Scan

Similar to the previous years, we solicited input from the MUI initiative's TEP on how to scope the scan for OY2. After reviewing the results of the Base Year and OY1 searches, the TEP agreed that (1) the published literature search strategy should remain the same and be updated to the present and (2) the supplemental searches conducted for the OY1 scan did not need to be rerun given the limited yield of relevant studies. Thus, the OY2 search strategy used the same search terms as both prior scans with an updated time frame of January 1996 (the start year for the OY1 search) to September 2024 (when the OY2 search was initiated)

Addition of Grantee Materials

In addition to the literature scan, we summarize the tools and resources that grantees have developed for PCPs, practices, practice facilitators, and patients to support the D&I of MUI

[2] The selection of other countries was based on similarities in UI management guidelines with those of the United States: Australia, Belgium, Canada, Denmark, Finland, Ireland, Israel, the Netherlands, New Zealand, Sweden, and the United Kingdom.

interventions. As part of the learning community and technical assistance that AcademyHealth has provided to the grantees, AcademyHealth compiled an MUI Tools and Resources Library, a Patient Resource Library, and a Grantee Resource Dissemination Toolkit. Chapter 4 includes a summary of those tools and resources that have been made publicly available.

2.2 Scoping Review Methods

The scan of the peer-reviewed and gray literature was conducted according to procedures for a scoping review, following the method of Arksey and O'Malley (2005) and as refined by the Joanna Briggs Institute (Peters et al., 2020). These procedures include the following general steps:

1. develop a conceptual framework and key question(s)
2. develop a preliminary set of key terms for (peer-reviewed and gray) literature searches, identify databases, develop inclusion and exclusion criteria, execute preliminary searches, refine terms (and databases), and run full searches
3. screen the results of the searches (titles and study abstracts) to identify studies and other reports that meet inclusion criteria; obtain full texts of included studies and rescreen to ensure that they meet the criteria
4. abstract information about the studies, including important study-level details and findings
5. present the study information in accessible evidence tables that include links to the studies and provide a (peer-reviewed) report that summarizes the state of the literature, gaps identified, and limitations.

2.2.1 Conceptual Framework and Key Questions

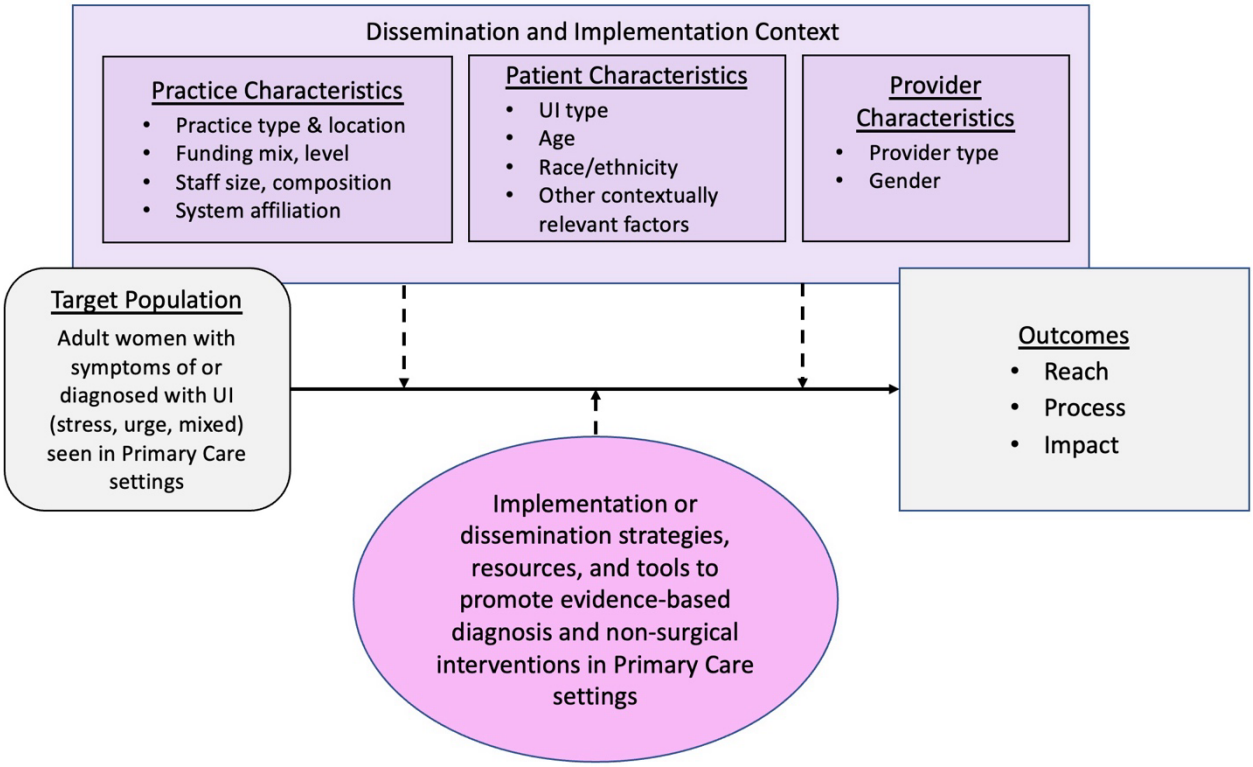
The current scan was guided by the same four key questions that guided the Base Year and OY1 environmental scans:

1. What D&I strategies (including resources and tools) have been used to promote nonsurgical clinical interventions in primary care settings for identifying and treating UI, on their own or in combination, in adult women?
2. What specific nonsurgical clinical interventions (pharmacologic and nonpharmacologic) were associated with each of the D&I interventions?
3. What were the contexts (primary care settings and patient populations) in which the implementation strategies and clinical interventions were introduced?
4. What outcomes and evidence of effectiveness have been reported for the D&I strategies? To what degree were the clinical interventions evidence-based?

Figure 2.1 presents our conceptual framework for addressing these questions in the environmental scan. We based this framework on the Standards for Reporting Implementation Studies (StaRI) guidelines, which distinguish between a clinical intervention (i.e., the health care or public health intervention that was implemented) and the implementation strategy, including associated resources and tools (i.e., how the intervention was implemented) (Pinnock et al., 2017a; Pinnock et al., 2017b). Given that the primary purpose of this scan was to identify D&I strategies of possible use to the MUI initiative U18 grantees, we focused on outcomes and evidence of effectiveness of the D&I strategies. However, we note the intervention outcomes for

the studies identified within the scope of the scan and whether the studies reported any evidence base for the implementation strategy and the intervention.

Figure 2.1. Conceptual Framework



As StaRI (Pinnock et al., 2017a) and other implementation study reporting guidelines and frameworks emphasize (e.g., the template for intervention description and replication [TIDieR] and Promoting Action on Research Implementation in Health Services [PARIHS]), we also gathered information on the contexts in which the implementation strategies and clinical interventions were introduced to help gauge their relative generalizability to primary care settings of interest (Berghmans, Seleme, and Bernards, 2020; Hoffmann et al., 2014).

We focused on two contexts: the characteristics of the practice setting and the characteristics of the adult women with UI symptoms who were being served in those settings. Practice characteristics include primary care practice type (e.g., general/family, community health center, women's health), geographic location (e.g., urban/rural, state/region), levels and mix of funding or reimbursement (e.g., commercial insurance, Medicaid, Medicare), staff size and composition, and whether and what type of system affiliation the practice might have (e.g., integrated health care system, medical group, accountable care organization). In addition to primary care practice settings, we also included community-based settings (e.g., patient homes or community-based organizations) and virtual settings (e.g., digital apps) that are operated by PCPs or offer UI-related services that are similar to those of PCPs (e.g., UI education, self-management support).

Relevant patient characteristics include UI type (e.g., stress, urgency, or mixed), age, race, ethnicity, comorbidities, and other contextually relevant factors.

2.2.2 Search Strategy, Databases, and Inclusion Criteria

A description of the key search concepts and terms used in the search strategy and the specific literature search queries are detailed in Appendix A.

2.2.2.1 Databases

Our searches covered the following databases: PubMed, CINAHL, Cochrane Central Trials Registry, ClinicalTrials.gov, and Google Advanced Interface (to identify gray literature).

2.2.2.2 Time Frame

The OY2 scan update covers the period of January 1, 1996, through September 19, 2024.

2.2.2.3 Inclusion and Exclusion Criteria

The OY2 update used the same inclusion and exclusion criteria as the prior Base Year and OY1 scans (Table 2.1).

Table 2.1. Inclusion and Exclusion Criteria for Option Year 2 Scan

Category	Inclusion	Exclusion
Patients	Adult women aged 18 and older who were screened for and/or diagnosed with UI[a]	• Male-only patients • Female patients younger than 18 years of age
Implementation strategies	Studies that reported on D&I strategies used to promote evidence-based practice in health care delivery	• Studies that reported clinical interventions or outcomes but not the D&I strategies or outcomes used to promote them
Clinical interventions	Practice-level, nonsurgical, and evidence-based interventions to screen, diagnose, or treat UI for women (including referral to specialty or community-based services)	• Clinical trials or other studies that were designed to assess patient-level efficacy and/or the harms of pharmacologic or nonpharmacologic interventions without attention to the D&I of those treatments • Surgical treatments for UI
Setting	Outpatient primary care settings or community or home settings in which treatments are managed by primary care professionals in the United States or 11 OECD countries with comparably mature health care systems[b]	• Specialist settings • Inpatient, long-term care, or skilled nursing facilities
Other	English-language publications and resources published or disseminated from 1996 to 2024	• Non-English language publications

NOTE: These criteria are based on the participant population, intervention, comparison group, outcomes, timing, setting, and study design (PICOTSS) framework. Other dimensions of the PICOTSS framework that were not included as inclusion or exclusion criteria in the table (e.g., comparators, outcomes, and study design) were included as part of the information abstraction for each study.

[a] The studies had to include only female participants or separate report findings for women and men.

[b] Australia, Belgium, Canada, Denmark, Finland, Ireland, Israel, the Netherlands, New Zealand, Sweden, and the United Kingdom.

2.2.3 Literature Screening

Following a brief training period to establish a common understanding of the inclusion criteria, titles and abstracts of peer-reviewed articles and reports were screened independently in duplicate by two team members against the inclusion criteria. From those that met the inclusion criteria, we obtained the available full-text publications, which were further screened in duplicate with reconciliation for final inclusion. All screening was accomplished using DistillerSR, an online literature review software program.

2.2.3.1 Data Abstraction and Study Quality Assessment

We extracted the data elements listed in Table D.1 from the studies that met our inclusion criteria using forms specially designed in DistillerSR. As with the previous year scans, data domains were derived from the StaRI and TIDieR implementation study reporting guidelines.

We developed categories of key dissemination, implementation, and clinical intervention to abstract from the study publications. Dissemination interventions represent approaches to inform, encourage, and support health care delivery organizations and teams to adopt and implement evidence-based practices and clinical interventions. We adapted categories of dissemination interventions from AHRQ's EvidenceNOW model of providing external support for primary care (AHRQ, 2019) and the AHRQ-supported evaluation of the National Action Plan to Reduce Healthcare-Associated Infections (Kahn et al., 2017). These categories include such dissemination approaches as practice facilitation and coaching, readiness assessments, and other technical assistance; learning communities, collaboratives, and other peer-to-peer learning opportunities; and accountability and financial incentives.

Implementation interventions represent strategies that health care delivery organizations and teams perform themselves to implement evidence-based care and clinical interventions within their own settings. We adapted categories of implementation interventions from AHRQ's EvidenceNOW framework of key drivers and change strategies that primary care practices can use to build their capacity for implementing evidence-based care (AHRQ, 2020). These categories include such implementation strategies as mechanisms for seeking evidence, developing QI skills and infrastructure, optimizing health information technology (IT), and cultivating leadership support for changes in care.

We adapted categories of clinical care interventions from typologies that were used in several clinical guidelines for UI care (Committee on Practice Bulletins—Gynecology and the American Urogynecologic Society, 2015; Lightner et al., 2019; Nambiar et al., 2018; National Institute for Health and Care Excellence, 2019). See Appendix D for the Data Abstraction Form, which lists categories for all the fields that were coded during data abstraction. Several categories were updated slightly to accommodate the supplemental searches (e.g., the addition of weight loss and obesity to the types of conditions in the interventions studied).

The data were abstracted by a single reviewer and audited by a second reviewer; the two then met to reconcile differences by consensus. We abstracted all fields in the Data Abstraction Form for new articles that had not been included in the Base Year or OY1 analysis.[3] For the grantee-developed tools and resources, we abstracted the materials on grantee, dissemination or implementation type, intended audience, stage of care, and description of material.

[3] For articles that had been included in the Base Year and OY1 scans, we incorporated our previously abstracted data into the analysis for this scan update.

For this updated scan, we present tabulated summaries of the study-level details and brief summaries of the authors' findings in Chapter 3. For ease of access, the base data for these summaries are presented in evidence tables in Appendix B, with links to the study publications.

For the grantee-developed tools and resources, we provide narrative summaries of the materials in Chapter 4. The detailed table used to generate the summaries, with data listed by tool or resource, is presented in Appendix E.

Although reporting standards for implementation studies are available, systematic guidelines on grading the quality of these studies do not exist (Pinnock et al., 2017a). However, the examination of study-level details—such as the sample size of practices, care providers, and patients; use of randomization procedures and comparator groups; and fidelity to the implementation strategy or clinical intervention as planned—allows for assessing the general quality of individual studies. In Chapter 5, we summarize the general reliability and precision of the results and identify gaps in the evidence, limitations, and key implementable findings.

2.3 Bibliography of Background Articles Identified

During the full-text review stage of the scan, we identified a variety of articles that, although did not meet the full inclusion criteria of the OY1 and OY2 literature searches, contained information that appeared to be relevant and potentially useful reference material for the design and D&I of interventions to improve the management of UI in primary care. These articles typically reported data pertaining to key components or contextual factors related to an intervention but did not study the D&I of the intervention—for example, a review of eHealth and mHealth solutions for UI among women (Dufour, Clancy, and Wu, 2023) or a comparison of PT referral rates by specialists versus PCPs (Freburger, Holmes, and Carey, 2003).

These background articles, including citations and abstracts, are listed in alphabetical order by author in Appendix C for each of the replicated Base Year searches conducted in the OY1 and OY2 environmental scans.

Chapter 3. Results of the Updated Scan on Dissemination and Implementation in Primary Care Settings of Urinary Incontinence Treatment for Women

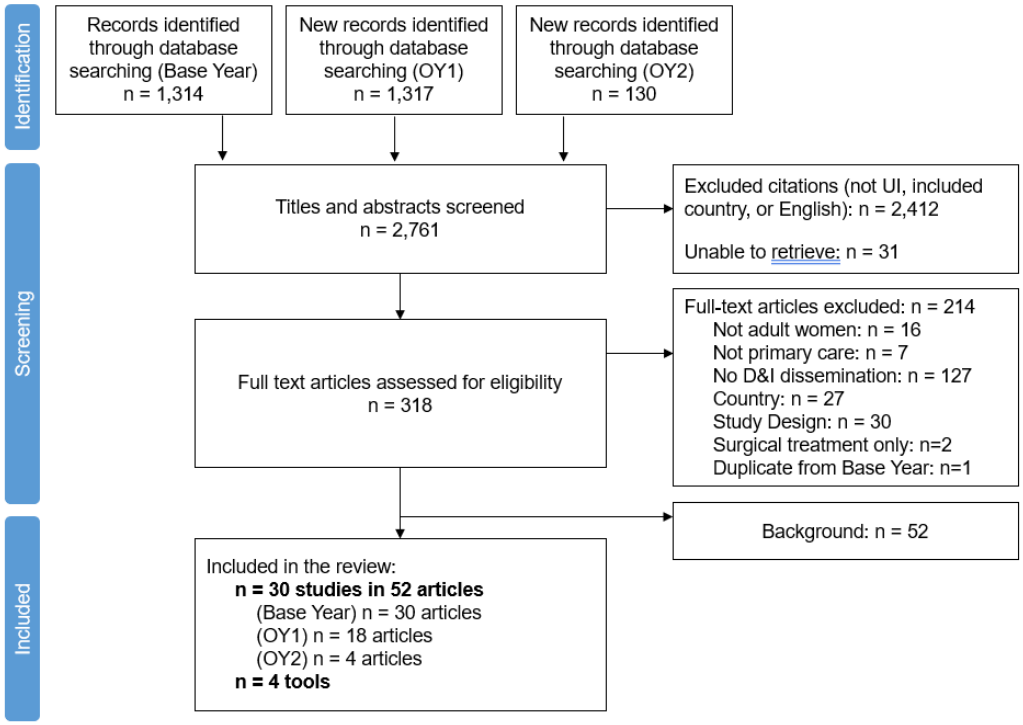
In this chapter, we report the results of the scan for studies published from January 1996 to September 2024 that assessed D&I interventions in primary care settings for UI treatments in women. We begin with an overview of the literature search and screening results and then summarize the findings of the in-scope studies according to the data abstraction domains:

- contexts in which study interventions were introduced
- participant characteristics
- D&I intervention components
- clinical care interventions that were disseminated and implemented
- study designs and outcomes.

3.1 Literature Searches and Screening Results

The scan identified 2,761 publications over the full date range (1996–2024). Among these results, 52 publications that reported on 30 studies met our full inclusion criteria. Figure 3.1 presents these results in a literature screening flow diagram that follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guide for scoping reviews (Tricco et al., 2018).

Figure 3.1. PRISMA Flow Diagram for the Literature Search (1996–2024)



3.2 Contexts of Study Interventions

In this section, we summarize the contexts of the study interventions, including the study countries, settings, and practice characteristics.

3.2.1 Study Countries and Settings

As shown in Table 3.1, most of the studies were conducted in the United States or the Netherlands. One study was conducted in multiple countries. Study settings comprised primary care practices and, as noted in Chapter 2, community, virtual, and other settings that are operated by PCPs or offer UI-related services similar to those of PCPs. *Primary care practices* were clinics (including retail clinics), offices, community health centers, and other similar settings. *Community settings* typically included patients' homes or community-based organizations. *Virtual settings* were telehealth, interactive websites, and phone apps. *Other locations* included primary care services located in research centers or large academic or other multispecialty medical centers. Studies that employed an app or eHealth screening but were based in a primary care setting were counted twice.

Table 3.1. Contexts of Studies

Category	Characteristics	Number of Studies
Study countries[a]	United States	13
	The Netherlands	9
	Australia and New Zealand	4
	Sweden	1
	Denmark	3
	United Kingdom	1
	Multinational (Canada, France, and United Kingdom)	1
Study settings[a]	Primary care	19
	Community	4
	Virtual	4
	Other	8

[a] Categories are not mutually exclusive (i.e., some studies occurred in multiple countries or settings).

3.2.2 Practice Characteristics

Most studies reported incomplete information on the characteristics of primary care practices. Of the 30 included studies, 19 reported on the number of participating primary care practices (the number of practices was not applicable for some studies that were conducted in community settings or virtually). The number of practice sites per study ranged from 1 to 128, with a mean of 24.

Only one study reported on rural (versus urban) location, and only six reported on health system affiliation (four studies were based in an academic medical center, one study was based

in the Veteran's Health Administration, and one was based in a public health system). No studies reported on practice ownership.

3.3 Participant Characteristics

3.3.1 Practitioner Characteristics

Most studies reported incomplete information on the number and characteristics of the practitioners involved. As shown in Table 3.2, the number of providers per study, when reported, varied widely. Only a few reported on the types of medical providers who were involved in the study (all studies conducted in Europe or Canada reported that physicians were general practitioners [GPs]). Several studies involved nonphysicians or a combination of physicians and nonphysicians (e.g., nurses, nurse practitioners [NPs], physical therapists, or clinic administrators) (Albers-Heitner et al., 2011; Albers-Heitner et al., 2012; Bland et al., 2003; Byles et al., 2005; Gao et al., 2024; Knight and Procter, 1999; Teunissen et al., 2015; St. John and Wallis, 2004; Wenger et al., 2010).

Table 3.2. Participant Characteristics

Characteristics	Mean	Range	Number of Studies Reporting
Number of study practitioners	46	1–375	20
Number of study patients (female)	492	3–3,950	25
Age of study patients (female)	61	21–90	23

3.3.2 Patient Characteristics

In this section, we report on the characteristics of the patients involved in the studies. Table 3.2 shows the number and age of female adult patients per study. The number of patients involved per study varied widely, from three to 3,950, with a mean of 489; however, this number is skewed by the largest study (Chen et al., 2021), which was a retrospective chart audit (the median number was 281).

Patients ranged in age from 21 to 90 years old, with a mean age of 61, across all studies. Three studies reported restricting their patient samples to older women (55 years old and over), two studies included only women 65 years old and older, and another included only those 75 years old and older (Wenger et al., 2010). The remaining studies included women 18 years old and older or did not report restricting the study to participants within a particular age range.

The studies included patients with varied combinations of UI types, as shown in Table 3.3. Most studies included patients with a combination of stress, urge, mixed, and/or other UI. Three studies included only one type of UI (two stress and one urge). About one-quarter did not specify the types of UI for the patients in the study.

Table 3.3. Types of Urinary Incontinence in Study Patients

Types of UI	Number of Studies
SUI only	1
UUI only	1

Types of UI	Number of Studies
SUI and UUI	3
SUI and mixed UI	1
UUI and mixed UI	1
SUI, UUI, and mixed UI	10
SUI, UUI, mixed, and other UI	3
SUI and other UI	1
Other UI	1
Not specified	8
Total	**30**

As a whole, the studies reported little or incomplete information on other characteristics of patients. Patient race and/or ethnicity were specifically listed in only four studies (Burton et al., 2024; Chick, Hunter, and Moore, 2013; Luebke et al., 2024; Sampselle et al., 2000a). The study by Chick, Hunter, and Moore reported that participants were 70 percent White, 20 percent Black, 6 percent Asian/Pacific Islander, and 4 percent Latina, multiethnic, or other. The patient sample in the study by Sampselle and colleagues was 72 percent White, 18 percent Black, and 10 percent Latina. Burton and colleagues described the distribution of race and ethnicity by the safety-net and non–safety net hospitals in their study and found significant differences across subgroups. Six studies described patient incomes and/or education. Four studies noted that both income and education were higher among their enrolled patients than the population averages (Firet et al., 2019; Loohuis et al., 2018; Schüssler-Fiorenza Rose et al., 2015; Wadensten et al., 2021). One study reported that 60 percent of a small patient sample (n=15) had at least a bachelor's degree (Luebke et al., 2024), whereas another study reported that 76 percent of enrolled participants had low education levels (Alewijnse et al., 2003). Only two studies mentioned health insurance type or the proportion of participants with health insurance coverage (Burton et al., 2024; Luebke et al., 2024); both of those studies describe five types of health insurance across the patient samples. Additionally, one U.S. study was conducted in federally qualified health centers (FQHCs), which generally serve lower-income populations (Sampselle et al., 2000a). It can also be inferred that patients in the UK studies had covered health care.

3.4 Intervention Design

In this section, we summarize the strategies used to promote evidence-based nonsurgical clinical interventions for identifying and treating UI, individually or as part of multicomponent interventions. These strategies include D&I and clinical care interventions. As described in Chapter 2, dissemination interventions represent approaches to inform, encourage, and support health care delivery organizations and teams to adopt and implement evidence-based practices and clinical interventions. Implementation interventions represent strategies that health care delivery organizations and teams perform to implement evidence-based care and clinical interventions within their own settings. We note that overlap exists across these types of interventions, particularly related to education and training (i.e., education and training is included as part of D&I and clinical care interventions). We still code education and training strategies under each type of intervention to distinguish who tends to conduct and receive the education and for what purposes (e.g., external disseminators training practice leaders to inform

and encourage the adoption of implementation strategies and clinical interventions, education within a practice to improve QI and change capacity, and clinicians educating patients on UI conditions and treatment options). Often, a study will include more than one type of education and training, as well as other interventions.

3.4.1 Dissemination Intervention Components

We identified 18 studies that describe a dissemination intervention component. These studies consisted of implementing provider and staff education and training (14 studies), providing onsite coordination or other direct technical assistance (two studies), using a payment incentive (one study), and other dissemination intervention components (Table 3.4). Some studies implemented more than one type of dissemination component.

Examples of dissemination intervention components that incorporate provider and staff education and training included training in screening or overall UI management for physicians, NPs, or nurses and bringing physical therapists into the practice to lead health education (Albers-Heitner et al., 2011; Alewijnse et al., 2003; Bland et al., 2003; Byles et al., 2005; Celik et al., 2008; Eckhardt et al., 2022; Gao et al., 2024; Knight and Procter, 1999; Luebke et al., 2024; Ngigi, 2017; Teunissen et al., 2015; Wenger et al., 2010).

Table 3.4. Types of Dissemination, Implementation, and Clinical Interventions

Types of Interventions	Number of Studies
Dissemination interventions[a]	18 total
Provider or staff education and training	14
On-site coordination and other direct technical assistance	2
Funding, payment, and/or reimbursement incentives	1
Other dissemination strategies	7
Implementation interventions[a]	23 total
Electronic or other tool	9
Care team engagement model	5
Implement QI	10
Engage with patients and families	4
Other strategies	2
Clinical care interventions[a]	30 total
Community-based multidisciplinary teams	3
Clinical screening and treatment	11
Lifestyle interventions	8
Behavioral and PT	10
Evaluation of provider type	3
Pharmacological management	2
Educational/informational interventions	7
Self-management	6

[a] Categories are not mutually exclusive (i.e., some studies span multiple categories).

3.4.2 Implementation Intervention Components

Twenty-three studies described at least one implementation intervention component (see Table 3.4). Nine used an electronic or other tool, five used a care team engagement approach, ten implemented changes to care processes as part of QI efforts, four implemented processes to initiate or improve engagement with patients and families or caregivers, and two used other strategies.

Examples of electronic and other tools included an online risk assessment tool, patient apps, and a telecontinence care program (Chen et al., 2021; Davis et al., 2020; Firet et al., 2024; Loohuis et al., 2018; Schlittenhardt, Clouse Smith, and Ward-Smith, 2016; Wadensten et al., 2021). Examples of implementing care team engagement models included developing a community-based UI center tied to primary care clinics (St. John and Wallis, 2004) and implementing site champions to facilitate the adoption of a clinical dashboard for screening (Gao et al., 2024).

3.4.3 Clinical Care Interventions

Last, we categorized the studies by the types of clinical care interventions that they disseminated and/or implemented. Many of the studies fit into multiple categories.

Community-based multidisciplinary teams: Interventions in this category were care assessment and treatment approaches that include providers, nurses, physiotherapists, and health care assistants (Beban, Newman, and Nolan, 2021; Byles et al., 2005; Knight and Procter, 1999).

Clinical screening and treatment: Interventions in this category were limited to interventions to improve screening (Bland et al., 2003; Byles et al., 2005; Chen et al., 2022; Eckhardt et al., 2022; Gao et al., 2024; Hess et al., 2013; Jha et al., 2007; Ngigi, 2017; Schüssler-Fiorenza Rose et al., 2015; Visser et al., 2015). None of the studies incorporated the UI treatment interventions included in our abstraction categories, such as addressing cognitive impairment, medication therapy, or posterior tibial nerve stimulation.

Lifestyle interventions: Interventions in this category were in-person or virtual interventions (i.e., mobile apps and telehealth) that provide education on lifestyle interventions or behavioral therapies, such as fluid intake or weight loss (Alewijnse et al., 2003; Davis et al., 2020; Firet et al., 2021; Loohuis et al., 2018; McFall, Yerkes, and Cowan, 2000a; Wadensten et al., 2022).

Behavioral therapy and PT: Interventions in this category included tools for prompted voiding, bladder training, PT, PFMT, and relaxation and breathing (Albers-Heitner et al., 2012; Alewijnse et al., 2003; Davis et al., 2020; Firet et al., 2024; Jha et al., 2007; McFall, Yerkes, and Cowan, 2000a; Sampselle et al., 2000a; Tannenbaum et al., 2019).

Evaluation of provider type: This category refers to studies that provided upskilling—for example, the use of a nurse instead of a physician in providing treatment or follow-up care (Albers-Heitner et al., 2012; Schlittenhardt, Clouse Smith, and Ward-Smith, 2016; Teunissen et al., 2015).

Pharmacological care: These studies tested the use of a screening questionnaire to identify patients who are appropriate for an antimuscarinic agent (Hess et al., 2013) or evaluated and adjusted medications being used to treat UI (Jha et al., 2007).

Educational or informational interventions: This category includes studies that provided educational materials to providers, clinic staff, and/or patients or provided training to providers. Many of the included studies implemented some form of education, but some studies focused on unique forms of training, such as upskilling, testing the provision of educational materials to

patients or providers, or training focused on treatment guidelines (Albers-Heitner et al., 2011; Alewijnse et al., 2003; Byles et al., 2005; Eckhardt et al., 2022).

Self-management: This category includes studies that used apps or a website link or provided special training to patients on managing their UI condition (Albers-Heitner et al., 2011; Alewijnse et al., 2003; Celik et al., 2008; Firet et al., 2021; Jha et al., 2007; Loohuis et al., 2018; Luebke et al., 2024; McFall, Yerkes, and Cowan, 2000a).

3.4.4 Levels and Groups of Participants in Primary Care Systems

The upper portion of Table 3.5 shows the number of studies whose interventions addressed different levels and groups of participants in health care systems. PCPs and patients within primary care practices or a health care system were the most frequent types of participants in the included studies. Most studies addressed multiple levels and participants because many incorporated interventions for both patients and primary care clinicians, such as an intervention that studied the use of telehealth for a follow-up visit for rural patients with UI.

Table 3.5. Levels of Primary Care Systems and Stages of Care Addressed by Study Interventions

Characteristic	Number of Studies
Levels of primary care system[a]	
Payors	1
Community	5
Health care delivery systems	5
Primary care practices	12
Primary care clinicians or staff	19
Families or caregivers	1
Patients	11
Stages of care[a]	
Screening and diagnosis	17
Management	21
Referral	7

[a] Categories are not mutually exclusive (i.e., some studies span multiple categories).

3.4.5 Stages of Care Addressed by Study Interventions

The lower portion of Table 3.5 shows the number of studies that addressed different stages of the care process for UI. Some studies incorporated interventions that were focused on more than one stage of care.

Examples of interventions that were focused on improving screening and diagnosis included online prediction and screening tools, mailed paper questionnaires, and educational programs for PCPs on the importance of screening (Bland et al., 2003; Byles et al., 2005; Celik et al., 2008; Chen et al., 2021; Eckhardt et al., 2022; Gao et al., 2024; Hess et al., 2013; Jha et al., 2007; Knight and Procter, 1999; Ngigi, 2017; Sampselle et al., 2000a; Schüssler-Fiorenza Rose et al., 2015; Visser et al., 2015).

Examples of interventions that focused on patient or provider management of UI included using patient self-management apps for prompted voiding, performing PFMT, and guiding lifestyle changes; providers prescribing a pharmacologic agent; modifying care team structures or processes to better manage patients with UI in the clinic; and incorporating an evidence-based UI care pathway based on published guidelines (Albers-Heitner et al., 2011; Albers-Heitner et al., 2012; Beban, Newman, and Nolan, 2021; Burton et al., 2024; Davis et al., 2020; Firet et al., 2019; Hess et al., 2013; Jha et al., 2007; Knight and Procter, 1999; Loohuis et al., 2018; Luebke et al., 2024; McFall, Yerkes, and Cowan, 2000b; Sampselle et al., 2000a; Schlittenhardt, Clouse Smith, and Ward-Smith, 2016; Schüssler-Fiorenza Rose et al., 2015; Teunissen et al., 2015; Wadensten et al., 2021).

Examples of interventions that focused on improving referral included the use of an electronic portal to remind providers of guideline-based practices and the recommended work-up prior to referral; referrals to various specialty services for UI, such as urogynecology and PT; or referrals to a service specifically dedicated to incontinence, such as a local primary care–based continence clinic (Burton et al., 2024; Byles et al., 2005; Jha et al., 2007; Sampselle et al., 2000a).

3.5 Study Design

The updated scan identified 12 randomized controlled trials (RCTs) or single-arm trials, one prospective cohort, eight studies that used a pre-post assessment of outcomes, and nine descriptive studies that met inclusion criteria. Most of these studies used mixed methods (i.e., both quantitative and qualitative) data and analysis.

3.6 Study Outcomes

In this section, we review the process and impact outcomes that were assessed in the studies. Process outcomes include the effects of study interventions on the implementation process and process of care. Impact outcomes are divided into three domains: health outcomes (e.g., effects on patient UI symptoms and quality of life), system outcomes (e.g., effects on provider behavior, sustainability of care changes, and practice capacity for QI), and economic outcomes (effects on costs and cost-benefits for patients, health care delivery organizations, or society).

3.6.1 Process Outcomes

Screening, Diagnosis, and Initiation of Treatment

Studies that tested interventions to improve screening rates found mixed effects, while studies that assessed the effects of screening reported improved rates of patient discussion of UI with providers and the initiation of treatment.

For example, a study in the United States found that patient (but not provider) education improved screening rates (Eckhardt et al., 2022). One study showed significantly worse adherence to quality indicators for managing UI care in non–safety net clinics (Burton et al., 2024). Another study of a multifaceted provider education intervention on screening guidelines reported no effects on screening rates (Bland et al., 2003).

However, a study that compared women screened for UI with those who were not screened found that screened women reported discussing UI with their provider during their visit and being offered treatment at higher rates. Another study similarly found that the use of a simple

pencil-and-paper prescreener increased the proportion of patients who initiated treatment (Hess et al., 2013).

Referral to Specialty Services

Nine studies reported on some aspect of referral from primary care to UI-related specialty services. Three of four studies that tested interventions focused on the referral process reported increased rates of referrals to urology, urogynecology, and/or PT services. A 2007 UK study compared two models for referral and found that an integrated care pathway in primary care increased the rates and speed of referral to specialty care (Jha et al., 2007). A 2004 Danish study that used self-report surveys to assess patient referrals to specialty care before and following the distribution of clinical guidelines and a reimbursement scheme found an apparent increase in referral behavior (Viktrup and Møller, 2004). A 2022 RCT in the United States that implemented a multicomponent educational intervention found increased rates of referral to urogynecology in both intervention and control groups (Eckhardt et al., 2022). However, a 2005 Australian study found no improvement in referral rates (i.e., to physiotherapy or other specialty care) after implementing three different interventions involving provider training, strengthening referral networks, and community education (Byles et al., 2005). Similarly, a study that implemented a UI care pathway that included electronic health record (EHR) referrals to behavioral self-management tools and other elements of UI treatment guidelines (e.g., PMFT, patient education, diet change) found that patients in the pilot did not seek a referral to a bladder specialist or PT (Luebke et al., 2024).

Four other studies whose interventions did not focus on referrals to UI-related specialty services reported referral measures but not in ways that are meaningful for understanding the effects of study interventions on the referral process. Two of these studies did not compare referrals between intervention and/or control groups (Beban, Newman, and Nolan, 2021; Visser et al., 2015). Another did not report referral rates (Schüssler-Fiorenza Rose et al., 2015). And a fourth study noted that no women in either the intervention or usual care groups were referred for specialty care (Loohuis et al., 2018).

Implementation Facilitators and Barriers

Despite the relative lack of attention to the evaluation of D&I efforts, studies in the scan identified a variety of facilitators and barriers related to *implementation context* (e.g., characteristics and capacities of primary care systems and local practice sites in which interventions were being disseminated and implemented), *attributes of UI care interventions*, and *implementation strategies and process*.

Implementation context: Several studies pointed to barriers associated with a lack of necessary resources for implementing interventions, such as limited access to equipment and training (Knight and Procter, 1999) and a lack of the time, space, and privacy needed to conduct thorough UI assessments within primary care settings (Byles et al., 2005). These same studies identified barriers related to established beliefs about professional roles (such as the ability of nurses to thoroughly assess UI) and a lack of communication among different groups of practitioners who need to work together as part of multidisciplinary approaches to continence care within primary care systems (Byles et al., 2005; Knight and Procter, 1999). Health system type was also found to influence adherence to evidence-based recommendations for managing UI. Safety-net health systems that provided PCPs with access to in-house specialists and an

electronic referral platform facilitated adherence to recommended UI care compared with non–safety net health systems without these features (Burton et al., 2024).

Attributes of UI care interventions: Studies also observed barriers and facilitators resulting from the attributes of the UI care interventions being disseminated or implemented within primary care settings. One set of barriers was related to patients and information flows—for example, patients having to overcome many gatekeepers before accessing a continence adviser (Knight and Procter, 1999); screening information not being linked to chart notes for providers to use during patient visits (Sampselle et al., 2000a); or technology challenges and confusion about making referrals specifically to pelvic floor PT (Luebke et al., 2024).

Other attributes of interventions served as facilitators to overcoming barriers, such as mechanisms to improve communication (e.g., developing a formal network of practitioners for coordinating continence services) or patient access (e.g., instituting a UI helpline and waiting room screening) (Byles et al., 2005). Likewise, the design of intervention tools for usability facilitated implementation. For example, qualitative findings from a study of PFMT in primary care settings suggested that simple standardized counseling protocols and checklists to structure sessions with patients were more useful to physiotherapists than lengthier detailed written health education materials (Alewijnse et al., 2003). Process maps used to understand end users' workflow supported better integration of a clinical dashboard in identifying high-risk patients (Gao et al., 2024). A study of a PFMT app for patients found that such features as easy digital access, the promotion of a sense of autonomy and self-discipline, and the flexibility of performing exercises at one's own convenience increased use of the app tool. At the same time, challenges came with the autonomy and flexibility afforded by the app, such as difficulty establishing a regular exercise schedule and uncertainty about performing the exercises without live feedback (Loohuis et al., 2018).

Implementation strategies and process: Last, the study that compared the development of two primary care–based continence services gleaned differences in the effectiveness of implementation approaches. One conclusion was that implementation strategies focused exclusively on the activities of individual practitioners ignored bureaucratic, resource, and other system barriers that need to be addressed for successful implementation. The study findings also indicated that organic locally led approaches to implementation appeared to empower practitioners to make role and structural changes that are supportive of the evidence-based intervention. In contrast, top–down, compliance–oriented approaches by system administrators tended to reinforce role and structural boundaries inhibiting the integration of new service models into routine care (Knight and Procter, 1999). Analysis of patients' use of an eHealth intervention illustrated the need to invest in promoting the use of eHealth interventions to improve treatment outcomes (Firet et al., 2024).

3.6.2 Impact Outcomes

3.6.2.1 Health Outcomes

Symptom Improvement

Many of the studies measured the effects of the study intervention on the improvement of UI symptoms. These studies used several quantitative measures, all self-reported.

The quantitative measures included the following:

- bladder or voiding diaries (Alewijnse et al., 2003; Davis et al., 2020; Hess et al., 2013)

- the International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) (Albers-Heitner et al., 2011; Luebke et al., 2024; Schlittenhardt, Clouse Smith, and Ward-Smith, 2016)
- the International Consultation on Incontinence Questionnaire Vaginal Symptoms Module (ICIQ-VS) and International Consultation on Incontinence Questionnaire Female Lower Urinary Tract Symptoms Module (ICIQ-FLUTS) (Beban, Newman, and Nolan, 2021)
- the severity of involuntary urine loss measured via the Sandvik score (quantity times frequency) and symptom severity using the Patient Global Impression of Severity scale (Teunissen et al., 2015)
- the International Consultation on Incontinence Questionnaire Overactive Bladder Module (ICIQ-OAB)
- the International Continence Society Urinary Symptom Index Short Form-Female (ICSUSI-SF-F) (St. John and Wallis, 2004)
- for symptom impact, the measures were
  - the Patient Perception of Bladder Condition (PPBC)
  - the Patient Perception of Intensity of Urgency Scale (PPIUS)
  - the Overactive Bladder Satisfaction scale (Hess et al., 2013; Wadensten et al., 2021)
  - the Patient Global Impression of Improvement (Loohuis et al., 2018; Tannenbaum et al., 2019)
  - and the Incontinence Severity Index (Firet et al., 2024; Visser et al., 2015).

All studies that reported on symptom improvement as an outcome reported improvements in at least one indicator of UI symptoms in groups that received an intervention that involved prescreening or screening during visits, NP involvement in treatment, the provision of educational materials on PFMT, or the use of an app, with some improvements lasting at least one year.

Quality of Life

Changes in quality of life were assessed in studies identified in the original Base Year scan that used Activity of Daily Living measures, the International Consultation on Incontinence Questionnaire Lower Urinary Tract Symptoms Quality of Life Module, Short-Form-12v2 (more commonly known as SF-12v2), and Short-Form 6-Dimension (SF-6D) (Loohuis et al., 2018; McFall, Yerkes, and Cowan, 2000a; Tannenbaum et al., 2019; Teunissen et al., 2015; Wadensten et al., 2021).

In summary, all studies that assessed quality of life after the use of screeners, an app, small group community-based intervention, or NP involvement in treatment reported improvements (Firet et al., 2024; Loohuis et al., 2018; McFall, Yerkes, and Cowan, 2000a; Sampselle et al., 2000a; Teunissen et al., 2015; Wadensten et al., 2021).

3.6.2.2 System Outcomes

Practitioner Behavior

A 1999 UK study found that an intervention developed organically between a clinic and community continence service led to improved physician adherence to screening and treatment guidelines in contrast with the imposition of a specialty continence service by the area health council (Knight and Procter, 1999). A 2024 study that included the use of an electronic referral

platform that included documentation of recommended guidelines and expected practices was associated with higher levels of adherence to the guidelines among primary care clinicians compared with those in a health system that did not have an electronic platform (Burton et al., 2024).

A 2000 U.S. multicomponent intervention aimed at providers and patients found that the incorporation of nursing staff in UI care processes improved rates of patient screening (Sampselle et al., 2000a). The 2010 U.S. study by Wenger and colleagues found that the multicomponent practice redesign intervention was associated with the improved delivery of recommended UI-related health care (Wenger et al., 2010).

A 2015 study used chart audits to assess whether a prescreening intervention in the primary care setting affected GPs' likelihood of discussing UI with female patients. The authors reported a significant improvement in physicians' discussion of UI following prescreening, especially for women whose screening results suggested UI (Schüssler-Fiorenza Rose et al., 2015).

In contrast, a 2022 U.S. study reported no effect of physician education on patient screening or the initiation of treatment (Eckhardt et al., 2022).

In summary, the findings of these studies suggest that interventions can change practitioner behavior—such as physician adherence to screening and treatment guidelines, discussion of UI with patients, and nurses assumption of roles in UI care—resulting in improved provider and practice management of patients with UI.

Provider Acceptance of Intervention

Several studies assessed provider acceptance of—or other attitudes toward—the intervention or the way it was implemented.

One study of a practice's process change aimed at improving rural patients' treatment follow-up implemented a three-item provider survey (Schlittenhardt, Clouse Smith, and Ward-Smith, 2016). This study reported good acceptance of the use of telehealth follow-up.

A study of a PFMT-focused app for the treatment of SUI interviewed a subset of practice physicians about their attitudes toward PFMT, the app, and telehealth in general. Although the doctors supported PFMT for the treatment of SUI and generally thought that the app fit well into their practice routines and added value, they tended to express doubts about whether the app would be effective for older patients or could be used without significant support from providers. These doctors maintained that physician care remains essential (Firet et al., 2019).

Integration of a Process Change into Practices

One study described in detail how a medical practice integrated a process change into its patient care routine (Schüssler-Fiorenza Rose et al., 2015). The reason for this might have been that only a small number of the studies implemented an intervention that required this kind of change. Another study discussed the use of process maps to assess how various users at two pilot sites integrated a risk dashboard into their routine practices and the different contexts of care in their local settings (Gao et al., 2024).

Several studies described the implementation of small changes, such as providing screening forms to patients waiting to be seen or adding triage by a physical therapist to the clinic process. One study described the integration of a multicomponent practice redesign into five primary care practices (Wenger et al., 2010): This study found positive impacts of the practice redesign on all outcomes assessed.

3.6.2.3 Economic Outcomes

Four studies assessed economic outcomes. One study, conducted from 2008 to 2010, assessed the effectiveness and cost-effectiveness of implementing trained nurse specialists in the care of adult patients with UI (Albers-Heitner et al., 2012). Using the EuroQol-5 Dimension tool to estimate changes in quality-adjusted life years (QALYs), the study estimated that the use of the nurse specialists was cost-effective compared with usual care.

The Urinary Incontinence in Older Women (URINO) trial, conducted from 2013 to 2015, assessed the cost-effectiveness of implementing a multicomponent intervention that included prescreening and developing individualized care plans. Estimating impact in terms of incontinence impact-adjusted life years, the study reported a 91 percent likelihood that the intervention was cost-effective (Visser et al., 2015).

A study of a UI management app conducted in Sweden compared the cost-effectiveness of the app with usual care and found the app to be comparatively cost-effective (Asklund et al., 2017).

Finally, a study that developed and validated a screening tool noted that the tool would save health care costs by reducing the need for referral to specialty care, although the study did not assess cost-effectiveness (Chen et al., 2022).

Chapter 4. Grantee Materials

In this chapter, we present a summary of publicly available resources and tools the five MUI grantees have created as part of this initiative to support the D&I of MUI interventions. Thirteen resources across the five grantees have been made publicly available. In what follows, we provide an overview of the various grantee resources grouped by type of dissemination or implementation tool (e.g., care delivery algorithm, provider education, study recruitment). A detailed summary table used to create this overview is presented in Appendix E.

4.1 Provider Education

The most common tool developed by the grantees was provider education materials. Two grantees developed pocket guides, which serve as quick-reference tools that cover key aspects of diagnosis and the management of UI, such as diagnosis codes, EHR note templates, and behavioral management strategies. Two additional resources focus on informing providers on how to use their EHR to support evidence-based UI care. This includes guidance on how to use order sets and dot phrases within the EHR platform to assist with diagnosis, medications, lab orders, referrals, and patient education. Another two grantees created educational tools to help PCPs integrate UI screening into their practices, review different types of UI, and consider behavior modification and nonsurgical treatment options for UI. Finally, one grantee provided referral instructions and a template with embedded links designed to help providers build referral networks for pelvic floor therapy, urogynecology, and urology within different health systems.

4.2 Care Pathways and Algorithms

Two grantees developed care pathways and algorithms to visually guide PCPs through screening, diagnosis, and treatment processes. The Interactive Urinary Incontinence (UI) Care Pathway Flowchart developed by EMPOWER outlines UI severity levels and suggests appropriate treatment steps. It is designed for use by providers, incontinence managers, nurses, and others and can be adapted easily to meet specific practice needs. The UI algorithm developed by WI-INTUIT details first-line treatment, UI diagnosis codes, pharmacotherapy options, and referral triggers. Both tools share the purpose of aiding providers in incorporating UI management into routine health care practices, assessing varying levels of UI severity, and guiding the appropriate treatment per severity level. There are some differences between the two tools; while the flowchart emphasizes adaptability and includes embedded links to external educational resources to increase utility, the algorithm focuses on a streamlined process for primary care settings, including directions for pharmacotherapy options.

4.3 Urinary Incontinence Screening and Assessment

One grantee developed a Urinary Incontinence Assessment Tool that consists of a patient-facing screener for PCPs to facilitate the diagnosis of UI. This tool features the 3 Incontinence Questions (3IQ), a screening method for PCPs to assess UI and determine its severity. The questions aim to differentiate between stress incontinence, urge incontinence, and other types of incontinence based on such circumstances as physical activity or urgency. This screener can be delivered verbally, electronically, or by paper. The grantee also provides a Spanish translation of the screener to accommodate Spanish-speaking patients.

4.4 Patient Information and Provider Education

Two grantees created dual-purpose tools that provide patient information and provider education. One tool focuses on delivering a variety of management options to patients via several modalities. Resources include educational videos, handouts, and referral instructions to a program that offers small group workshops covering such behavioral techniques as pelvic floor muscle exercises, constipation avoidance, healthy weight maintenance, and scheduled toileting. Patient-facing videos and handouts were provided in both English and Spanish. Another tool offers a menu of sustainability resources for PCPs and patients. Resources for primary care practices were designed to support the continuation of UI QI efforts. Patients are offered ongoing management options, such as bladder diaries, pelvic floor exercise handouts, and information on virtual coaching and support groups.

Chapter 5. Discussion

In this chapter, we summarize and discuss the findings from the updated scan on the D&I of primary care interventions for managing UI in women, limited findings from the supplemental scans on the referral process in other settings or for other conditions, limitations of the scan and research base, and overall conclusions.

5.1 Summary of Findings on the Dissemination and Implementation of Primary Care Interventions to Manage Urinary Incontinence for Women

The updated scan identified 2,761 publications over the full date range (1996–2024). Of these, 52 publications that reported on 30 studies met our full inclusion criteria. This OY2 update added three new studies from the 2023–2024 period. We review the findings for clinical care interventions below, organized by UI stage of care (screening and diagnosing, managing, and referral to specialty care) and D&I interventions.

Screening and diagnosing UI: Reflecting the evidence that most women with UI go untreated because they do not discuss their symptoms with their providers, many of the studies we identified aimed to develop, refine, test, and ensure the use of screening tools. These were delivered in a variety of media, including mailed paper forms, paper forms completed in waiting rooms, online tools, and face-to-face interviews with NPs. Some interventions were aimed at patients, some at providers, and some at both groups. Some efforts combined the introduction of screening tools with educational outreach on screening to patients and/or providers. A recent effort involved the development and implementation of a clinical dashboard for PCPs to facilitate the identification of UI and support nonsurgical UI treatment in high-risk women veterans.

Screening efforts tended to be well accepted but did not consistently increase the likelihood that women would interact with their providers for treatment. For studies in which screening improved diagnosis and treatment, recruited participants might have been more health literate or simply more willing to comply than typical primary care patients. This is a particular concern with studies that are not designed to assess D&I interventions in real-life settings. Several studies identified additional barriers to the success of screening: These included a lack of ready access of providers to pre-visit screening results (no mechanism to transmit them to patient charts in a timely manner or no prompts to seek them) and a lack of time to review the results prior to or during a visit. One study found that screening interventions developed as a part of an organically designed practice change intervention were more likely to succeed than were screening tools imposed on clinics from the top down.

Managing UI: Several studies tested novel strategies for managing UI. These included apps that provide support and education for behavioral management (e.g., PFMT), lifestyle modification (e.g., fluid intake), and changes to practice routines (e.g., implementing follow-up calls with NPs, bringing physical therapists into primary care clinics to conduct PFMT and/or to perform triage for specialty referral), and other multicomponent practice redesign efforts aimed at QI).

These interventions tended to be well received by patients and were associated with improved clinical outcomes. One study compared the effectiveness of a self-management app with usual (evidence-based) care in real-world health care settings and found the app to be

equally effective in improving symptoms and quality of life. The apps can be integrated into primary care practices relatively easily, but it will be important to ensure that multilingual versions are created and that all women who could benefit from the apps are ensured equal access and any training needed to use them. Studies conducted with the apps are relatively recent and most were conducted in the Netherlands, so it will be important to track the findings of long-term follow-up and studies conducted in the United States. Additionally, a recent study emphasized the role of app use in affecting treatment outcomes and the importance of addressing use attrition. Studies of multicomponent interventions (such as practice redesign efforts and the establishment of care networks) showed some positive results; as with the finding for screening interventions, efforts designed at the individual practice level tended to be more successful and accepted.

Referral to specialty care: Several studies implemented interventions to improve referrals to urogynecology or to PT. Three of these studies reported increased referral and access to PT (one reported increases for both intervention and control groups); however, nearly all these studies took place in countries with national health systems and/or near universal health care coverage, so it will be important to assess whether the effectiveness of such interventions generalizes to health care systems in which primary care physician referrals are needed to access specialty care. Below, we discuss this finding in relation to identified barriers to PT.

D&I interventions: Many studies, including D&I interventions, focused on measuring clinical outcomes and did not assess whether or how fully the D&I components were used. However, we did identify other studies that focused on dissemination interventions (including funding and reimbursement incentives, media campaigns, train-the-trainer programs, and the dissemination of UI guidelines) and implementation strategies (including use of QI methods and approaches to engage patients and families). Two recent studies focused on the development of a D&I intervention in a small sample (e.g., user-centered design in the development of a clinical dashboard and an environmental scan and interviews to inform the development of a pilot care pathway). But too few studies assessed the overall effectiveness of the D&I interventions, let alone their effectiveness in particular settings or for particular patient populations.

Among these implementation strategies, multicomponent practice redesign efforts that incorporated additional steps, such as meetings with advanced care practice nurses or onsite physical therapists, had mixed results: Studies that reported positive results tended to implement multicomponent efforts tailored to their own sites, or such studies might have included clinics that are more motivated to improve (such as those in academic medical centers, for which QI efforts might be part of teaching) and/or might be in countries that provide broader health insurance coverage.

Educational interventions aimed at providers tended to improve knowledge but usually were not associated with improvements in screening or management. This finding could be attributable to the lack of study length mentioned above or to study design (e.g., multicomponent interventions or contamination in randomized trials in which clinicians might practice at multiple sites or patients might see different providers at different visits).

5.3 Limitations of the Scan and the Research Base

Some of the studies identified facilitators and barriers to implementation, as well as the limitations of their own research designs and findings. In addition, we identified several limitations and gaps in our own review and in the literature.

Several major limitations are inherent to environmental scans, scoping reviews, and systematic reviews of D&I efforts. First, no standardized terms exist for D&I research that would identify all relevant research; rather, interventions, particularly multicomponent interventions, can employ or include D&I components but focus primarily on clinical process or health outcomes that are unrelated to evaluating the D&I. Authors of such studies may not emphasize these D&I components, let alone describe them as a D&I intervention. Thus, we may have missed some studies of interest, even though we included a variety of search terms related to D&I. Second, assessing the quality of D&I studies and the strength of D&I literature faces various challenges that have yet to be overcome.

In the remaining parts of this section, we synthesize and describe the limitations in the literature.

5.3.1 Interventions

To ensure relevance, we limited inclusion to studies that reported on D&I efforts to promote evidence-based interventions in primary care or other settings relevant for the MUI grantee projects. Still, many of the studies identified by the scan chiefly concentrated on clinical interventions and effectiveness, with noticeably less attention to D&I strategies and factors, such as effective approaches to D&I facilitators and barriers.

Given the time and resource constraints of the scan task, we were able to search some sources of gray (non–peer reviewed) studies, but we could not search all sources (e.g., we did not search abstracts presented at research meetings). To augment our searches, we asked members of the TEP and the project's UI subject-matter experts to help identify relevant interventions and resources that we might have missed. They identified a small number of important studies conducted in specialty care settings, some of which were included in the results if they met the specific criteria of the supplemental search.

The reading level of educational and promotional resources and tools intended for patients is an important consideration for their appropriateness and use. None of the studies assessed patient health literacy or the reading level of these kinds of materials when used.

5.3.2 Settings

As noted in published standards and other implementation science guidance, it is essential to understand the context in which interventions are implemented to examine possible sources of barriers and facilitators to their introduction and assess the generalizability of interventions to other settings. To gather as much information as we could about implementation context, we abstracted all relevant study-level details that were available in the retrieved documents, including study protocols. However, most of the implementation studies did not adequately describe the implementation context.

5.3.4 Outcomes

As noted above, many of the outcomes assessed in the studies concerned the effectiveness of clinical interventions rather than of D&I efforts. Although most studies used validated tools for clinical outcomes, none evaluated whether the magnitudes of clinical improvement met thresholds for being clinically important either at the patient or population level.

Likewise, as previously described, the studies examined a variety of process outcomes and impact outcomes. However, no studies specifically assessed outcomes related to the reach of the care interventions among the targeted practice or patient population or sustainment of the D&I

practices. Moreover, because of the heterogeneity of the interventions and outcomes assessed across studies, it is difficult to conclusively distinguish the effectiveness of any individual type of D&I intervention for any particular type of outcome.

5.3.5 Populations and Locations

We aimed to ensure that we identified studies that address UI care and the needs of underserved women, particularly those with limited access to care. Health care coverage has been reported as a barrier to accessing PT for UI management, but only two U.S. studies reported on patients' care coverage. Moreover, only four studies specified the racial or ethnic makeup of the participants.

Most studies did not identify the income or education level of participants. The small number that did found that participants tended to be more educated and had a higher-than-average income. This gap is especially critical because several studies implemented phone apps or other electronic health functions. Women with less education and lower reading comprehension levels might be less likely to be able or willing to adopt these technologies.

Only three studies were conducted in areas that were identified as underserved or in safety-net settings. One study assessed the effect of a practice change aimed at improving access to care for women in rural areas. Another study that was conducted in FQHCs reported on the successful implementation of standardized physician screening, follow-up forms, and patient education materials that promoted PFMT (Sampselle et al., 2000a). The third study compared adherence to evidence-based guidelines across safety-net and non–safety net hospitals in an urban setting (Burton et al., 2024).

The utility and generalizability of D&I studies in real-life primary care settings, including community or home settings in which treatments are managed by primary care professionals, depend on the degree to which their participants are representative of the populations served and that barriers to care are typical of those settings. Also, primary care practices are universally recognized as a key entryway to the health care system, and the treatment of UI is no exception. This updated scan identified four studies in primary care settings, but there continues to be a major gap in the number of D&I studies based in primary care settings for the nonsurgical treatment of UI. Last, PCPs who participated in these studies may have been more willing to adopt new interventions or have more experience with UI care, which limits their representativeness.

Finally, most studies were small, both in number of participants and study sites, and dropout rates for some studies were relatively high. These factors have the following three implications:

- The studies might not have had the statistical power to assess important questions.
- The study findings might not represent what would be found in whole populations or even larger practices or health care systems.
- It would be important to study the reasons for dropping out to understand the barriers to the adoption of UI care improvements at the patient, practice, or system level.

5.3.6 Study Quality and Applicability

As an environmental scan, assessing study quality was not within scope. However, several overall comments from our prior report about the quality of the studies bear repeating (Newberry et al., 2023).

Several of the studies were large, well designed within the limitations of this kind of research, and implemented features of good quality, such as calculating the number of participants needed to observe differences between treatment groups, using valid methods of randomization, assessing retention, and using intention to treat analysis (that is, including all participants who enrolled in the study—not just those who completed all treatments—in the calculation of study findings). However, by necessity, few studies were able to fully blind participants or their PCPs to their treatment assignment, and nearly all outcomes were self-reported; in at least one case, contamination of the control condition was suspected as the reason for intervention and control participants having similar improvements. Also, several of the studies had low retention rates.

As discussed in the prior report, although many of the studies were conducted in primary care settings that provide treatment in real-life care settings, several factors make the applicability of the studies that we identified somewhat challenging. Only about one-third of the studies were conducted in the United States; the remainder were conducted in countries that provide or heavily subsidize universal health care coverage. Most studies lacked information on the practice context or size relative to the number of study participants (both providers and patients). Few studies reported race, ethnicity, socioeconomic status, health care coverage, comorbidities, education, or other contextually relevant factors of participants. No studies reported on health literacy.

5.4 Conclusions

The OY2 updated scan identified a small body of literature on UI intervention in primary care practices for female patients, including D&I strategies, as well as barriers and facilitators to the implementation of UI interventions. This update identified potential factors, such as usability, use levels, supportive technologies, workflow integration, and integrated referral processes, that could be further evaluated to determine their role in the efficacy and sustainability of D&I interventions.

Although the OY2 update identified three new studies since the end of the OY1 scan time frame of 2023, the number of relevant studies on the D&I of primary care UI treatment for women remains relatively small. Future research is needed on the impact of D&I interventions on such measures as rates of screening and diagnosis, PCPs' UI management behaviors, and use of nonsurgical treatments. Moreover, the five grantees of the MUI initiative have implemented several tools and resources to support the D&I of nonsurgical UI treatment of female patients in primary care. As the MUI initiative and grantee projects progress, they will expand the evidence on managing UI within primary care practices for women so that nonparticipating primary care practices and health systems can adopt these interventions and reduce the prevalence of UI in women.

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Wessels, Nienke J., Anne M. M. Loohuis, Henk van der Worp, Linde Abbenhuis, Janny Dekker, Marjolein Y. Berger, Julia E. W. C. van Gemert-Pijnen, and Marco H. Blanker, "Barriers and Facilitators Associated with App-Based Treatment for Female Urinary Incontinence: Mixed Methods Evaluation," *JMIR mHealth uHealth*, Vol. 9, No. 9, September 2021.

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Abbreviations and Acronyms

3IQ	3 Incontinence Questions
AHRQ	Agency for Healthcare Research and Quality
D&I	dissemination and implementation
DO	doctor of osteopathy
EHER	electronic health record
FQHC	federally qualified health center
GP	general practitioner
ICIQ-UI SF	International Consultation on Incontinence Questionnaire- Urinary Incontinence Short Form
ICSUSI-SF-F	International Continence Society Urinary Symptom Index Short Form-Female
IT	information technology
MD	medical doctor
MUI	Managing Urinary Incontinence
NP	nurse practitioner
NR	standard deviation not reported
OAB	overactive bladder
OECD	Organisation for Economic Co-operation and Development
OY1	Option Year 1
OY2	Option Year 2
PA	physician assistant
PCP	primary care provider
PFD	pelvic floor disorder
PFMT	pelvic floor muscle training
PPBC	Patient Perception of Bladder Condition
PPIUS	Patient Perception of Intensity of Urgency Scale
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PT	physical therapy
QI	quality improvement
QALY	quality-adjusted life year
RCT	randomized controlled trial
SD	standard deviation
SGLT-2	sodium glucose cotransporter 2
StaRI	Standards for Reporting Implementation Studies
SUI	stress urinary incontinence
TEP	technical expert panel

TIDieR	template for intervention description and replication
UI	urinary incontinence
UUI	urge urinary incontinence

Appendix A. Literature Search Strategy

A.1 Key Search Concepts and Terms

The same key concepts for the search strategy, extracted from the key questions in Chapter 2, were used for the Base Year, OY1, and OY2 searches (see Table A.1).

Table A.1. Key Search Concepts and Terms for Environmental Scan

1. Nonsurgical treatment (including screening, diagnosis, management, and specialty referral)
2. Urinary incontinence (including stress, urge, and mixed)
3. Women (female adults, 18 years old or older)
4. Primary care (including family medicine, general internal medicine, and geriatric practices and community and home settings in which treatment is managed by primary care professionals)
5. Dissemination, implementation, or both (including strategies, resources, and tools)

The search terms based on the key concepts were developed by Sydne Newberry, the lead for the environmental scan, and Gena Dunivan, UI subject-matter expert for the project's support tasks, in collaboration with Jody Larkin, a RAND research librarian who performed the literature searches. These terms also drew on those used in the 2018 AHRQ systematic review (Balk et al., 2018), in topical articles referenced in AHRQ's application request for the U18 cooperative agreements and the grantees' project plan materials, and in articles from the focused search of EvidenceNOW materials.

We used common synonyms and wildcard searches to capture variations in wording of the aforementioned concepts and subcomponents (e.g., for screening, diagnosis, management, and specialty referral as part of the more general concept of treatment).

We first conducted a search for literature that contained all of the first four concepts and then filtered those results for the fifth concept on dissemination, implementation, or both (and such synonyms as uptake and adoption). A subset of titles and abstracts of articles from the search that did not appear after applying the filter were reviewed manually for dissemination content, implementation content, or both in case the filter did not capture all relevant articles. Articles remaining after we applied the filter and conducted the manual review for dissemination content, implementation content, or both were included in the scope of scan.

A.2 Literature Search Queries

The search terms and strategies for the OY2 scan are detailed below.

PubMed
English; August 2023–date of search
Search executed September 19, 2024

"overactive bladder"[tiab] OR enuresis[tiab] OR nocturia[tiab] OR incontinen*[tiab] OR "detrusor instabilit*"[tiab] OR "continence care*"[tiab] OR ((bladder*[tiab] OR urine[tiab] OR urina*[tiab]) AND (overactive[tiab] OR "over active"[tiab] OR urgent[tiab] OR urgency[tiab] OR frequent[tiab] OR frequency[tiab] OR detrusor[tiab] OR leak*[tiab] OR dysfunction* OR urge*[tiab])) OR ((bladder[tiab]) AND (neurogen*[tiab] OR neurologic*[tiab])) OR "Urinary Bladder, Overactive"[Mesh] OR "Urinary Incontinence"[Mesh] OR "Enuresis"[Mesh] OR "Urinary Bladder, Neurogenic"[Mesh] OR "Urinary Incontinence, Urge"[Mesh] OR "Urinary Incontinence, Stress"[Mesh] OR "Nocturia"[Mesh]
AND
"primary care"[tiab] OR "primary doctor"[tiab] OR "primary provider*"[tiab] OR "primary clinic"[tiab] OR "ambulatory care"[tiab] OR "general practitioner*"[tiab] OR GP[tiab] OR "general practice physician*"[tiab] OR internist*[tiab] OR "family medicine"[tiab] OR "family practice"[tiab] OR "family doctor*"[tiab] OR "internal medicine"[tiab] OR "geriatric medicine"[tiab] OR geriatric*[tiab] OR "community health center*"[tiab] OR "federally qualified health center*"[tiab] OR FQHC*[tiab] OR CBOC*[tiab] OR "community based"[tiab] OR "Primary Health Care"[Mesh] OR "Physicians, Primary Care"[Mesh] OR "General Practice"[Mesh] OR "General Practitioners"[Mesh] OR "Geriatrics"[Mesh] OR "Internal Medicine"[Mesh] OR "Family Practice"[Mesh]
AND
Women[mh] OR Female[mh] OR women*[tiab] OR woman*[tiab] OR female*[tiab]

Results: 123

CINAHL Plus (via EBSCO)
English; August 2023–date of search
Search executed September 19, 2024

TI("overactive bladder" OR enuresis OR nocturia OR incontinen* OR "detrusor instabilit*" OR "continence care*") OR AB("overactive bladder" OR enuresis OR nocturia OR incontinen* OR "detrusor instabilit*" OR "continence care*") OR (TI(bladder* OR urine OR urina*) AND TI(overactive OR "over active" OR urgent OR urgency OR frequent OR frequency OR detrusor OR leak* OR dysfunction* OR urge*)) OR (TI(bladder* OR urine OR urina*) AND AB(overactive OR "over active" OR urgent OR urgency OR frequent OR frequency OR detrusor OR leak* OR dysfunction* OR urge*)) OR (AB(bladder* OR urine OR urina*) AND TI(overactive OR "over active" OR urgent OR urgency OR frequent OR frequency OR detrusor OR leak* OR dysfunction* OR urge*)) OR (AB(bladder* OR urine OR urina*) AND AB(overactive OR "over active" OR urgent OR urgency OR frequent OR frequency OR detrusor OR leak* OR dysfunction* OR urge*)) OR (TI(bladder) AND TI(neurogen* OR neurologic*)) OR (TI(bladder) AND AB(neurogen* OR neurologic*)) OR (AB(bladder) AND TI(neurogen* OR neurologic*)) OR (AB(bladder) AND AB(neurogen* OR neurologic*)) OR (MH "Urinary Incontinence") OR (MH "Stress Incontinence") OR (MH "Urge Incontinence") OR (MH "Bladder, Neurogenic") OR (MH "Overactive Bladder") OR (MH "Enuresis") OR (MH "Enuresis, Nocturnal")
AND
TI("primary care" OR "primary doctor" OR "primary provider*" OR "primary clinic" OR "ambulatory care" OR "general practitioner*" OR GP OR "general practice physician*" OR internist* OR "family medicine" OR "family practice" OR "family doctor*" OR "internal medicine" OR "geriatric medicine" OR geriatric* OR "community health center*" OR "federally qualified health center*" OR FQHC* OR CBOC* OR "community based") OR AB("primary care" OR "primary doctor" OR "primary provider*" OR "primary clinic" OR "ambulatory care" OR "general practitioner*" OR GP OR "general practice physician*" OR internist* OR "family medicine" OR "family practice" OR "family doctor*" OR "internal medicine" OR "geriatric medicine" OR geriatric* OR "community health center*" OR "federally qualified health center*" OR FQHC* OR CBOC* OR "community based") OR (MH "Primary Health Care") OR (MH "Physicians, Family") OR (MH "Internal Medicine") OR (MH "Family Practice") OR (MH "Geriatrics")
AND
(MH "Women+") OR (MH "Female") OR TI(women*) OR AB(women*) OR KW(women*) OR TI(woman*) OR AB(Woman*) OR KW(Woman*) OR TI(female*) OR AB(female*) OR KW(female*)

Results: 19

Web of Science
Conference Proceedings Citation Index—Science (CPCI-S)
English; August 2023–date of search
Search executed September 19, 2024

TS=("overactive bladder" OR enuresis OR nocturia OR incontinen* OR "detrusor instabilit*" OR "continence care*") OR (TS=(bladder* OR urine OR urina*) AND TS=(overactive OR "over active" OR urgent OR urgency OR frequent OR frequency OR detrusor OR leak* OR dysfunction* OR urge*)) OR (TS=(bladder) AND TS=(neurogen* OR neurologic*))
AND
TS=("primary care" OR "primary doctor" OR "primary provider*" OR "primary clinic" OR "ambulatory care" OR "general practitioner*" OR GP OR "general practice physician*" OR internist* OR "family medicine" OR "family practice" OR "family doctor*" OR "internal medicine" OR "geriatric medicine" OR geriatric* OR "community health center*" OR "federally qualified health center*" OR FQHC* OR CBOC* OR "community based")

Results: 0

Total for PubMed, CINAHL Plus, and Web of Science (conference): 143 (after removing duplicates with the Base Year and OY1 searches: 130).

Appendix B. Evidence Tables for Option Year 2 Literature Review

Below are evidence tables for the 30 studies included in the OY2 scan. Table B.1 presents each study that was identified and included in the Base Year scan. Table B.2 presents the additional studies that met the same inclusion criteria in OY1. Table B.3 presents the additional studies that were identified and included in the OY2 scan.

Each row reflects a single identified study; all relevant publications associated with that study, if any, are cited in the leftmost column.

Table B.1. Evidence Table for Studies Included in Base Year Literature Scoping Review (2012–2022)

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Albers-Heitner et al., 2012 **Study design:** RCT **Country:** The Netherlands **Locale:** Four Dutch regions (Maastrict, Nijmegen, Helmond, The Hague) **Setting:** Primary care practices	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)— number involved in the study: 109; nurses—number involved in the study: 6 **Types of physician practice:** Other, general practice	**Number of women of all ages served by study practices**: 384 (186 intervention, 198 care-as-usual) **Mean (SD) age of all women in the study**: 65 **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Community-based multidisciplinary teams **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** On-site intervention resource and practice coordinator, provider and staff education and training **Features of implementation approach:** Seek evidence, implement QI **Levels of primary care system involved:** Primary care clinicians and/or staff, patients	**Control:** Yes, care-as-usual by GP **Randomization process:** Yes, computer-generated with allocation concealment by sealed envelopes **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): portal questionnaires at baseline, three, six, nine, and 12 months **Process outcomes:** Exposure/engagement of providers or other staff to the intervention, feasibility of implementing or using the intervention, patient experience or satisfaction **Impact outcomes:** Economic outcomes (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care providers, patients, or system stakeholders)	**Brief description of intervention:** Six nurse specialists who received specialized training and a competencies assessment provided intervention. Patients completed micturition diaries and were given advice on lifestyle, toileting habits, bladder training and PFMT and a choice of incontinence pads (when appropriate). **Study limitations:** Active recruitment may have made patients in the control arm aware of the severity of their condition and the available treatments and randomization at the patient level may have caused contamination. Trial follow-up may have been too short to capture all the benefits. A more ideal trial should have used naturalistic patient recruitment, a longer

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
				Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	follow-up, and a larger and representative sample of UI caregivers **Study findings**: Compared with care-as-usual, nurse specialist involvement cost €16,742/QALY societal gained. Both QALY patient and the incontinence severity weighted life year showed slightly better cost-effectiveness. Recommended adopting the nurse specialist intervention in primary care, and following costs and effectiveness in real-life settings.
Beban, Newman, and Nolan, 2021 **Study design:** Pre-assessment/post-assessment **Country:** New Zealand **Locale:** Napier, Aotearoa, and Hawke's Bay region **Setting:** Primary care practices	**Practice type:** Other, pilot, publicly funded clinic for women for pelvic organ prolapse and incontinence **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 1; GP, other(s): 1 physiotherapist, 1 health assistant **Types of physician practice:** Other, general practice	**Number of women of all ages in the study:** 36 **Mean (SD) age of all women in the study:** 64 **Particular type of women:** No **UI type(s):** SUI, other—mentioned incontinence broadly	**Features of care intervention:** Community-based multidisciplinary teams; clinical Interventions: containment products (e.g., absorbent pads, external collection devices, intravaginal devices, pessaries); lifestyle Interventions: physical exercise; behavioral and physical therapies: PFMT; behavioral and physical therapies: psychological interventions **Stages addressed by care intervention:** Management (treatment), specialty referral **Features of dissemination approach:** On-site intervention resource and practice coordinator; other dissemination strategies: dedicated pilot clinic **Features of implementation approach:** Seek evidence: efficacy of biopsychosocial approach, implement QI	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): semistructured interviews Quantitative (e.g., clinical measures, patient surveys): pre- and post-surveys **Process outcomes:** Feasibility of implementing or using the intervention **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	**Brief description of intervention:** Initial 60-minute consultation with GP or physiotherapist; healthcare assistant with experience in sexual health assessment to offer support and ensure patient flow; GP performs examination; physiotherapist assessed bodily structure, muscles, and movement; individual treatment pathway designed (e.g., modifying behavioral risk factors, physiotherapy, pessary use, referral); lifestyle and nutrition advice; provided written information; follow-up appointments based on need (most had two or three appointments) **Study limitations:** Small sample, no control group,

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
			Levels of primary care system involved: Community, primary care practices, patients		quantitative data did not include long-term effects of treatment nor various treatment pathways that continued beyond the clinic **Study findings:** Participants reported significant reduction in clinical symptoms. Interviews found improvements in related conditions (e.g., constipation and pelvic pain). Psychosocial improvements included significant decrease in bother associated with urinary and vaginal symptoms and fewer negative effects of symptoms on relationships, sex life, and quality of life. Concluded that integrated GP/physiotherapy clinic using biopsychosocial approach can significantly reduce physical symptoms and improve quality of life.
Chen et al., 2022 **Study design:** Other: retrospective validation of screening tool for online use **Country:** Australia **Locale:** Brisbane **Setting:** Virtual	**Practice type:** Private practice; other, general gynecology, urogynecology **Number of PCPs by category:** Not applicable **Types of physician practice:** Women's health specialty	**Number of women of all ages served by study practices**: Not reported **Number of women of all ages in the study**: 3,950 **Mean (SD) age of all women in the study practices:** Not reported **Mean (SD) age of all women in the study:** Not reported	**Features of care intervention:** Other, development of an online prediction tool **Stages addressed by care intervention:** Screening, diagnosis **Features of dissemination approach:** Other dissemination strategies—not applicable **Features of implementation approach:** Implementation not yet addressed but would involve targeting appropriate patients for treatment	**Control:** Yes **Randomization process:** Yes, historical cohorts of asymptomatic community women **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys) **Process outcomes:** Other key process outcomes **Impact outcomes:** Economic outcomes (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care	**Brief description of intervention:** Develop and then internally and externally validate a diagnostic prediction model (tool) based on the Australian Pelvic Floor Questionnaire and patient demographics to determine the presence of PFD and compare it with the orthodox method of diagnosis of common PFDs, including history, examination, and investigations by gynaecologists. The aim is to

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
		Particular type of women: No **UI type(s):** SUI, UUI	**Levels of primary care system involved:** Primary care clinicians and/or staff, patients	providers, patients, or system stakeholders) System outcomes (change in capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	allow women to complete the form prior to their PCP visit to facilitate communication. **Study limitations:** This study involved no actual patient or provider contact or D&I intervention and retrospectively validated a tool. **Study findings:** The model was validated internally and externally and provides an accurate online tool for patient self-assessment of pelvic floor disorders.
Davis et al., 2020 **Study design:** Pre-assessment/post-assessment **Country:** United States **Locale:** Metropolitan area in the southeastern United States **Setting:** Community	**Practice type:** Not applicable **Number of PCPs by category:** Other(s): 3 family caregivers **Types of physician practice:** Not applicable (community study)	**Number of women of all ages in the study**: 3 **Mean (SD) age of all women in the study**: Not reported **Particular type of women:** No **UI type(s):** Not reported	**Features of care intervention:** Behavioral and physical therapies: prompted voiding **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies—caregiver education **Features of implementation approach:** Engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care) **Levels of primary care system involved:** Community	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): three-day bladder diaries, caregiver perceptions, and satisfaction questionnaire Quantitative (e.g., clinical measures, patient surveys): caregivers complete surveys at baseline, three weeks, and six weeks with perceived competence scale, perceived ease of use subscale, adapted incontinence impact questionnaire, urinary knowledge scale, depression scale, Lawton instrument of daily living scale, physical self-management scales; module viewing logs; telephone visit logs; caregiver perceptions and satisfaction questionnaire **Process outcomes:** Feasibility of implementing or using the intervention	**Brief description of intervention:** Six-week multicomponent behavioral intervention delivered via telehealth targeting three domains (informal caregiver education, skill enhancement in effective toileting strategies, and social support). Includes individual, weekly telehealth visits with an NP expert in UI care. **Study limitations:** Only three caregiver/patient dyads agreed to participate. **Study findings**: Most caregivers found the overall intervention acceptable; adherence to prompted voiding was inconsistent but symptoms improved. Results suggest that the tablet-facilitated intervention was feasible and acceptable to informal caregivers and

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
				Impact outcomes: Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients), other key impact outcomes	showed promise for improving caregiver and patient outcomes.
Firet et al., 2019 Firet et.al., 2021 Firet et.al., 2024 **Study design:** Pre-assessment/post-assessment, descriptive (qualitative or quantitative) **Country:** The Netherlands **Locale:** Throughout the Netherlands **Setting:** Virtual, other: GP interviews were conducted FTF and by phone	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 13 **Types of physician practice:** Other, general practice	**Number of women of all ages in the study**: 20 **Mean (SD) age of all women in the study:** 51 **Particular type of women:** Yes, women with SUI over 18 years old **UI type(s):** SUI, mixed UI	**Features of care intervention:** Clinical interventions: treatment of underlying disease/cognitive impairment; behavioral and physical therapies: PFMT **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies: none—intervention involved only developers and patients **Features of implementation approach:** Seek evidence **Levels of primary care system involved:** Primary care clinicians and/or staff, patients	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): semistructured interviews among a subset of 15–20 women, training reports Quantitative (e.g., clinical measures, patient surveys): surveys at baseline, three weeks, and three and six months after baseline; training reports; website use data **Process outcomes:** The feasibility of implementing or using the intervention, the compatibility of the intervention with practices or care routines, barriers to disseminating or implementing the intervention, facilitators to disseminating or implementing the intervention, patient adherence to treatment **Impact outcomes:** Other key impact outcomes	**Brief description of intervention:** Three-month eHealth intervention on PFMT (text, audio fragments, images) with four different exercises in eight escalating modules; information about UI and lifestyle advice was also provided; each module contained background information, a training program, and a test exercise to ensure that the women gained the correct skills; the women were recommended to train 2–3 times a day for 2 to 12 minutes. **Study limitations:** GP interviews: limited sample and not generalizable, response bias because of GP questioning on conceptual eHealth intervention Women study: not all data fall into the FITT framework, recall bias, highly educated sample may have been predisposed toward all forms of health care and information provision via electronic means, limited qualitative sample **Study findings**: Facilitators to the adoption of eHealth intervention for SUI include a

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
					preference for self-management, a strong sense of self-discipline, and the ability to schedule routine exercises. Barriers were personal circumstances restricting time for exercises and a lack of skills to perform the exercises correctly. Some patients requireadditional provider support.
Hess et al., 2013 **Study design:** RCT, single arm trial **Country:** United States **Locale:** Recruited from the general communities surrounding 13 clinical sites **Setting:** Community	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: not reported **Types of physician practice:** Not reported	**Number of women of all ages in the study**: 567 completed the RCT, 454 completed the open-label study **Mean (SD) age of all women in the study**: 56.9 (SD 13.8, range 21–90) **Particular type of women:** Yes, ambulatory, community-dwelling women aged 18 years old and older with self-reported UUI **UI type(s):** UUI	**Features of care intervention:** Pharmacological management: antimuscarinic/anticholinergic drugs; other: assessment **Stages addressed by care intervention:** Screening, diagnosis **Features of dissemination approach:** Not applicable **Features of implementation approach:** Seek evidence **Levels of primary care system involved:** Community, primary care practices, patients	**Control:** Yes, the RCT included a placebo control **Randomization process:** Yes, 322 women were randomized to fesoterodine and 323 to placebo **Analytic methods:** Qualitative (e.g., interviews, focus groups): three-day voiding diary Quantitative (e.g., clinical measures, patient surveys): validated questionnaires; included (1) OAB-q, (2) PPBC, and (3) PPIUS **Process outcomes:** Feasibility of implementing or using the intervention, patient experience or satisfaction **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients) Sustainability outcomes (continued dissemination or implementation of the intervention, use of the intervention by practices or providers, and/or improvement in patient care and health outcomes)	**Brief description of intervention:** BRIDGES, a 12-week randomized, double-blind, placebo-controlled clinical trial of antimuscarinic therapy in ambulatory women who self-diagnosed as having UUI using the 3IQ **Study limitations:** Women who were diagnosed in context of the study rather than primary care practices should provide PCPs with common antimuscarinic side effects and 3IQ responses; the study was conducted with only one antimuscarinic medication **Study findings:** Patient satisfaction with treatment was high. The questionnaire misclassified a small number of patients, but no adverse events resulted. The study concluded that use of the questionnaire for diagnosis and treatment initiation in primary care settings is safe and effective.

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Loohuis et al., 2018; Loohuis et al., 2021; Loohuis et al., 2022; van der Worp et al., 2020; Wessels et al., 2020; Wessels et al., 2021 **Study design:** RCT, descriptive (qualitative or quantitative) **Country:** The Netherlands **Locale:** Northern **Setting:** Primary care practices, other: Some participants were recruited through social and print media; those assigned to the usual care group were told to see their own PCP	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 88 **Types of physician practice:** Other, general practice	**Number of women of all ages in the study**: 262 **Mean (SD) age of all women in the study**: 53 (NR) **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Other: URinControl app **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies—not described **Features of implementation approach:** Seek evidence: study aimed to compare an app with usual care, study assessed providers attitudes toward the implementation of the app in practices **Levels of primary care system involved:** Primary care clinicians and/or staff, patients	**Control:** Yes, usual care **Randomization process:** Yes, by patient **Analytic methods:** Qualitative (e.g., interviews, focus groups): semistructured interviews Quantitative (e.g., clinical measures, patient surveys): clinical measures, cost assessment **Process outcomes:** Exposure or engagement of providers or other staff to the intervention, feasibility of implementing or using the intervention, barriers to the D&I of the intervention, facilitators to the D&I of the intervention, proportion of patients receiving specialty referrals, patient adherence to treatment, patient experience or satisfaction **Impact outcomes:** Economic outcomes (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care providers, patients, or system stakeholders) Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients) Sustainability outcomes (continued the D&I of the intervention, use of the intervention by practices or providers, and/or improvement in patient care and health outcomes) Unintended consequences (unintended negative, positive, or spillover effects of the D&I of the	**Brief description of intervention:** Women who were screened as having UI were randomized to use an app or usual care for four months with the option to continue for another eight months. **Study limitations:** Because participants were recruited and screened via research physicians, patients in the intervention (app) arm may not have seen their PCP during the study, even if they were recruited from their PCP's practice. Also, patients in the app group had a slightly higher education level than those in the usual care group. Patients and providers could not be blinded. **Study findings:** No difference was seen in improvement in symptom severity between the app and usual care groups in the primary care setting. App-based treatment is preferable in terms of patient privacy and accessibility and is lower in cost than provider visits.

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
				intervention on practice setting, providers, or patients)	
Ngigi, 2017 **Study design:** Pre-assessment/post-assessment **Country:** United States **Locale:** Not specified **Setting:** Primary care practices	**Practice type:** Other, retail clinic **Number of PCPs by category:** Advanced practice professionals (NPs or PAs)—number involved in the study: 153 **Types of physician practice:** Family medicine	**Number of women of all ages served by study practices**: Not applicable **Number of women of all ages in the study**: Not applicable **Mean (SD) age of all women in the study practices**: Not applicable **Mean (SD) age of all women in the study**: Not applicable **Particular type of women:** Yes, women over 40 years old **UI type(s):** Other, OAB	**Features of care intervention:** Other, screening education **Stages addressed by care intervention:** Screening, diagnosis **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI: adopt QI approach, engage care team via education and training, nurture leadership (e.g., create a QI culture, encourage learning, forge a vision, identify champions, review measures, support evidence-based practice), identify change champions (the chief nursing officer and market educators) **Levels of primary care system involved:** Primary care clinicians and/or staff	**Control:** Yes, baseline **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys) **Process outcomes:** Exposure and engagement of providers or other staff to the intervention, fidelity of intervention implementation or use to what was intended **Impact outcomes:** Other key impact outcomes	**Brief description of intervention:** A doctor of nursing student designed an intervention to increase NPs' understanding and use of an evidence-based OAB screening tool (Actionable Bladder Symptom Screen Tool [ABSST]) in the retail clinic setting for female patients over 40 years old (QI intervention). Developed an online education module and practice change processes to implement use of the tool. **Study limitations:** Of 1,000 providers targeted, only 153 agreed to participate and only 52 completed the study. The study also measured pre- and post-training knowledge but did not assess changes in the use of screening. **Study findings:** Providers' knowledge and awareness of OAB symptoms and screening in adult women increased following use of the educational online module. Results suggest that the screening tool is likely to improve outcomes for patients who are screened and begin early treatment when appropriate.
Schlittenhardt, Clouse Smith, and Ward-Smith, 2016	**Practice type:** Not reported	**Number of women of all ages in the study**: 41	**Features of care intervention:** Other, not described	**Control:** Yes, historical comparison	**Brief description of intervention:** Study established telehealth follow-

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Study design: Descriptive (qualitative or quantitative), other: participation by invitation **Country:** United States **Locale:** Not specified **Setting:** Primary care practices, virtual	**Number of PCPs by category:** Physicians (MDs or DOs): not reported; physicians (MDs or DOs)—number involved in the study: 3 (1 PCP, 2 gynecologists); advanced practice professionals (NPs or PAs)—number involved in the study: 2; nurses—number involved in the study: 2; other(s): 1 telehealth nurse, 1 telehealth coordinator **Types of physician practice:** Not reported	**Mean (SD) age of all women in the study:** 59 (NR) **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI; other: incomplete bladder emptying, frequency	**Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies—no dissemination strategy **Features of implementation approach:** Create care teams: target appropriate patients, engage with patients and families (involve patients in integrating evidence), link to community resources, support patient engagement in care **Levels of primary care system involved:** Health care delivery system (i.e., other delivery organizations beyond primary care), primary care clinicians and/or staff, patients	**Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys) **Process outcomes:** Patient adherence to treatment, patient experience or satisfaction, other key process outcomes **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	up visit option with NP for rural patients following UI in-person visits **Study limitations:** Study involved only one small clinic and patients were selected to participate **Study findings:** Telehealth program resulted in improved follow-up rates, treatment plan effectiveness, patient satisfaction, and healthcare team support.
Schüssler-Fiorenza Rose et al., 2015 **Study design:** Other: randomized parallel group study in single outpatient clinic **Country:** United States **Locale:** Wisconsin **Setting:** Other, academically affiliated women's health internal medicine clinic	**Practice type:** Other, academically affiliated clinic **Number of PCPs by category:** Other(s): PCPs, not otherwise described **Types of physician practice:** Not reported	**Number of women of all ages in the study**: 284 **Mean (SD) age of all women in the study**: 56 (range 40–87 years old) **Particular type of women:** No **UI type(s):** SUI	**Features of care intervention:** Other, computerized pelvic floor questionnaire prior to visit **Stages addressed by care intervention:** Screening **Features of dissemination approach:** Other dissemination strategies—not described **Features of implementation approach:** Seek evidence **Levels of primary care system involved:** Health care delivery system (i.e., other delivery organizations beyond primary care), primary care practices and patients	**Control:** Yes, post-visit group patients were asked to complete the ePAQ-PF after the appointment. **Randomization process:** Yes, patients were randomized within strata defined by clinicians. A randomization list was computer-generated using a permutated block design. **Analytic methods:** Qualitative (e.g., interviews, focus groups): mention of UI in the clinic note, patient report of UI discussion, and clinician-initiated UI discussion Quantitative (e.g., clinical measures, patient surveys): referrals, percentage of patients	**Brief description of intervention:** The ePAQ-PF for the assessment of PFDs and to decrease burden of paper-based questionnaires. **Study limitations:** A small percentage of control participants answered affirmatively to the question of whether participation in the study affected their discussion with the physician (22 percent of control UI discussants). **Study findings:** The primary finding was an increase in clinician-initiated UI discussions in the group that received the questionnaire.

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				with UI and a UI clinic note mentioning no prior UI, and frequency of UI diagnostic codes in the subgroup **Process outcomes:** Compatibility of the intervention with practices and care routines **Impact outcomes:** Sustainability outcomes (continued the D&I of the intervention, the use of the intervention by practices or providers, and/or improvement in patient care and health outcomes)	Use of the tool prior to clinic visits increases UI discussion, particularly clinician-initiated discussion. These findings suggest that such tools may increase the detection and treatment of UI.
Agnew, van den Heuvel, and Tannenbaum, 2013; Fritel et al., 2021; Tannenbaum et al., 2015; Tannenbaum et al., 2019 **Study design:** RCT **Country:** Canada, France, United Kingdom **Locale:** Not specified **Setting:** Community, other: CACTUS-D trial	**Practice type:** Not applicable **Number of PCPs by category:** Others, research assistant facilitators **Types of physician practice:** Not applicable	**Number of women of all ages in the study**: 909 **Mean (SD) age of all women in the study**: Intervention: 77.4 (7.8) Control: 78.6 (7.9) **Particular type of women:** Yes: older women **UI type(s):** Stress UI, urge UI, mixed UI, Other: nocturia and "other"	**Features of care intervention:** Community-based multidisciplinary teams; behavioral and physical therapies: PFMT; behavioral and physical therapies: psychological interventions; other: facilitated interactive discussion to address myths surrounding involuntary urine loss and possible causes; descriptions of self-management techniques, such as pelvic floor muscle exercises and lifestyle interventions, were provided; distribution of self-management brochure (Canadian Deprescribing Network, undated) **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies—not relevant; programs conducted at community centers **Features of implementation approach:** Engage with patients and families (involve patients in	**Control:** Yes, a single 45-minute interactive group workshop on other health topics of importance to older women **Randomization process:** Yes, randomization by community organization **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys) **Process outcomes:** Fidelity of intervention implementation or use to what was intended, patient adherence to treatment **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	**Brief description of intervention:** A single 45-minute interactive group continence promotion program delivered by a trained research assistant/workshop facilitator incorporating constructivist learning and discussing the risk factors, causes, and treatments for incontinence, challenging the misconception that incontinence is a normal part of aging. The program aims to motivate community-dwelling women to initiate evidence-based self-management and/or to consult for treatment **Study limitations:** The control group received health information that could have resulted in some positive outcomes (e.g., decreased falls in this group could have

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			integrating evidence), link to community resources, support patient engagement in care **Levels of primary care system involved:** Community		resulted from information the women learned that led to medication deprescribing); only 20 percent of community organizations internationally agreed to enroll in the CACTUS-D trial, mainly because of disinterest in participating in health research; women self-selected to participate **Study findings:** Community-based group incontinence self-management workshops show long-term beneficial effects for older women's urinary symptoms but did not affect fall risk or healthy life expectancy compared with participation in a generic educational workshop.
Teunissen et al., 2015 **Study design:** Single arm trial **Country:** The Netherlands **Locale:** Eastern section **Setting:** Primary care practices	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 16; advanced practice professionals (NPs or PAs)—number involved in the study: 16; nurses—number involved in the study: Not reported **Types of physician practice:** Family medicine	**Number of women of all ages in the study**: 103 **Mean (SD) age of all women in the study**: 55.0 (14.6) **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Other, NP monitoring and treatment guidance **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Other implementation strategies **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	**Control:** Yes, unclear whether comparison was baseline or a group not assigned to NPs **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys) **Process outcomes:** Patient adherence to treatment, patient experience or satisfaction **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	**Brief description of intervention:** Women seen by GPs for UI were assigned to a trained NP for follow-up and management and outcomes were measured at three months. **Study limitations:** A small number of clinics and patients and no random assignment or comparison with an untreated group. **Study findings:** Treatment by a trained NP had a beneficial effect on UI symptom severity and quality of life compared with women who did not undergo or complete treatment.

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Barentsen et al., 2012; Vermeulen et al., 2016; Visser et al., 2012; Visser et al., 2013; Visser et al., 2014; Visser et al., 2015 **Study design:** RCT **Country:** The Netherlands **Locale:** Northern part of the country **Setting:** Primary care practices	**Practice type:** Other, single provider general practice offices **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 14 **Types of physician practice:** Other, general practice	**Number of women of all ages in the study:** Intervention: 166 Control: 184 **Mean (SD) age of all women in the study:** Intervention: 65.7 (8.4) Control: 65.9 (8.3) **Particular type of women:** Yes, women age 55 years old and over **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Behavioral and physical therapies: PFMT; other: following screening, multidisciplinary teams tailored treatment recommendations to individual patients based on initial exams. Included medication adjustment, if needed; referral for physical therapy; or referral for specialty care **Stages addressed by care intervention:** Screening, diagnosis, management (treatment), specialty referral **Features of dissemination approach:** On-site intervention resource or coordinator; other direct technical assistance: research physician and assistant worked on-site to interview and examine patients who met the enrollment criteria **Features of implementation approach:** Seek evidence: a primary aim of the study was to determine whether brief UI screening would identify women with UI symptoms and bring them into treatment; create care teams: multidisciplinary care teams were formed to examine patients and develop care plans, including referral if warranted; engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care, targeting appropriate patients and supporting their engagement in care)	**Control:** Yes, practices that did not implement screening **Randomization process:** Yes, randomization by practice **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): clinical measures, patient surveys **Process outcomes:** Proportion of patients receiving specialty referrals, patient adherence to treatment **Impact outcomes:** Economic outcomes (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care providers, patients, or system stakeholders) Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients) System outcomes (change in capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Brief description of intervention:** Study aimed at assessing the effect of systematic screening of at-risk women for UI who were not already in care, bringing them into treatment, establishing care plans on UI symptoms and quality of life, and determining the reasons women do not seek care. **Study limitations:** The study used research staff for some aspects of the study; in real life, GP offices' NPs would be expected to explain the screening and diagnostic practices to patients, and GPs would take the place of the multidisciplinary team, engaging patients in shared decisionmaking about treatment options and referral. Also, improvement at follow-up (one year) was modest but this might be attributable to at least 25 percent of patients having only mild symptoms. **Study findings:** Tailored screening and treatment—intervention patients had greater improvement in symptom severity, including incontinence episodes, than did controls at 1 year. Intervention is recommended for community dwelling women 55 years old and over.

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
			Levels of primary care system involved: Payors, health care delivery system (i.e., other delivery organizations beyond primary care), primary care practices, primary care clinicians and/or staff, patients		
Asklund et al., 2017; Wadensten et al., 2021; Wadensten et al., 2022 **Study design:** RCT **Country:** Sweden **Locale:** Locale not specified **Setting:** Virtual	**Practice type:** Not applicable **Number of PCPs by category:** Not applicable **Types of physician practice:** Not applicable	**Number of women of all ages in the study:** 123 **Mean (SD) age of all women in the study:** 58.3 (NR); treatment group: 58.9 (9.2); information group: 57.7 (9.9) **Particular type of women:** No **UI type(s):** UUI, mixed UI	**Features of care intervention:** Behavioral and physical therapies: bladder training, behavioral and physical therapies—PFMT; behavioral and physical therapies: psychological interventions; other: lifestyle advice, tailored **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Other dissemination strategies—none **Features of implementation approach:** Other implementation strategies—no implementation involved. This was a long-term trial to test a device that can eventually be provided to patients by PCPs. **Levels of primary care system involved:** Health care delivery system (i.e., other delivery organizations beyond primary care), patients	**Control:** Yes, an information-only app **Randomization process:** Yes, patients were randomized to the treatment app or an information app by an independent administrator using high-quality methods. **Analytic methods:** Qualitative (e.g., interviews, focus groups): web-based questionnaire to capture user feedback Quantitative (e.g., clinical measures, patient surveys): patient bladder symptom diaries, validated UI surveys and measures (ICIQ-UI SF) **Process outcomes:** Patient adherence to treatment **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	**Brief description of intervention:** App Tat(R)II, a mobile app developed and piloted to help UI patients manage their condition, was tested in an RCT with health and quality of life outcomes assessed at 15 weeks and one year. **Study limitations:** The study was conducted in a research setting, and study participants had higher education and health literacy than the average primary care patient. Also, troubleshooting of the app was provided by the research team, not the patient's PCP. Outcomes were self reported. **Study findings**: The treatment app significantly improved UI and MUI. App-induced self-management showed significant effects on all outcome measures at 15 months. The study concluded that, for appropriate patients, the app is a useful alternative to usual management strategies.

Author and Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings

NOTE: BRIDGES = Bringing Simple Urge Incontinence Diagnosis and Treatment to Providers; CACTUS-D = Continence Across Continents to Upend Stigma and Dependency; DO = doctor of osteopathy; ePAQ-PF = electronic pelvic floor questionnaire; FITT = fit between individuals, task, and technology; FTF = face-to-face; MD = medical doctor; NR = standard deviation not reported; OAB-q = overactive bladder questionnaire; PA = physician assistant; PFD = pelvic floor disorder.

Table B.2. Evidence Table for New Studies Identified in Option Year 1 Over the Extended Date Range (1996–2023)

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Albers-Heitner et al., 2012; Albers-Heitner et al., 2011 **Study design:** RCT **Country:** The Netherlands **Locale:** Four Dutch regions (Maastricht, Nijmegen, Helmond, The Hague) **Setting:** Primary care practices **Number of primary care practices:** 65	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 109; advanced practice professionals (NPs or PAs)—number involved in the study: 6 **Types of physician practice:** Other(s): general practice	**Number of women of all ages in the study:** 384 patients (92% women) **Mean (SD) age of all women in the study:** Intervention group 64.5 (14.1) Control group64.9 (11.6) **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Educational and informational interventions: caregiver education, self-management (e.g., symptom tracking); other: nurse specialists underwent UI specialist training and assumed care of UI patients' further diagnosis, review of symptom diaries, lifestyle guidance, and other interventions **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI; other implementation strategies: provide upskilling **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	**Control:** Yes, usual care **Randomization Process:** Yes, randomization by region **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): ICIQ-UI SF, patient surveys of UI severity; EuroQoL quality of life **Process outcomes:** Other key process outcomes **Impact outcomes:** Economic outcomes (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care providers, patients, or system stakeholders) Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients) Subgroup outcomes (differences in economic, health, system, sustainability, or unintended consequences for types of practices, providers, or patients in under-resourced communities)	**Brief description of intervention:** GP practice nursing staff underwent specialized training in diagnosis and UI management and took over patient education and followup. **Study limitations:** Patients and GPs were not blinded to the treatment condition; contamination was possible, the study design was pragmatic, and there was no assessment of process outcomes. **Study findings:** Patients and GPs were not blinded to the treatment condition, contamination was possible, the study design was pragmatic, and there was no assessment of process outcomes.
Alewijnse et al., 2003 **Study design:** RCT **Country:** The Netherlands **Locale:** Maastricht **Setting:** Primary care practices **Number of primary care practices:** 23	**Practice type:** Private practice **Number of PCPs by category:** Physicians (MDs or DOs): 55; Other(s): physiotherapists **Types of physician practice:** Family medicine	**Number of women of all ages in the study:** 180 **Mean (SD) age of all women in the study:** 55.6 (10.9) **Particular type of women:** Yes, women with at least 1 risk factor for UI	**Features of care intervention:** Lifestyle interventions: diet—fluid intake; behavioral and physical therapies: bladder training; behavioral and physical therapies: PFMT; educational and informational interventions: patient education; self-management (e.g., symptom tracking)	**Control:** Yes, referral to PFMT physiotherapists **Randomization process:** Yes, by practice **Analytic methods:** Qualitative (e.g., interviews, focus groups): questionnaires Quantitative (e.g., clinical measures, patient surveys): frequency of wetting and adherence behavior	**Brief description of intervention:** Four-arm RC—women recruited from primary care clinic rosters based on 1 or more UI risk factors and who screened positive for UI were assigned to referral to PFMT, PFMT with attendance reminders, PFMT with reminders and educational materials, or all of the previous

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		UI type(s): SUI, UUI, mixed UI, other (missing)	**Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI, engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care) **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	**Process outcomes:** Feasibility of implementing or using the intervention, barriers to the D&I of the intervention, other key process outcomes **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients), other key impact outcomes	plus verbal counseling and education **Study limitations:** Blinding was not possible. The proportion of eligible participants who enrolled and loss to follow-up were relatively high; neither the reminder nor the counseling intervention were implemented as planned; possible contamination, although attempts were made to prevent **Study findings:** Blinding was not possible. The proportion of eligible participants who enrolled and loss to follow-up were relatively high; neither the reminder nor the counseling intervention were implemented as planned; possible contamination, although attempts were made to prevent
Bland et al., 2003 **Study design:** RCT **Country:** United States **Locale:** Northwest North Carolina **Setting:** Primary care practices **Number of primary care practices:** 41 (4 lost to follow-up)	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs): 57; physicians (MDs or DOs)—number involved in the study: 45; advanced practice professionals (NPs or PAs)—total number employed by practices in the study: NR; advanced practice professionals (NPs or PAs)—number involved in the study: NR;	**Number of women of all ages served by study practices:** NR **Number of women of all ages in the study:** 507 **Mean (SD) age of all women in the study practices:** NR **Mean (SD) age of all women in the study:** NR **Particular type of women:** No	**Features of care intervention:** Clinical interventions: screening for UI **Stages addressed by care intervention:** Screening **Features of dissemination approach:** Provider and staff education and training; other direct technical assistance: logistical support, frequent interaction and feedback, patient screening forms, and patient education materials **Features of implementation approach:** Implement QI	**Control:** Yes, usual care **Randomization process:** Yes, practice **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): patient telephone surveys **Process outcomes:** The extent the intervention was adopted and used in practice, barriers to disseminating and implementing the intervention, facilitators to disseminating and implementing the intervention **Impact outcomes:** Health outcomes (change in UI	**Brief description of intervention:** Primary care office-based intervention to improve the implementation and adoption of AHRQ UI screening guidelines. Patients were screened for UI status (symptoms and management) at enrollment and were characterized as symptomatic or asymptomatic. The practice received multicomponent training and assistance in UI care guidelines. **Study limitations:** Patient follow-up was relatively low; evaluation and management

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	nurses—total number employed by practices in the study: NR; nurses—number involved in the study: NR **Types of physician practice:** Family medicine, general internal medicine	**UI type(s):** Not reported	**Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	symptoms, health functioning, and/or quality of life of patients)	following positive screening were assessed by a patient survey and appeared limited (e.g., referral). **Study findings:** Patient follow-up was relatively low; evaluation and management following positive screening were assessed by a patient survey and appeared limited (e.g., referral).
Byles et al., 2005 **Study design:** Pre-assessment /post-assessment; descriptive (qualitative or quantitative); other: helpline audit **Country:** Australia **Locale:** Project 1 (Centralised Continence Service) was based in a large, inland rural area in Australia. Project 2 (General Practice-Based Continence Service) was based in a coastal area covering both rural areas and a major Australian urban center. Project 3 (Continence Service Network) covered a large coastal capital city. **Setting:** Primary care practices, community **Number of primary care practices:** Unknown	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: interviews 5; GPs, nurses—number involved in the study: interviews 2; others: interviews 2 PTs **Types of physician practice:** Family medicine	**Number of women of all ages in the study:** GP waiting room survey 1: 1,299 (72%); survey 2: 904 (71%); patient survey: 91% of 114 were women **Mean (SD) age of all women in the study:** GP waiting room survey 1: 54 (17.6); survey 2: 51 (17.6) for both men and women; patient survey: 63.3 years **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI, other (not described)	**Features of care intervention:** Community-based multidisciplinary teams, clinical interventions: screning for UI; educational and informational interventions: patient education; educational and informational interventions: caregiver education **Stages addressed by care intervention:** Screening, specialty referral: other (describe)—local continence services **Features of dissemination approach:** Provider and staff education and training; other dissemination strategies: media campaign **Features of implementation approach:** Create care teams **Levels of primary care system involved:** Community, primary care practices, primary care clinicians and/or staff, patients	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): provider interviews Quantitative (e.g., clinical measures, patient surveys): provider knowledge survey, GP waiting room survey, patient survey, helpline audit **Process outcomes:** Barriers to disseminating and implementing the intervention, facilitators to disseminating and implementing the intervention, proportion of patients receiving specialty referrals, patient experience or satisfaction **Impact outcomes:** System outcomes (change in capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Brief description of intervention:** Training to GPs, pharmacists, and other health care providers; public awareness-raising campaigns for UI; referral to local continence services; training nurses to comanage with GPs; networking existing services to help GPs refer **Study limitations:** (1) provider interviewees were self-selected, (2) the provider survey lacked a control group, (3) a low number of calls to the helpline prevented stat analysis, (4) the helpline audit was less than 12 months and therefore unable to account for seasonality, (5) the GP waiting room survey lacked a population denominator and reasons for declining to participate, (6) the short timespan between surveys may have limited the ability to see changes, (7) a small number of patient surveys

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
					Study findings: (1) provider interviewees were self-selected, (2) the provider survey lacked a control group, (3) a low number of calls to the helpline prevented stat analysis, (4) the helpline audit was less than 12 months and therefore unable to account for seasonality, (5) the GP waiting room survey lacked a population denominator and reasons for declining to participate, (6) the short timespan between surveys may have limited the ability to see changes, (7) a small number of patient surveys
Celik et al., 2008 **Study design:** Descriptive (qualitative or quantitative) **Country:** The Netherlands **Locale:** Not reported but mentions Maastricht University, University of Amsterdam, and Radboud University Nijmegen Medical Center **Setting:** Primary care practices **Number of primary care practices:** Not reported	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 9 experienced GPs and 9 GPs in thir third year of training **Types of physician practice:** Family medicine	**Particular type of women:** No **UI type(s):** Not reported	**Features of care intervention:** Self-management (e.g., symptom tracking) **Stages addressed by care intervention:** Screening, diagnosis **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI **Levels of primary care system involved:** Primary care clinicians and/or staff	**Control:** No **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): Explorative study using standardized registration forms for patients seen the first time for the disease, immediately after consultation. The form was intended to support GP's gender sensitivity and if the GP did not follow the recommendation, they had to explain reason on form. Daily conversations between the GP pairs were conducted for training; the forms were collected over 6-month period **Process outcomes:** Exposure and engagement of providers or other staff to the intervention **Impact outcomes:** Unintended consequences (unintended	**Brief description of intervention:** Interactive training program—2 modules—providing a general introduction to gender-related issues and interactive lectures to help put recommendations into practice. Recommendations for UI were (1) recommend the use of a diary; (2) consider sexual issues, since UI is a risk factor for sexual dysfunction; (3) promptly provide active treatment for women with UI for a long period. **Study limitations:** No pre- or post-measurement, so the study is only exploratory. The samples were too small to detect a trend in GP sensitivity over the 6 month period.

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				negative, positive, or spillover effects of the D&I of the intervention on practice setting, providers, or patients) Subgroup outcomes (differences in economic, health, system, sustainability or unintended consequences for types of practices, providers, or patients in under-resourced communities)	**Study findings:** No pre- or post-measurement, so the study is only exploratory. The samples were too small to detect a trend in GP sensitivity over the 6 month period.
Eckhardt et al., 2022 **Study design:** Pre assessment/post-assessment **Country:** United States **Locale:** Not specified—a large academic institution serving an underserved, urban patient population (the main author is at the University of California, Los Angeles) **Setting:** Other—internal medicine department at a large academic medical center **Number of primary care practices:** 1 internal medicine clinic	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 65 internal medicine residents **Types of physician practice:** General internal medicine	**Number of women of all ages in the study:** 410 **Mean (SD) age of all women in the study:** Control: 56 (8.5) Phase 1: 54 (8.8) Phase 2: 54 (8.6) **Particular type of women:** No **UI type(s):** Not reported	**Features of care intervention:** Clinical interventions: screning for UI; educational and informational interventions: patient education **Stages addressed by care intervention:** Screening **Features of dissemination approach:** Provider and staff education and training; other dissemination strategies: patient poster **Features of implementation approach:** Create care teams, engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care) **Levels of primary care system involved:** Primary care clinicians and/or staff, patients	**Control:** No **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): chart review of new internal medicine patients over an 8-month period as control and chart review 96 clinic days immediately after each phase **Process outcomes:** Exposure and engagement of providers or other staff to the intervention, proportion of patients receiving specialty referrals **Impact outcomes:** System outcomes (change in the capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Brief description of intervention:** There were two phases: a physician directed education intervention for internal medicine residents (phase 1) and a patient-directed education intervention (phase 2). **Study limitations:** The power calculation was performed post hoc; the majority of data were extracted by chart review and could have missed patients who were not properly screened; documentation may have missed treatment; some residents received both or just one intervention; other covariates could have contributed to effect; primarly an urban and underserved population with a large Latino and Spanish-speaking population, which may limit generalizability. **Study findings:** The power calculation was performed post hoc; the majority of data were extracted by chart review and could have missed patients

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
					who were not properly screened; documentation may have missed treatment; some residents received both or just one intervention; other covariates could have contributed to effect; primarly an urban and underserved population with a large Latino and Spanish-speaking population, which may limit generalizability.
Jha et al., 2007 **Study design:** Prospective cohort trial (comparison but no randomization) **Country:** United Kingdom **Locale:** Worcester Royal Hospital is a large UK district general hospital **Setting:** Primary care practices **Number of primary care practices:** 1	**Practice type:** Other, primary care department within Worcester Royal Hospital **Number of PCPs by category:** Not reported **Types of physician practice:** Family medicine	**Number of women of all ages in the study:** 65 **Mean (SD) age of all women in the study:** 59 for direct access patients, 61 for women referred through the gynecology outpatient clinic (no SD reported) **Particular type of women:** No **UI type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Clinical interventions: screening for UI; behavioral and physical therapies: physical therapy; pharmacological management: antimuscarinic/anticholinergic drugs; self-management (e.g., symptom tracking) **Stages addressed by care intervention:** Screening, diagnosis, management (treatment), and specialty referral: physical therapy, specialty referral: urogynecology **Features of implementation approach:** Implement QI: implemented a care pathway called direct access in June 2004 that had patients seen in a nurse-led clinic and then referred for urodynamic studies, PT, or a continence advisory team review **Levels of primary care system involved:** Primary care clinicians and/or staff, patients	**Control:** Yes, the 20 patients who completed the pathway were compared with 20 randomly selected patients who were referred to gynecology outpatient services with similar problems **Randomization process:** Yes, a selection of 20 patients based on the medical secretary to avoid bias **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): used the Mann-Whitney test to compare time in days from referral based on medical records **Process outcomes:** The feasibility of implementing or using the intervention, the proportion of patients receiving specialty referrals **Impact outcomes:**	**Brief description of intervention:** Patients were seen in a nurse-led clinic and then referred to urodynamic studies, PT, or a continence advisory team review depending on the primary care workup. The endpoints were discharge after conservative measures, surgery, or med treatment following urodynamic diagnosis. **Study limitations:** The study sample was very small and did not look at patient perceptions or satisfaction with the care pathways. There was a lack of generalizability to other areas because the care pathways need to be adapted for local use. **Study findings:** The study sample was very small and did not look at patient perceptions or satisfaction with the care pathways. There was a lack of generalizability to other areas because the care pathways

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					need to be adapted for local use.
Knight and Procter, 1999 **Study design:** Descriptive (qualitative or quantitative) **Country:** United Kingdom **Locale:** Not reported **Setting:** Other, site 1: community trust; site 2: joint acute and community trust **Number of primary care practices:** Not reported	**Practice type:** Other, acute and community trusts in the United Kingdom **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 1; GP, 1 consultant urologist; advanced practice professionals (NPs or PAs)—number involved in the study: 2 NPs at site 1; nurses—number involved in the study: 1 practice nurse, 6 district nurses, 3 community nurses, 1 practice development nurse; others: 2 continence advisors, 2 health visitors, 1 physiotherapist **Types of physician practice:** Family medicine; other: urologist	**Particular type of women:** No **UI type(s):** Not reported	**Features of care intervention:** Community-based multidisciplinary teams **Stages addressed by care intervention:** Diagnosis, Management (treatment) **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI **Levels of primary care system involved:** Health care delivery system (i.e., other delivery organizations beyond primary care)	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): 20 semi-structured interviews with providers **Process outcomes:** Barriers to disseminating and implementing the intervention, facilitators to disseminating and implementing the intervention **Impact outcomes:** System outcomes (change in the capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Brief description of intervention:** implementation of evidence-based practice guidelines **Study limitations:** The interview data provide the experiences of interviewees and not what actually happens in practice. External validity at two sites may not be typical of other sites. There is an absence of data from GPs. **Study findings:** The interview data provide the experiences of the interviewees and not what actually happens in practice. External validity at two sites may not be typical of other sites. There is an absence of data from GPs.
McFall, Yerkes, and Cowan, 2000a; McFall, Yerkes, and Cowan, 2000b **Study design:** RCT, pre-assessment/post-assessment **Country:** United States **Locale:** 4 central Oklahoma counties **Setting:** Community	**Practice type:** Other, 6 sites included patient education areas of hospitals, a continuous care housing development, and an aging center **Number of PCPs by category:** Not reported	**Number of women of all ages in the study:** 145 elderly women were recruited **Mean (SD) age of all women in the study:** 74.7 (no SD)	**Features of care intervention:** Lifestyle interventions: diet-other; behavioral and physical therapies: prompted voiding; behavioral and physical therapies: bladder training; behavioral and physical therapies: PFMT; self-management (e.g., symptom tracking); other: relaxation and	**Control:** Yes, wait control—following post-intervention data collection; control participants were admitted into an intervention class, if desired **Randomization process:** Yes, women selected the site and when 10–18 had selected a site, the intervention class was scheduled and the women were	**Brief description of intervention:** Delivery of the Dry Anticipations curriculum to small groups of elderly women at 6 contracting sites—5 biweekly sessions on bladder training, managing urge, and performing pelvic muscle exercises. Participants kept voiding diaries to assist with

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Number of primary care practices: Not applicable	**Types of physician practice:** Not reported	**Particular type of women:** Yes, women 65 years or older **UI Type(s):** SUI, UUI	breathing techniques to control the urge to urinate **Stages addressed by care intervention:** Management (treatment) **Features of dissemination approach:** Provider and staff education and training; other dissemination strategies: train-the-trainer **Features of implementation approach:** Seek evidence: evaluation of behavioral therapy program for small groups rather than individuals **Levels of primary care system involved:** Community, patients	randmoized into intervention or control **Analytic methods:** Qualitative (e.g., interviews, focus groups): voiding diaries (the intervention group kept diaries throughout the program and the control group kept diaries for 1 week at the beginning and week 9); interviews (prior to the first class and at 9 weeks at the conclusion of program) Quantitative (e.g., clinical measures, patient surveys): surveys (baseline and 12-month follow-up) **Process outcomes:** Feasibility of implementing or using the intervention **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	self-regulation and problem-solving with instructors. Group support was part of program. **Study limitations:** Homogeneous sample (highly educated, affluent group) limits ability to generalize. The study included women with zero episodes in the baseline week, which led to a ceiling effect. **Study findings:** Homogeneous sample (highly educated, affluent group) limits ability to generalize. The study included women with zero episodes in the baseline week, which led to ceiling effect.
Sampselle et al., 2000a; Sampselle et al., 2000b **Study design:** Descriptive (qualitative or quantitative) **Country:** United States **Locale:** 21 sites across the United States **Setting:** Primary care practices; other: federally qualified health centers **Number of primary care practices:** 21 ambulatory care sites: 19% FQHCs, 33% public clinics, 33% private practices, 14% other types of ambulatory	**Practice type:** Private practice, safety net; other: public **Number of PCPs by category:** Other(s): 29 site coordinators **Types of physician practice:** Not reported	**Number of women of all ages in the study:** 1,474 patients across the 21 sites **Particular type of women:** No **UI Type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Behavioral and physical therapies: bladder training; behavioral and physical therapies: PFMT **Stages addressed by care intervention:** Screening, diagnosis, management (treatment); specialty referral: other (describe)—the article did not describe type of referral **Features of dissemination approach:** Provider and staff education and training; other dissemination strategies: data management form	**Control:** No **Randomization process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): written reports from 6 site coordinators Quantitative (e.g., clinical measures, patient surveys): screening form data, evaluation form for site coordinator training **Process outcomes:** Feasibility of implementing or using the intervention, barriers to disseminating and implementing the intervention,facilitators to disseminating and implementing the intervention	**Brief description of intervention:** Step-by-step protocol for (1) assessing women for UI, (2) conducting a baseline evaluation of symptomatic women to identify complicating factors, (3) giving behavioral instruction for bladder training and PFMT, and (4) referring women for specialized care when indicated **Study limitations:** Small sample and no comparison group; limited discussion of analysis of qualitative sources of data and analysis

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
care clinics (e.g. nurse-managed clinics)			**Features of implementation approach:** **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	**Impact outcomes:** System outcomes (change in the capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Study findings:** Small sample and no comparison group; limited discussion of analysis of qualitative sources of data and analysis
St. John and Wallis, 2004; St. John et al., 2004; Zhou et al., 2019 **Study design:** Pre-assessmentpost-assessment **Country:** Australia **Locale:** Gold Coast, South East Queensland **Setting:** Community **Number of primary care practices:** Not relevant	**Practice type:** Other, community health center-based **Number of PCPs by category:** Advanced practice professionals (NPs or PAs)—total number employed by practices in the study: continence nurses, number not reported; advanced practice professionals (NPs or PAs)—number involved in the study: continence nurses, number not reported; Other(s): a multidisciplinary team of continence specialist nurses and physiotherapists linked to medical practitioners **Types of physician practice:** Other, continence nurses and physiotherapists	**Number of women of all ages served by study practices:** NR **Number of women of all ages in the study:** 123 **Mean (SD) age of all women in the study practices:** NR **Mean (SD) age of all women in the study:** 63.9 (12.2), range 33–88 **Particular type of women:** No **UI Type(s):** SUI; UUI; other: overflow and other	**Features of care intervention:** Community-based multidisciplinary teams, clinical interventions: containment products (e.g., absorbent pads, external collection devices, intravaginal devices, pessaries); clinical interventions: screning for UI; lifestyle interventions: diet—caffeine reduction; lifestyle interventions: diet—fluid intake; behavioral and physical therapies: prompted voiding; behavioral and physical therapies: bladder training; behavioral and physical therapies: physical therapy; behavioral and physical therapies: psychological interventions; educational and informational interventions: patient education; other: referrals were made to physiotherapists or back to primary care physicians **Stages addressed by care intervention:** Screening, diagnosis, management (treatment); specialty referral: physical therapy **Features of dissemination approach:** Provider and staff education and training; other dissemination strategies: primary	**Control:** No **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): ICSUSI-SF-F **Process outcomes:** Other key process outcomes **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients), Subgroup outcomes (differences in economic, health, system, sustainability or unintended consequences for types of practices, providers, or patients in under-resourced communities)	**Brief description of intervention:** A continence care center, the Waterworxx Centre, was developed to provide diagnosis, management, physiotherapy, patient education, and referrals back to patients' primary care physicians. Patients were referred to the center by their primary care physicians or were self-referred. Each patient's primary care doctor was linked into the patient's care with a letter informing the physician of the patient's ongoing care and management and education provided. **Study limitations:** The number of participants was small; no reach or dissemination measures **Study findings:** The number of participants was small; no reach or dissemination measures

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
			care doctors and the community received brochures informing them of the center **Features of implementation approach:** Implement QI, create care teams, engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care) **Levels of primary care system involved:** Community, primary care clinicians and/or staff, patients		
Viktrup and Møller, 2004 **Study design:** Other, study took advantage of the dissemination of clinical guidelines **Country:** Denmark **Locale:** Frederiksborg County, Denmark **Setting:** Other, mailed survey to GPs **Number of primary care practices:** 128	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs): 243; physicians (MDs or DOs)—number involved in the study: 132; advanced practice professionals (NPs or PAs)—total number employed by practices in the study: NR; advanced practice professionals (NPs or PAs)—number involved in the study: 0; nurses—total number employed by practices in the study: NR; nurses—number involved in the study: 0 **Types of physician practice:** Family medicine	**Number of women of all ages served by study practices:** NR **Number of women of all ages in the study:** NR **Mean (SD) age of all women in the study practices:** NR **Mean (SD) age of all women in the study:** NR **Particular type of women:** No **UI Type(s):** Not reported	**Features of care intervention:** Clinical interventions: containment products (e.g., absorbent pads, external collection devices, intravaginal devices, pessaries); self-management (e.g., symptom tracking); other: all UI care recommended by 2001 clinical guidelines distributed to all Danish GPs **Stages addressed by care intervention:** Screening, diagnosis, management (treatment); specialty referral: urogynecology; specialty referral: other (describe)—UI specialty care clinic **Features of dissemination approach:** Funding, payment, and/or reimbursement incentives; other dissemination strategies: distribution of 2001 national clinical guidelines for the management of UI to all Danish GPs, reimbursement to patients	**Control:** No **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): provider surveys **Process outcomes:** Exposure and engagement of providers or other staff to the intervention, extent the intervention was adopted and used in practice, proportion of patients receiving specialty referrals **Impact outcomes:** Other key impact outcomes	**Brief description of intervention:** Following the distribution of 1999 clinical UI management guidelines to GPs (and the implementation of a reimbursement system for certain GP behaviors and patient behaviors), a questionnaire was sent to all GPs in a single county to assess their familiarity with, attitudes toward, and use of the recommendations. **Study limitations:** The response rate to the questionnaire was low; it was not possible to ascertain the impact of the most recent guidelines on current reported behavior. The registry data were too incomplete to validate GP reports of screening, use of voiding diaries, prescribing, or referral. **Study findings:** The response rate to the questionnaire was

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
			for UI supplies, reimbursement to GPs for having patient **Features of implementation approach:** Other implementation strategies: not described **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients		low; it was not possible to ascertain the impact of the most recent guidelines on current reported behavior. The registry data were too incomplete to validate GP reports of screening, use of voiding diaries, prescribing, or referral.
Wenger et al., 2009; Wenger et al., 2010 **Study design:** RCT **Country:** United States **Locale:** Rural New York and small- to medium-sized cities in Pennsylvania, Wisconsin, Arizona, and Oregon **Setting:** Primary care practices **Number of primary care practices:** 5	**Practice type:** Not reported **Number of PCPs by category:** Physicians (MDs or DOs): NR; physicians (MDs or DOs)—number involved in the study: 42; advanced practice professionals (NPs or PAs)—total number employed by practices in the study: NR; advanced practice professionals (NPs or PAs)—number involved in the study: 2; nurses—total number employed by practices in the study: NR; nurses—number involved in the study: NR **Types of physician practice:** Family medicine, general internal medicine, geriatric medicine	**Number of women of all ages served by study practices:** NR **Number of women of all ages in the study:** 281 **Mean (SD) age of all women in the study practices:** NR **Mean (SD) age of all women in the study:** 83 **Particular type of women:** Yes, age 75 and older **UI Type(s):** Not reported	**Features of care intervention:** Educational and informational interventions: patient education; educational and informational interventions: caregiver education **Stages addressed by care intervention:** Diagnosis, management (treatment) **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI, engage with patients and families (involve patients in integrating evidence, link to community resources, support patient engagement in care) **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, families or caregivers, patients	**Control:** Yes, usual care practices **Randomization process:** Yes, the intervention was implemented among a subset of providers in each of the 5 practices **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): patient chart audits to assess the completion of care processes **Process outcomes:** Extent the intervention was adopted and used in practice **Impact outcomes:** System outcomes (change in the capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)	**Brief description of intervention:** Prior to clinic visits, patients 75 years old and over were screened. The study researchers provided training to providers and office staff. Structured visit notes and educational materials were added to patient charts prior to the visits. Providers and office staff made needed changes to patient flow to facilitate data collection. Medical record prompts guided providers in addressing UI, diagnostic and treatment processes, patient education, and referrals. Patient and caregiver education materials were provided, and decision support and education were provided to providers and office staff. **Study limitations:** Clinic participation was self-selected and voluntary. The sites were not selected randomly. The care received at other sites, including specialty care providers, could not be considered. The effects of practice and process redesign

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
					components were not directly assessed, and no health outcomes were assessed. Providing screening results to the control clinic providers may have minimized the effect of intervention; the outcomes were not reported separately for men and women. **Study findings:** Clinic participation was self-selected and voluntary. The sites were not selected randomly. The care received at other sites, including specialty care providers, could not be considered. The effects of practice and process redesign components were not directly assessed, and no health outcomes were assessed. Providing screening results to the control clinic providers may have minimized the effect of intervention; the outcomes were not reported separately for men and women.

Table B.3. Evidence Table for New Studies Identified in the Option Year 2 Literature Review (2023–2024)

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Burton et.al., 2024 **Study design:** Retrospective review of medical records **Country:** United States **Locale:** Los Angeles, California **Setting:** Primary care practices **Number of primary care practices:** Not reported	**Practice type:** Safety net (FQHC, community health center); other: non-safety net hospitals **Number of PCPs by category:** Not reported **Types of physician practice:** Family medicine, general internal medicine, women's health specialty, geriatric medicine	**Number of women of all ages in the study:** Safety net (*n*=188), Non-safety net (*n*=200) **Particular type of women:** No **UI Type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Clinical intervention: screening for UI; lifestyle interventions: diet—fluid intake; lifestyle interventions: obesity and weight loss; behavioral and physical therapies: bladder training; behavioral and physical therapies: PFMT; pharmacological management: antimuscarinic/anticholinergic drugs **Stages addressed by care intervention:** Diagnosis, management (treatment), and specialty referral (urogynecology) **Features of dissemination approach:** Other dissemination strategies: the eConsult portal and an expected practices document that documented the guideline-based recommended workup prior to referral. **Features of implementation approach:** Implement QI, Optimize Health IT **Levels of primary care system involved:** Primary care clinicians and/or staff	**Control:** No **Randomization process:** No **Analytic methods:** Quantitative (e.g., clinical measures, patient surveys): adherence measurements, calculation of aggregate scores, statistical testing of differences between healthcare systems (t-tests, chi-square test, fisher exact tests, logistic and linear regression methods) **Process outcomes:** Extent the intervention was adopted and used in practice **Impact outcomes:** System outcomes Subgroup outcomes	**Brief description of intervention:** The intervention aimed to enhance the quality of UI care for women by increasing adherence to established quality indicators in both safety-net and non–safety net healthcare settings. **Study limitations:** The study did not include women who were cared for by a PCP without specialty referral. Several quality indicators rely on precise documentation in medical records. **Study findings:** Women in non–safety net clinics received significantly worse UI care compared with safety-net clinics.

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Gao et al., 2024 **Study design:** Descriptive (qualitative or quantitative) **Country:** United States **Locale:** Veterans Integrated Service Network 7, also known as the Veterans Affairs Southeast Network, is a region that includes parts of Alabama, Georgia, and South Carolina **Setting:** Primary care practices (includes clinics, offices, etc.) **Number of primary care practices:** 3 initial pilot Veterans Health Administration primary care sites	**Practice type: Other:** Veteran's Health Administration **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 2; advanced practice professionals (NPs or PAs)—number involved in the study: 3; nurses—number involved in the study: 4 **Types of physician practice:** Not reported	**Number of women of all ages served by study practices:** Over 64,000 **Particular type of women:** Women veterans **UI Type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Clinical interventions**:** screening for UI **Stages addressed by care intervention:** Screening **Features of dissemination approach:** Practice facilitation and coaching (including academic detailing), provider and staff education and training; other dissemination strategies: user-centered design evaluations to obtain early feedback data from early dashboard users. These evaluations were used to help refine the dashboard before broader dissemination. **Features of implementation approach:** Implement QI, Optimize Health IT, nurture leadership **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff	**Control:** No **Randomization Process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): open-question surveys and unstructured interviews with site champions and users Quantitative (e.g. clinical measures, patient surveys): the Likert System Usability Scale was used to quantify subjective assessment of the dashboard utility **Process outcomes:** Exposure and engagement of providers or other staff to the intervention, feasibility of implementing or using the intervention, compatibility of the intervention with practices, barriers to disseminating and implementing the intervention, facilitators to disseminating and implementing the intervention **Impact outcomes:** Not reported	**Brief description of intervention:** Involves developing and implementing the PURSUIT dashboard to aid PCPs in identifying women veterans who are at high risk for UI and facilitating UI screening, diagnosis, and evidence-based nonsurgical treatment. The digital tool offers dynamic data visualization, drill-through capabilities, and exportable grids. Process maps help optimize user engagement and workflow integration across clinical settings. **Study limitations:** A lack of chart review to help validate data on the dashboard, site champions are self-identified, and survey and interview participants were early adopters of the clinical dashboard. These users are typically more open to innovations, potentially skewing the results toward higher acceptance. **Study findings:** The PURSUIT dashboard showed good to excellent usability performance in the initial pilot sites and offered a user-driven pathway to develop a dashboard that best supports clinicians to address a common gap in accessing UI care for women veterans.

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
Luebke et al., 2024 **Study design:** Pre-assessment/post-assessment **Country:** United States **Locale:** Milwaukee, Wisconsin **Setting:** Primary care practices (includes clinics, offices, etc.) **Number of primary care practices:** Out of 24 clinics, 21 interviews were completed with 21 managers; thus, 21 clinics participated. The number of practices involved in the pilot pathway is unclear.	**Practice type:** Other practice types: clinics within a large academic medical system **Number of PCPs by category:** Physicians (MDs or DOs)—number involved in the study: 5 PCPs for interviews, 8 for pilot care pathway; other: 21 managers of clinics as part of the environmental scan **Types of physician practice:** Family medicine, general internal medicine; other: combined clinics (family medicine/internal medicine)	**Number of women of all ages in the study:** *n*=18 **Particular type of women:** Yes, focused on women over 65 who completed a Medicare Annual Wellness Visit **UI Type(s):** SUI, UUI, mixed UI	**Features of care intervention:** Lifestyle interventions: diet—fluid intake; lifestyle interventions: diet—other; behavioral and physical therapies: bladder training; behavioral and physical therapies: FPMT **Stages addressed by care intervention:** Screening, management (treatment); specialty referral: PT; specialty referral: urology **Features of dissemination approach:** Provider and staff education and training **Features of implementation approach:** Implement QI **Levels of primary care system involved:** Primary care practices, primary care clinicians and/or staff, patients	**Control:** No **Randomization Process:** No **Analytic methods:** Qualitative (e.g., interviews, focus groups): interviews with PCP's Quantitative (e.g. clinical measures, patient surveys): surveys at baseline, 8 weeks, and 6 months **Process outcomes:** Feasibility of implementing or using the intervention **Impact outcomes:** Health outcomes (change in UI symptoms, health functioning, and/or quality of life of patients)	**Brief description of intervention:** The UI care pathway was women who were screened at their Annual Wellness Visit. The provider used EHR-based referrals for behavioral self-management tools and other elements of UI treatment guidelines. The provider was instructed to include a website link with evidence-based strategies and self-treatments to reduce urine leakage, including free information, free classes, and an evidence-based free smartphone app in the after visit summary. **Study limitations:** The study is limited by its setting in a single academic health system, which affects generalizability. Providers with more UI experience and patients with severe UI may have been more likely to participate. The study did not include patient interviews or differentiate between UI types (UUI, SUI, and mixed UI). **Study findings:** At 8 weeks, 13 of 15 patients reported leakage. The most common intervention was avoiding bladder irritants. Only 2 patients had PT appointments and 3 had appointments with PCPs; no patient saw a bladder specialist or was referred to PT. Most

Author, Year Related Studies Study Design Country Locale Study Settings	Practice Type(s) Number of PCPs Involved in the Study Types of Physician Practice	Number of Women in the Study Mean Age of Women in Study Particular Type of Women UI Type(s)	Features of Care Intervention Stages Addressed by Care Intervention Features of Dissemination Approach Features of Implementation Approach Levels of Primary Care System	Control Randomization Process Analytic Methods Process Outcomes Impact Outcomes	Brief Description of Intervention Study Limitations Authors' Study Findings
					clinics lacked onsite therapists, and PCPs faced challenges with referrals. Despite low use of pelvic floor therapy, UI symptoms generally improved. Recommendations include enhancing access to pelvic floor PT, streamlining referrals, and increasing patient education on therapy benefits.

Appendix C. Background Publications

This appendix contains a bibliography of background articles that did not meet the full inclusion criteria of the OY1 and OY2 literature searches but did have information deemed relevant and potentially useful as reference material for the design and D&I of interventions to improve the management of UI in primary care. Articles with citations and abstracts (where available) are listed in alphabetical name order below for replicated Base Year searches conducted in OY1 and OY2. Abstracts are presented as they appear in publication and are unedited.

1. Burton, Claire S., Gabriela Gonzalez, Eunice Choi, Catherine Bresee, Teryl K. Nuckols, Karyn S. Eilber, Neil S. Wenger, and Jennifer T. Anger, "The Impact of Provider Sex and Experience on the Quality of Care Provided for Women with Urinary Incontinence," *American Journal of Medicine*, Vol. 135, No. 4, April 2022. *Background*

BACKGROUND: Although specialists are skilled in the management of urinary incontinence, primary care clinicians are integral in early diagnosis and initiation of management in order to decrease overuse of specialty care and improve the quality of specialist visits. We measured the quality of incontinence care provided by primary care clinicians prior to referral to a specialist and evaluated the impact of provider variables on quality of care. METHODS: We performed a retrospective review of 200 women referred for urinary incontinence to a Female Pelvic Medicine and Reconstructive Surgery specialist between March 2017 and July 2018. We measured primary care adherence to 12 quality indicators in the 12 months prior to specialist consultation. We stratified adherence to quality indicators by clinician sex and years of experience. RESULTS: Half of women with incontinence underwent a pelvic examination or had a urinalysis ordered. Few patients with urge urinary incontinence were recommended behavioral therapy (14%) or prescribed medication (8%). When total aggregate scores were compared, female clinicians performed the recommended care 47% ± 25% of the time, compared with 35% ± 23% for male clinicians (P = .003). Increasing years of experience was associated with worse overall urinary incontinence care (r -0.157, P = .02). CONCLUSIONS: We found low rates of adherence to a set of quality indicators for women with urinary incontinence, with male clinicians performing significantly worse than female clinicians. Improvement of incontinence care in primary care could significantly reduce costs of care and preserve outcomes.

2. Charette Marylène, Lissa Pacheco-Brousseau, Stéphane Poitras, Rosalind Ashton, and Linda McLean, "Management of Urinary Incontinence in Females by Primary Care Providers: A Systematic Review," *BJU international*, Vol. 133, No. 5, May 2024 May. *Background*

OBJECTIVE: To describe primary care provider (PCP) practices for the assessment and management of females with urinary incontinence (UI, and appraise these practices relative to recommendations made in high-quality clinical guidelines. METHODS: Studies were searched in four databases (MEDLINE, EMBASE, CINAHL, Web of Science) from their respective inception dates to 6 March 2023. All studies describing UI evaluation and management practices used by PCPs for female patients were eligible. Two reviewers independently selected studies assessed their quality and extracted data. A narrative synthesis of included studies was performed to describe practices. Relevant evaluation and management practices were then compared to recommendations that were consistent across current high-quality UI guidelines.

Pharmacotherapy, referrals, and follow-ups were reported descriptively only. RESULTS: A total of 3475 articles were retrieved and, among those, 31 were included in the review. The majority reported a poor–moderate adherence to performing a pelvic examination (reported adherence range: 23–76%; based on eight studies), abdominal examination (0–87%; three studies), pelvic floor muscle assessment (9–36%; two studies), and bladder diary (0–92%; nine studies), while there was high adherence to urine analysis (40–97%; nine studies). For the conservative management of UI, studies revealed a poor–moderate adherence to recommendations for pelvic floor muscle training (5–82%; nine studies), bladder training (2–53%; eight studies) and lifestyle interventions (1–71%; six studies). Regarding pharmacotherapy, PCPs predominantly prescribed antimuscarinics (2–46%; nine studies) and oestrogen (2–77%; seven studies). Lastly, PCPs referred those reporting UI to medical specialists (5–37%; 14 studies). Referrals were generally made <30 days after diagnosis with urologists being the most sought out professional to assess and treat UI. CONCLUSION: This review revealed poor–moderate adherence to clinical practice guideline recommendations. While these findings reflect high variability in reporting, the key message is that most aspects of patient care for female UI provided by PCPs needs to improve.

3. Diaz, Susana Martinez, Hudson Pierce, John Lee, Tirsit Asfaw, Andrew Abram, Naeem Bhojani, Dean Elterman, Kevin Zorn, and Bilal Chughtai, "A Community-Based Education Program for Overactive Bladder in a Predominantly Minority Older Female Population: A Pilot Study," *Journal of Urology*, Vol. 207, Supplement 5, May 2022. *Background*
4. Dufour, Sinéad, Aisling Clancy, and Maria Wu, "Technical Update No. 433: eHealth Solutions for Urinary Incontinence Among Women," *Journal of Obstetrics and Gynaecology Canada*, Vol. 45, No. 2, February 2023. *Background*

OBJECTIVE: The purpose of this technical update is to establish the state of the science regarding emerging and novel electronic health (eHealth) and mobile health (mHealth) solutions for urinary incontinence among women. TARGET POPULATION: Women over 18 years with urinary incontinence. OPTIONS: Websites and mobile health applications are useful in the conservative care of urinary incontinence. Relevant care providers should be familiar with such tools, particularly those that use motivational principles for behaviour change, which can be used as adjunct tools for urinary incontinence care. Telemedicine is an effect mode to provide services for the conservative care of urinary incontinence. OUTCOMES: Use of eHealth and mHealth solutions has potentially significant health outcomes for patients, providers, and global health systems. Broader use of telemedicine, in and of itself, could improve care access and reduce costs incurred by patients and the health care system. BENEFITS, HARMS, AND COSTS: Evidence for the efficacy of eHealth and mHealth technologies and applications for urinary incontinence ranges from weak to strong. However, the research landscape for many of these novel solutions is developing rapidly. Furthermore, these options have minimal or no harm and confer an established cost benefit and care access benefit. EVIDENCE: The Cochrane Library, Medline, EMBASE, CENTRAL databases (from January 2014 to April 2019) were searched to find articles related to conservative care of urinary incontinence in women (over 18 years) and studies on eHealth and mHealth interventions for urinary incontinence. Articles were appraised, and the collective evidence was graded. VALIDATION METHODS: The authors rated the quality of evidence and strength of recommendations using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. See online Appendix A (Tables A1 for definitions and A2 for interpretations of strong and conditional [weak] recommendations). INTENDED AUDIENCE: Relevant primary care providers and medical

specialists, including physicians, nurses, midwives, and pelvic health physiotherapists. SUMMARY STATEMENTS: RECOMMENDATIONS.

5. Geynisman-Tan, Julia, Manisha Cherupally, Shaina J. Alexandria, Tiffany Brown, Sarah Collins, Ashley Mathews, Havisha Pedamallu, Kimberly S. Kenton, and Stephen D. Persell, "Urinary Incontinence in Primary Care—The Gap Between Recommendations and Real World," *Urogynecology*, Vol. 30, No. 9, September 2024. *Background*

IMPORTANCE: Routine screening for urinary incontinence (UI) by primary care providers (PCPs) is recommended. OBJECTIVES: We aimed to describe the rate of incident UI diagnosed at annual PCP visits, the prevalence of UI in a large primary care population and estimate the rate of screening for UI during primary care preventive and annual wellness visits. Secondary aims were to describe PCP knowledge and behavior as they relate to UI screening and diagnosis. STUDY DESIGN: The electronic health record was used to abstract the number of adult female patients seen by PCPs within a regional health system with a diagnosis of UI before our study period and with a new diagnosis over a 2-year period. Additional new diagnoses and screening practices were found on chart review of an additional 824 representative charts. Primary care providers within the health system were surveyed about their screening practices and knowledge about UI. RESULTS: There were 192,053 women primary care patients seen over 2 years. A total of 5.7% had a UI diagnosis preceding the study period and 3.4% had a UI diagnosis during the study period. A total of 42% of PCPs reported that they screen for UI at least half the time and none were completely satisfied with their ability to screen for UI. Sixteen percent of annual wellness visits had any documentation of screening for UI. CONCLUSION: In a large primary care population, screening for and detection of UI in women was low.

6. Neuner, Joan, Emily Schmitt, Aaron Winn, Emily Davidson, Robert C. O'Connor, Sarah Marowski, Marie Luebke, Joanna Balza, Madeline Attewell, and Kathryn E. Flynn, "Urinary Incontinence Medications: Patient-Initiated Concerns in Primary Care," *Urogynecology*, June 2022. *Background*

IMPORTANCE: Guideline-recommended medications for overactive bladder and urge urinary incontinence (OAB/UUI) are effective but have high costs and side effects. Little is known about patient concerns regarding these medications when prescribed by their primary care providers (PCPs). OBJECTIVE: The aim of the study was to describe PCP-patient interactions when prescribing medications for OAB/UUI, specifically clinical concerns, cost and authorization issues, and mode of communication for these interactions. STUDY DESIGN: Using electronic health records, we identified a retrospective cohort of women aged 18–89 years who were prescribed a medication for OAB/UUI during a primary care office visit from 2017 to 2018. We examined the electronic health record from initial prescription through 15 subsequent months for documentation of prior authorization requests and patient concerns about cost, side effects, or ineffectiveness. The association of patient demographics, comorbidity, and medication class with these concerns was examined with logistic regression models. RESULTS: Overall, 46.2% of patients (n = 123) had 1 or more OAB/UUI medication concerns, and 52 reported outside an office visit. Only higher comorbidity was associated with reduced concern of any type. Although the overall percent age of patients reporting concerns was similar by medication type, the patterns of concern type varied. Compared with those taking short-acting antimuscarinics, patients taking long-acting antimuscarinics other than oxybutynin were less likely to have side effect concerns (adjusted odds ratio 0.35, 95% CI 0.16–0.78) and more likely to have cost concerns (adjusted odds ratio 5.10, 95% CI 1.53–17.03). CONCLUSIONS: Patient concerns

regarding OAB/UUI medications were common in primary care practices and frequently reported outside of office visits. However, the patterns of concerns (cost vs side effects) varied between medication classes.

7. Newman, Diane K., "Conservative Management of Urinary Incontinence in Women," *Primary Care Update for OB/GYNs*, Vol. 8, No. 4, July–August 2001. *Background*

Urinary incontinence (UI) is now recognized as a growing health care problem and a personal concern for women. UI is felt to be a significant aging health issue for women. Much is known about the prevalence of UI in women. Almost one third (31%) of women between the ages of 42 and 50 and two in five (38%) women over the age of 60 suffer from UI. Urine leakage varies, with about 1 in 10 women leaking enough urine that it soaks through underclothes. About one in three (30%) women have problems with incontinence during pregnancy. Society incurs a significant economic burden as a result of UI, which cost the Medicare Part A program $26.3 billion in 1995. One of the biggest obstacles to effective management of incontinence is the perception that incontinence is inevitable and irreversible, a perception almost as common among health care providers as patients. Therefore, most women do not report their UI problem to primary care practitioners. Primary care practitioners are in a key position to influence prevention, screen for incontinence, and improve outcomes of women at risk for incontinence. Current research supports the value of noninvasive, conservative treatment strategies, education, and emotional support.

8. Olenek, Katherine, Teresia Skowronski, and Dianne Schmaltz, "Geriatric Nursing Assessment," *Journal of Gerontological Nursing*, Vol. 29, No. 8, August 2003. *Background*

Gerontological nursing is a unique area of nursing. The cornerstone of the gerontological nursing process is assessment. In some traditional education models, nurses are taught assessments in general areas, such as cardiology, neurology, urology, and orthopedics. Little emphasis is placed on integrating these systems. A one-day workshop was developed with the objective to further develop the assessment skills of the registered nurse (RN) in continuing care by demonstrating a holistic approach to assessment and care planning. For this workshop, the "giants of geriatric medicine," namely falls, incontinence, confusion, iatrogenic illness, and impaired homeostasis (Cape, 1978) were further developed into a geriatric nursing model to include the psychosocial issues. This model demonstrates a way of assessing and integrating the information known about the resident. To ensure the workshop content was practical for the nurse, existing resident care documentation within the sponsoring organization, The Capital Care Group, was used. Through the education provided in the workshop, the RNs recognized that individualized care is based on full assessment of the resident, integration of the information gathered, and complete documentation.

9. Patel, Ushma J., Madeline K. Moureau, Joan M. Neuner, Heidi W. Brown, "Screening and Treating Urinary Incontinence in Primary Care: A Missed Opportunity," OBM geriatrics, Vol. 7, No. 4, 2023. *Background*

More than 60% of adult women in the United States have urinary incontinence (UI), with the prevalence increasing to over 80% in women over age 65. Despite its high prevalence, most patients do not seek care and few clinicians screen for UI. The Medicare Health Outcomes Survey queries patients about satisfaction with their provider's discussion and management of UI, but formal recommendations about screening, diagnosis, and treatment are lacking. This

review presents a practical algorithm for primary care providers to incorporate management of UI into routine preventive care for women, and outlines UI prevalence, risk factors, screening, and non-surgical treatment options.

10. Paudel, Roshan, and Giulia I. Lane, "Delivering Patient-Centered Care Through Shared Decision Making in Overactive Bladder," *Neurourology and Urodynamics*, Vol. 41, No. 4, April 2022. *Background*

INTRODUCTION: Men and women living with overactive bladder (OAB) face many treatment decisions as they progress through the treatment pathway. Decisions to pursue specific therapies are highly preference sensitive and ideal for shared decision making (SDM). The aim of this narrative review is to provide urologists with a practical summary of methods to elicit preferences and facilitate SDM to promote patient-centered care for OAB. METHODS: We explore OAB as a preference sensitive condition through a review of treatment outcomes and present available data on prediction tools, patient preferences, and decision aids. We propose a paradigm for applying Everyday SDM to OAB care. RESULTS: Clinical outcome data points to equipoise (balanced outcomes) between options for first-, second-, and third-line OAB therapies, making OAB preference sensitive and appropriate for SDM. Methods to personalize care through individualized outcome prediction calculators and tools to elicit patient preferences are emerging. While patient information about OAB is readily available, we identified few OAB decision aids that facilitate patient preference elicitation and SDM. CONCLUSIONS: OAB is a preference sensitive condition, where treatment is largely based on the patient's preferences and values. SDM is an ideal approach to supporting patients through these treatment decisions. We propose the application of Everyday SDM, a personalized, clinically efficient methodology as a method to support patient-centered OAB care.

11. Sampselle, Carolyn M., Patricia A. Burns, Molly C. Dougherty, Diane Kaschak Newman, Karen Kelly Thomas, and Jean F. Wyman, "Continence for Women: Evidence-Based Practice," *Journal of Obstetric, Gynecologic and Neonatal Nursing*, Vol. 26, No. 4, July–August 1997. *Background*

Approximately 20% of women ages 25-64 years' experience urinary incontinence. The symptoms increase during perimenopause, when 31% of women report that they experience incontinent episodes at least once per month. Bladder training and pelvic muscle exercise are the recommended initial treatment and can be taught effectively in the ambulatory care setting. Bladder training enables women to accommodate greater volumes of urine and extend between-voiding intervals. Pelvic muscle exercise increases muscle strength and reduces unwanted urine leakage. Accumulated research results provide evidence-based guidelines for nursing practice. The Association of Women's Health, Obstetric, and Neonatal Nurses has identified continence for women as the focus of its third research utilization project. This article presents the rationale, evidence base, and educational strategies compiled by the Research Utilization 3 Nurse Scientist Team. Nurses can enable women to incorporate these noninvasive techniques into self-care.

12. Senekjian, Lara, Kristina Heintz, Marlene J. Egger, and Ingrid Nygaard, "Do Women Understand Urogynecologic Terminology?" *Female Pelvic Medicine and Reconstructive Surgery*, Vol. 17, No. 5, September 2011. *Background*

OBJECTIVES: The aims of this study were to describe women's stated knowledge of the primary urogynecologic diagnostic terms (urinary incontinence, pelvic floor disorder, and pelvic organ prolapse) and to assess factors associated with knowledge. METHODS: Before any

education about pelvic floor disorders, 376 women presenting to primary care-level gynecologic clinics were asked whether they knew what the terms urinary incontinence, pelvic organ prolapse, and pelvic floor disorder meant. $\chi(2)$ and t tests were used to compare characteristics of women with complete knowledge versus partial or no knowledge of terms. $P < 0.05$ was considered significant. RESULTS: Of all women, 25% knew all 3 terms and 18% knew none. Moreover, 80%, 52%, and 27% of women reported that they knew the meaning of the terms urinary incontinence, pelvic organ prolapse, and pelvic floor disorder, respectively. Of women with stress urinary incontinence symptoms, 88% knew the term urinary incontinence compared with 78% without stress urinary incontinence ($P = 0.07$). Of 41 women, 31 (76%) with the symptom of vaginal bulge knew the term pelvic organ prolapse compared with 49% without ($P = 0.001$). Only higher education and symptom of vaginal bulge were associated with complete knowledge of the 3 terms; 30% of women who completed college or higher reported complete knowledge compared with 18% who did not ($P = 0.013$). CONCLUSIONS: Public health campaigns using terms pelvic organ prolapse or pelvic floor disorders are unlikely to reach most women. Further education and research are needed to improve women's health literacy in urogynecology.

13. Shaw, Chris, Christine Atwell, Fiona Wood, Katie Brittain, and Kate Williams, "A Qualitative Study of the Assessment and Treatment of Incontinence in Primary Care," *Family Practice*, Vol. 24, No. 5, October 2007. *Background*

BACKGROUND: Although incontinence is a common condition, previous studies have suggested that access to appropriate treatment is variable. Recent guidelines recommend initial conservative treatment in primary care and this study explores GPs management practices and the feasibility of applying guidelines. OBJECTIVES: To describe the assessment and management practices of incontinence by GPs in primary care. METHODS: Semi-structured interviews were carried out with 32 GPs practicing in South East Wales. Sampling was purposive to include a range of characteristics such as gender, age and size and location of practice. Interviews were audio taped and transcribed and a thematic analysis carried out using a grounded theory approach. RESULTS: The extent to which GPs felt adequately informed to carry out assessment and treatment of incontinence was varied. While most were aware of appropriate assessment and investigation, none felt in a position to undertake conservative treatments such as bladder training or to monitor pelvic floor therapy either due to lack of knowledge or organizational constraints. Access to specialist continence services was also variable across different localities with many GPs being unaware of the remit of specialist nurses. However, there was a high rate of referral to secondary care which will result in high cost to the National Health Service. CONCLUSIONS: There are a number of barriers to provision of first-line treatments in primary care, including variability in training and knowledge of GPs, as well as practical barriers (such as time resource) to carrying out assessments and treatment in routine surgeries. This results in increased likelihood of referral to secondary care.

14. Steers, William, Holly Richter, Leroy Nyberg, John Kusek, Stephen Kraus, Kimberly Dandreo, Toby Chai, and Linda Brubaker, "Challenges of Conducting Multi-Center, Multi-Disciplinary Urinary Incontinence Clinical Trials: Experience of the Urinary Incontinence Treatment Network," *Neurourology and Urodynamics*, Vol. 28, No. 3, March 2009. *Background*

AIMS: The Urinary Incontinence Treatment Network (UITN) was established in 2000 as a multi-disciplinary, multi-institutional network by the National Institute for Diabetes, Digestive,

and Kidney Diseases (NIDDK) to investigate treatments for urinary incontinence in women. METHODS: Over 8 years this network composed of urologists, urogynecologists, geriatricians, behavioral psychologists, physical therapists, nurses, epidemiologists, social scientists and statisticians from nine academic sites and a Data Coordinating Center has been effective in designing and completing prospective randomized clinical trials for treatments of urinary incontinence in women. RESULTS: Two major clinical trials have been completed and a third has completed recruitment. The focus of the completed trials was a comparison of surgical methods to treat stress urinary incontinence whereas the third examined the potential benefit of combined behavioral intervention and antimuscarinic drug therapy to eliminate the need for long-term use of drug therapy alone to manage urge urinary incontinence. The scientific output of the network measured by abstracts, original papers and presentations demonstrates the productivity of the network. CONCLUSIONS: Many unique challenges are posed by a multi-disciplinary team located at sites across the United States undertaking several clinical trials. This review presents some of the logistics, barriers, tactics, and strategies used to create this successful clinical trials network focused on urinary incontinence.

15. Talley, Kristine M. C., Jean F. Wyman, and Tatyana A. Shamliyan, "State of the Science: Conservative Interventions for Urinary Incontinence in Frail Community-Dwelling Older Adults," *Nursing Outlook*, Vol. 59, No. 4, July–August 2011. *Background*

This systematic literature review aimed to identify conservative interventions for reducing urinary incontinence (UI) in non-institutionalized frail older adults. Randomized and quasi-experimental studies published in English reporting outcomes on UI frequency, severity, or quality of life were included and rated for quality. Studies reporting improvements over 50% in UI outcomes were considered clinically significant. Seven studies with 683 participants (75% female) were eligible. Multicomponent behavioral interventions including pelvic floor muscle exercises and bladder training had the strongest evidence for reducing UI. The evidence supporting comprehensive geriatric assessment with multicomponent behavioral interventions, pattern urge response training, and toilet skills was limited. There is insufficient evidence to derive firm conclusions regarding the use of conservative interventions. Clinical trials are needed on a variety of interventions to guide practice on UI prevention and management in frail community-dwelling older adults.

16. Teunissen, Doreth, Wil van den Bosch, Chris van Weel, and Toine Lagro-Janssen, "Urinary Incontinence in the Elderly: Attitudes and Experiences of General Practitioners. A Focus Group Study," *Scandinavian Journal of Primary Health Care*, Vol. 24, No. 1, March 2006. *Background*

OBJECTIVE: To assess general practitioners' (GPs') attitudes to urinary incontinence in elderly patients and their experiences in the application of the Dutch College of General Practitioners' guideline in daily practice. DESIGN: Two existed groups of six GPs working in villages and seven GPs working in urban practices. METHOD: Two focus-group discussions with recording of discussions and transcription. Transcripts were analyzed by two independent researchers. RESULTS: During the discussions three main themes of attitudes came forward: (1) therapeutic nihilism of GPs and low motivation of patients, (2): GPs experienced lack of time because of difficulties in explaining the therapy and because of impaired mobility of older patients, (3) because of the complexity of the problem and co-morbidity, GPs as well as patients were reluctant to treat the UI. The most remarkable findings in the application of the guideline were: (1) because of the barriers mentioned above, physical examination did not take place in spite of

GPs' conviction as to the benefit of it; (2) GPs' knowledge of treatment options in the elderly with UI is substandard. CONCLUSION: Several patient (comorbidity, impaired mobility, low motivation, and acceptance of the problem) and GP factors (therapeutic nihilism, lack of time and knowledge) interfere with good management of UI in the elderly.

17. Wagg, Adrian, Derek Lowe, Penny Peel, and Jonathan Potter, "Do Self-Reported 'Integrated' Continence Services Provide High-Quality Continence Care?" *Age and Ageing*, Vol. 38, No. 6, November 2009. *Background*

INTRODUCTION: systematic collection of clinical outcome data remains the most difficult task in the measurement of clinical effectiveness. However, the examination of the relationship between organisational and clinical process of care may provide a surrogate measure of quality in care. METHODS: data from the 2006 National Audit of Continence Care for Older People were used to examine whether there was an association between organisational structure and standard of continence care for older people. "Quality" scores were produced and the relationship between scores was examined. RESULTS: there were statistically significant correlations between organisational and process scores for continence care. Primary care scored higher than hospitals or care homes in regard to service organisation [median (IQR): 57 (45-68) vs 48 (36-65) vs 50 (38-55), P = 0.001]. Differences were less with clinical process scores for urinary incontinence (UI) [median (IQR): 42 (32-52) vs 40 (29-49) vs 43 (34-52), P = 0.06] and for faecal incontinence (FI) [median: 42 (34-53) vs 45 (36-55) vs 47 (41-53), P = 0.12]. CONCLUSION: those with an integrated service provide higher quality care to older people. The provision of high-quality care for continence appears to be dependent upon well-organised services with personnel who have the appropriate training and skills to deliver the care.

18. Williams, Kate S., R. Philip Assassa, Nigel Smith, Christine Rippin, Christine Shaw, and Chris Mayne, "Good Practice in Continence Care: Development of Nurse-Led Service," *British Journal of Nursing*, Vol. 11, No. 8, 2002. *Background*

The implementation of evidence-based interventions in clinical practice is often alluded to in the literature; however, the development of these interventions is rarely documented. Within continence care, there is a large body of relevant literature on which primary clinical interventions can be based. The Leicestershire Medical Research Council (MRC) Incontinence Study is a series of inter-related studies exploring the epidemiology of urinary symptoms, including incontinence, and evaluating service provision and treatment options for these symptoms. This article describes one aspect of the Leicestershire study, namely the development of evidence-based intervention protocols for use in a new nurse-led continence service. This service is currently being evaluated in a randomized controlled trial.

19. Williams, Kate S., R. Phil Assassa, Nicola J. Cooper, David A. Turner, Christine Shaw, Keith R. Abrams, Christopher Mayne, Carol Jagger, Ruth Matthews, Michael Clarke, Catherine W. McGrother, and the Leicestershire MRC Incontinence Study Team, "Clinical and Cost-Effectiveness of a New Nurse-Led Continence Service: A Randomised Controlled Trial," *British Journal of General Practice*, Vol. 55, No. 518, September 2005. *Background*

BACKGROUND: Continence services in the UK have developed at different rates within differing care models, resulting in scattered and inconsistent services. Consequently, questions remain about the most cost-effective method of delivering these services. AIM: To evaluate the impact of a new service led by a continence nurse practitioner compared with existing

primary/secondary care provision for people with urinary incontinence and storage symptoms. DESIGN OF STUDY: Randomised controlled trial with a 3- and 6-month follow-up in men and women (n = 3746) aged 40 years and over living in private households (intervention [n = 2958]; control [n = 788]). SETTING: Leicestershire and Rutland, UK. METHOD: The continence nurse practitioner intervention comprised a continence service provided by specially trained nurses delivering evidence-based interventions using predetermined care pathways. They delivered an 8-week primary intervention package that included advice on diet and fluids; bladder training; pelvic floor awareness and lifestyle advice. The standard care arm comprised access to existing primary care including GP and continence advisory services in the area. Outcome measures were recorded at 3 and 6 months post-randomisation. RESULTS: The percentage of individuals who improved (with at least one symptom alleviated) at 3 months was 59% in the intervention group compared with 48% in the standard care group (difference of 11%, 95% CI = 7 to 16; P<0.001) The percentage of people reporting no symptoms or 'cured' was 25% in the intervention group and 15% in the standard care group (difference of 10%, 95% CI = 6 to 13, P = 0.001). At 6 months the difference was maintained. There was a significant difference in impact scores between the two groups at 3 and 6 months. CONCLUSIONS: The continence nurse practitioner-led intervention reduced the symptoms of incontinence, frequency, urgency and nocturia at 3 and 6 months; impact was reduced; and satisfaction with the new service was high.

20. Wyman, J. F., K. L. Burgio, and D. K. Newman, "Practical Aspects of Lifestyle Modifications and Behavioural Interventions in the Treatment of Overactive Bladder and Urgency Urinary Incontinence," *International Journal of* Clinical *Practice*, Vol. 63, No. 8, August 2009. *Background*

Behavioural interventions are effective treatments for overactive bladder (OAB) and urgency urinary incontinence (UUI). They are in part aimed at improving symptoms with patient education on healthy bladder habits and lifestyle modifications, including the establishment of normal voiding intervals, elimination of bladder irritants from the diet, management of fluid intake, weight control, management of bowel regularity and smoking cessation. Behavioural interventions also include specific training techniques aimed at re-establishing normal voiding intervals and continence. Training techniques include bladder training, which includes a progressive voiding schedule together with relaxation and distraction for urgency suppression, and multicomponent behavioural training, which, in conjunction with pelvic floor muscle (PFM) exercises, includes PFM contraction to control urgency and increase the interval between voids. Guidelines for the conservative treatment of OAB and UUI have been published by several organisations and the physiological basis and evidence for the effectiveness of behavioural interventions, including lifestyle modifications, in the treatment of OAB and UUI have been described. However, many primary care clinicians may have a limited awareness of the evidence supporting the often straight-forward treatment recommendations and guidance for incorporating behavioural interventions into busy primary care practices, because most of this information has appeared in the specialty literature. The purpose of this review is to provide an overview of behavioural interventions for OAB and UUI that can be incorporated with minimal time and effort into the treatment armamentarium of all clinicians that care for patients with bladder problems. Practical supporting materials that will facilitate the use of these interventions in the clinic are included; these can be used to help patients understand lifestyle choices and voiding behaviours that may improve function in patients experiencing OAB symptoms and/or UUI as well as promote healthy bladder behaviours and perhaps even prevent future bladder problems. Interventions for stress urinary incontinence are beyond the scope of this review.

Appendix D. Data Abstraction Fields and Form

D.1 Data Abstraction Fields

Table D.1. Data Abstraction Fields

Data Domain	Dissemination and Implementation Intervention	Clinical Care Intervention
Contextual characteristics	Primary care practice characteristics: • Practice type and location • Funding levels and mix • Staff size, composition • Ownership type • System affiliation	Patients' or intended patients' characteristics: • UI type • Age • Race and ethnicity • Other factors
Key intervention features	• Whether a document describes a D&I strategy, resource, tool, or some combination thereof • Number and types of health care system levels included in the strategy, resource, or tool • Components of the strategy, resource, or tool • Logic model or theory of action • Prior evidence of effectiveness	• Whether a document describes a clinical intervention, resource, tool, or some combination thereof • Number and types of health care system levels included in the clinical intervention, resource, or tool • Treatment elements included (screening, diagnosis, management, specialty referral) • Components of the clinical intervention, resource, or tool • Logic model/theory of action • Prior evidence of effectiveness
Study design	• Sample size of practices • Qualitative, quantitative, or mixed methods used • Hybrid effectiveness and other implementation models • Type or degree of randomization of practices or care providers • Comparator or control practices or providers (if any) not included in the target D&I effort (or receiving an alternate strategy, resource, or tool)	• Sample size of care providers and patients • Qualitative, quantitative, or mixed methods used • Type or degree of randomization of patients • Comparator or control patients (if any) receiving usual care or an alternate clinical intervention
Outcomes		
Reach outcomes	Proportion of the targeted practices or providers included in the D&I effort	Proportion of the targeted patients included in the intervention
Process outcomes	• Proportion of targeted practices or providers exposed to the D&I efforts • Fidelity to or adoption of the implementation strategy as planned • Barriers and facilitators to the D&I efforts as planned • Feasibility of the implementation strategy, resources, or tools • Compatibility of the implementation strategy, resource, or tools to the practice setting	• Proportion of adoption, use, or both of the intervention by practices or care providers • Fidelity to or adoption of the clinical intervention • Barriers and facilitators to implementing the intervention as planned • Feasibility of the intervention for practices, providers, or patients • Compatibility of the intervention to the practice setting, care routines, or patient circumstances • Proportion of patients receiving or adhering to treatment

	Dissemination and Implementation Intervention	
		• Patient experience or satisfaction with the intervention care • Proportion of patients receiving or following through on a referral to specialty or community-based services (if applicable)
Economic outcomes	Resource use, costs, economic outcomes of the implementation strategy for practices, care providers, or system stakeholders	Resource use, costs, economic outcomes of the intervention for practices, care providers, patients, or system stakeholders
Health and system outcomes	• Sustainability of the implementation or dissemination strategy • Increased capacity of practices to implement evidence-based practices	• Improvement in patient UI symptoms, health functioning, quality of life, or a combination thereof • Sustainability of the clinical intervention by practices or care providers • Sustainability of improved patient care and health outcomes by practices and care providers
Subgroup outcomes	Representativeness and outcomes of process, economic, or health and system outcomes for different types of practice contexts, including under-resourced practice settings or those serving under-resourced patient populations	Representativeness and outcomes of process, economic, or patient care or health outcomes for different types of providers or patients, including those in under-resourced practice settings or patients from under-resourced populations
Unintended consequences	Unintended negative, positive, or spillover effects of the D&I effort on practice settings or provider	Harms or other unintended effects on patients or subgroups of patients receiving or exposed to the clinical intervention

D.2 Data Abstraction Form

The form reproduced here was revised and reformatted for use in the DistillerSR literature review software program.

Study Reference:
[Study ID] Author, Year
Additional (multiple) publications: [Study ID] Author, Year

Contextual Characteristics:

1. Country_____
2. Locale (city, state, or region) _____
3. Study settings*: mark all that apply*
   - ☐ Primary care practices (includes clinics, offices, etc.)
   - ☐ Community (e.g., patient homes, social services, senior centers, etc.)
   - ☐ Virtual (e.g., telehealth, phone, etc.)
   - ☐ Other (Describe)_____

Practice Characteristics

4. Number of primary care practices included in study _____
5. Practice types: *mark all that apply*
   - ☐ Private practice
   - ☐ Safety-net (FQHC, community health center)
   - ☐ Other (Describe)_____
   - ☐ Not reported
6. Practice ownership: *mark all that apply*
   - ☐ For-profit
   - ☐ Non-profit
   - ☐ Government-state or local
   - ☐ Government-federal (e.g., military, VA)
   - ☐ Other (Describe)_____
   - ☐ Not reported
7. Practice system affiliation: *mark all that apply*
   - ☐ Medical group
   - ☐ Integrated health care or hospital system
   - ☐ Academic medical center (medical school-affiliated)
   - ☐ VA system
   - ☐ Other (Describe)_____
   - ☐ Not reported

Provider Characteristics

8. Number of PCPs (leave cells blank if not reported): ____

Primary Care Professionals	Total Number Employed by Practices in the Study	Number Involved in the Intervention(s) Studied
Physicians (MDs, DOs)		
Advanced practice professionals (NPs, PAs)		
Nurses		
Others (if specifically a focus of the study)		

If Others, describe: _____

9. Types of primary care providers (i.e., physicians and advance practice professionals): *mark all that apply*
   - ☐ Family medicine
   - ☐ General internal medicine
   - ☐ Women's health specialty
   - ☐ Geriatric medicine
   - ☐ Other (Describe)_____
   - ☐ Not reported

Patient Characteristics

10. Total number of patients served by practices in the study: _____

11. Insurance/health plan coverage: *mark all that apply*
   - ☐ Medicare (including Medicare Advantage)
   - ☐ Medicaid
   - ☐ Private/commercial insurance (individual or group)
   - ☐ Uninsured/self-pay
   - ☐ Non-US public insurance (if study is in an OECD country)
   - ☐ Non-US private coverage (if study is in an OECD country)
   - ☐ Other (Describe)_____
   - ☐ Not reported

12. Number of **adult women patients** (leave cells blank if not reported):

Adult Women Patients	Total Number Served by Practices in the Study	Number Involved in the Intervention(s) Studied
All ages		
Mean (of all ages)		
Standard deviation (of all ages)		

If multiple settings or intervention groups, describe number per each:

_____

13. Does this study focus on any particular type of woman (e.g., post-partum, post-menopausal)?
- ☐ Yes (Describe)_____
- ☐ No

14. Race of adult women in the interventions(s) studied: *mark all that apply*
- ☐ White
- ☐ Black/African American
- ☐ American Indian/Alaskan native
- ☐ Asian
- ☐ Hawaiian or other Pacific Islander
- ☐ Other (Describe)_____
- ☐ Not reported

15. Ethnicity of adult women in the intervention(s) studied: *mark all that apply*
- ☐ Hispanic
- ☐ Non-Hispanic
- ☐ Not reported

16. Other contextually relevant factors of adult women in the intervention(s) studied:

(Describe) _____

17. UI types of adult women in the intervention(s) studied: *mark all that apply*
- ☐ Stress UI
- ☐ Urge UI
- ☐ Mixed UI
- ☐ Other (e.g., overflow, insensible) (Describe)_____
- ☐ Not reported

Intervention Design:

***Notes**: Intervention design includes both (a) clinical care intervention and (b) dissemination and implementation (D&I) approach.*

The term "intervention" may refer to a care process and D&I approach, even if not implemented by the researchers/authors of the publication.

Clinical Care Intervention Components

18. What features are included in the **clinical care intervention**?* *mark all that apply*

- ☐ Community-based multidisciplinary teams
- ☐ Clinical screening and treatment
    - o Screening for UI
    - o Screening for weight loss or obesity
    - o Treatment of underlying disease/cognitive impairment
    - o Review and adjust non-incontinence medication associated with development or worsening of UI
    - o Treat constipation
    - o Containment products (e.g., absorbent pads, external collection devices, intravaginal devices, pessaries)
    - o Urinary catheters
    - o Posterior tibial nerve stimulation (PTNS)
- ☐ Lifestyle Interventions
    - o Diet-Caffeine reduction
    - o Diet-Fluid intake
    - o Diet-Other
    - o Physical exercise
    - o Obesity and weight loss
    - o Smoking cessation
- ☐ Behavioral and Physical Therapies
    - o Prompted voiding
    - o Bladder Training
    - o Physical Therapy
    - o Pelvic floor muscle training (PFMT)
    - o Psychological interventions
- ☐ Pharmacological management
    - o Antimuscarinic/anticholinergic drugs
    - o Mirabegron (beta3 agonist)
    - o Drugs for stress urinary incontinence (Duloxetine)

- Estrogen
- Desmopressin

☐ Educational/Informational Interventions
- Patient education
- Caregiver education
- App-based interventions

☐ Self-management (e.g., symptom tracking)

☐ Other (Describe)_____

** Adapted from EAU Guidelines on UI, 2020; AUA/SUFU Guideline for Overactive Bladder; NICE Guidelines; AUGS Guidance.*

19. What stage(s) of care does the care intervention address? *mark all that apply*

☐ Screening
☐ Diagnosis
☐ Management (treatment)
☐ Specialty referral
- Physical therapy
- Urology
- Urogynecology
- Other (Describe) _____

D&I Approach Components

20. What features are included in the **dissemination approach**?**** *mark all that apply*

☐ Practice facilitation/coaching (including academic detailing)
☐ Assessment of practice readiness/capacity for change
☐ On-site intervention resource/practice coordinator
☐ Provider/staff education & training
☐ Other direct technical assistance (Describe)_____
☐ Learning communities/collaboratives
☐ Other peer-to-peer learning strategies (Describe)_____
☐ Accountability-Policy, program and/or contractual requirements
☐ Accountability-Transparency, public reporting
☐ Funding, payment, and/or reimbursement incentives
☐ Other dissemination strategies (Describe)_____

*** Adapted from the AHRQ EvidenceNOW Publications website, https://www.ahrq.gov/evidencenow/projects/heart-health/research-results/results/publications.html, and Kahn et al. 2017.*

21. What features are included in the **implementation approach**?*** *mark all that apply*

- ☐ Seek Evidence
  - o Develop a Process to Seek New Evidence
  - o Select and Customize Evidence
  - o Embed in Clinical Info Systems (electronic or paper; e.g., CDS, checklists)
  - o Inform Patients that Practice is Evidence-Based
- ☐ Implement QI
  - o Adopt QI Approach
  - o Develop QI Team
  - o Engage Care Team (e.g., provider/staff education & training)
  - o Select QI Measures
- ☐ Optimize Health IT
  - o Create a QI Dashboard
  - o Focus on Data Quality
  - o Identify Data Coordinator
  - o Involve Care Teams
  - o Link Patients and Teams in Info System
  - o Maximize EHRs
  - o Use Registries and More
- ☐ Create Care Teams
  - o Assign Patients to Care Teams
  - o Empower Team Members
  - o Engage with Evidence
  - o Establish Care Teams
  - o Optimize Communication
  - o Participate in QI
- ☐ Engage with Patients and Families
  - o Involve Patients in Integrating Evidence
  - o Link to Community Resources
  - o Support Patient Engagement in Care (e.g., shared decision-making)
  - o Target Appropriate Patients
- ☐ Nurture Leadership
  - o Create a QI Culture
  - o Encourage Learning
  - o Forge a Vision
  - o Identify Champions
  - o Review Measures
  - o Support Evidence-based Practice

☐ Other implementation strategies (Describe)_____

*** *Adapted from AHRQ EvidenceNOW Key Drivers and Change Strategies.*
For the EvidenceNOW Key Driver Diagram, see https://www.ahrq.gov/evidencenow/tools/keydrivers/index.html.
For definitions of each Key Driver, see https://www.ahrq.gov/evidencenow/tools/keydrivers/description.html?tca=Uh7at9Yny2Es6Py8EEfBJNitZgd39c3s5co-A31x2KQ.

22. Briefly describe the overall intervention (care intervention and D&I approach):

_____

23. Does the study provide or reference any specific intervention tools or resources (e.g., patient or provider education materials, implementation toolkits, templates, websites, etc.)?

☐ Yes (Describe)_____
☐ No

24. Which levels of the **primary care system** does the overall intervention address? *Mark all that apply*
    ☐ Payors
    ☐ Community
    ☐ Health care delivery system (i.e., other delivery organizations beyond primary care)
    ☐ Primary care practices
    ☐ Primary care clinicians and/or staff
    ☐ Families or caregivers
    ☐ Patients

25. What evidence base does the study give for the care intervention or D&I approach? (include key cites)

_____

Study Design:

26. What was the design of the study?
    ☐ Randomized controlled trial (RCT)
    ☐ Single arm trial
    ☐ Prospective cohort trial (comparison but no randomization)
    ☐ Pre/post assessment
    ☐ Descriptive (qualitative or quantitative)
    ☐ Other (Describe)_____

27. Did the study include control or comparison condition(s)?
    - ☐ Yes (Describe)_____
    - ☐ No

28. Did the study include randomization (by practice, provider, and/or patients, etc.)?
    - ☐ Yes (Describe)_____

    - ☐ No

29. What types of methods did the study use?
    - ☐ Qualitative (e.g., interviews, focus groups) (Describe)_____
    - ☐ Quantitative (e.g., clinical measures, patient surveys) (Describe)_____

Outcomes:

Reach outcomes

30. What reach outcomes did the study measure or report on? *mark all that apply*

    - ☐ Proportion of **primary care practices** in the targeted/sampled health care systems or locales that were involved in the study/demonstration of the intervention
    - ☐ Proportion of **primary care providers** in the study/demonstration's primary care practices that were involved in the intervention ****
    - ☐ Proportion of **adult women patients** in the study/demonstration's primary care practices that were involved the intervention *****
    - ☐ Access or barriers to treatment due to insurance coverage
    - ☐ Access in rural or specific geographical areas
    - ☐ Other key reach outcome(s) (Describe) _____
    - ☐ Not reported

**** *Mark this response if, in Q8, the study reported both the total number of primary care providers (physicians and/or advanced practice professionals) employed by the practices in the study* ***and*** *the number of those providers involved in the intervention (even if the study did not report the proportion).*

***** *Mark this response if, in Q12, the study reported both the total number of adult women patients (All ages) served by the practices in the study* ***and*** *the number of those patients involved in the intervention (even if the study did not report the proportion).*

31. Summarize the key reach outcomes for all checked above:

    _____

Process outcomes

32. What process outcomes did the study measure or report on? *mark all that apply*

Note: "intervention" refers to the care intervention and/or D&I approach, unless otherwise specified.

- ☐ Exposure/engagement of practices to the intervention
- ☐ Exposure/engagement of providers or other staff to the intervention
- ☐ Extent the intervention was adopted/used in practice
- ☐ Fidelity of intervention implementation or use to what was intended
- ☐ Adaptations to the intervention (before or during implementation)
- ☐ Feasibility of implementing or using the intervention
- ☐ Compatibility of the intervention to practices/care routines
- ☐ Barriers to disseminating/implementing the intervention
- ☐ Facilitators to disseminating/implementing the intervention
- ☐ Proportion of patients receiving specialty referrals
- ☐ Proportion of patients following through on specialty referrals
- ☐ Patient adherence to treatment
- ☐ Patient experience or satisfaction
- ☐ Other key process outcomes

33. Summarize the key process outcomes for all checked above:

_____

Impact outcomes

34. What impact outcomes did the study measure or report on? *mark all that apply*

- ☐ **Economic outcomes** (resource use, costs, or economic outcomes of the implementation strategy or intervention for practices, care providers, patients, or system stakeholders)
- ☐ **Health outcomes** (change in UI symptoms, health functioning, and/or quality of life of patients)
- ☐ **System outcomes** (change in capacity of primary care practices to implement evidence-based care or health care systems in disseminating evidence-based care)
- ☐ **Sustainability outcomes** (continued dissemination or implementation of the intervention, use of the intervention by practices or providers, and/or improvement in patient care and health outcomes)
- ☐ **Unintended consequences** (unintended negative, positive, or spillover effects of the dissemination or implementation of the intervention on practice setting, providers, or patients)
- ☐ **Subgroup outcomes** (differences in economic, health, system, sustainability or unintended consequences for types of practices, providers, or patients in under-resourced communities)
- ☐ Other key impact outcomes

35. Summarize the key impact outcomes for all checked above:

_____

37. Summarize the study limitations.

_____

38. Summarize the key findings.

_____

Appendix E. Summary Table of Grantee Materials

The five MUI grantees are EMPOWER (University Hospitals of Cleveland), IT2 (Northwestern University), PURSUIT (U.S. Department of Veterans Affairs and University of Alabama at Birmingham), WI-INTUIT (University of Wisconsin-Madison), and UCSD-OPTIMA (University of California San Diego). Table E.1 presents a summary of the materials the grantees' created as part of the MUI initiative.

Table E.1. Detailed Summary Table of Grantee Materials

Team	Title	D&I Type	Audience	Stage	Description
EMPOWER	Interactive Urinary Incontinence Care Pathway Flowchart	• Care pathway/ algorithm	• Providers • Incontinence managers • Nurses • Others	• Diagnosis • Management (treatment) • Referral	This UI care pathway flowchart was created using draw.io by the EMPOWER study team to aid practices participating in the team's intervention designed for the AHRQ's EvidenceNOW model: Managing Urinary Incontinence initiative. This diagram, which can be used by providers, incontinence managers, nurses, and others, shows the various levels of severity of UI and indicates appropriate steps to take to treat symptoms. Several links are embedded throughout the care flowchart that direct clinicians to external educational resources that they can use to help treat their patients. The template can be replicated and customized for a practice's needs.
EMPOWER	Sustainability Menu	• Patient information • Provider education	• Primary care providers • Patients	• Screening • Management (treatment)	These are examples of practice- and patient-facing sustainability menus created by the EMPOWER team for the AHRQ's EvidenceNOW model: Managing Urinary Incontinence initiative. After a practice or patient has completed their participation in the study, the research team outlines several options for available next steps. For primary care practices, options are catered toward opportunities for them to continue their UI QI efforts. The patient-facing version allows the patient to indicate additional resources that could help them in their UI management.
WI-INTUIT	UI Algorithm	• Care pathway/ algorithm	• Primary care providers	• Screening • Diagnosis • Management (treatment)	A practical algorithm for PCPs to incorporate the management of UI into routine preventive care for women; an algorithm for PCPs to screen, diagnose, and treat UI in female patients.
WI-INTUIT	UI Screener English	• UI screening • Assessment	• Primary care providers • Patients	• Diagnosis	The 3IQ-3 screener is a concise tool designed to identify and classify types of UI through three questions. It distinguishes between SIO, UUI, and other types of UI based on leakage circumstances, such as during physical activity or urgency. This

Team	Title	D&I Type	Audience	Stage	Description
					versatile screener can be administered verbally, on paper, or electronically.
WI-INTUIT	UI Screener Spanish	• UI screening • Assessment	• Primary care providers • Patients	• Diagnosis	The 3IQ-3 screener is a short screening and assessment tool to help identify UI and as the type of UI. The Spanish-translated screener asks three questions. The screener helps differentiate between SUI, UUI, and other types of UI based on the circumstances of leakage, such as physical activity or feeling a sense of urgency. This screener can be administered verbally, on paper, or electronically making it versatile for patient use.
WI-INTUIT	UI EHR Materials	• Patient information • Provider education	• Primary care providers • Patients	• Diagnosis • Management • Referral	UI EHR Materials is a small compilation (five pages) of provider education materials. The packet begins with a note detailing a patient diagnosis scenarios and relevant orders. The patient's instructions for after visits details nonsurgical behavioral modifications for management, embedded links of educational videos, and small group classes. The packet continues with patient information resources for clinicians on prescriptions and concludes with embedded links for courses and handouts.
WI-INTUIT	UI Patient Information	• Patient information • Education	• Patients with UI • Healthcare providers	• Diagnosis • Management (behavioral)	A urinary incontinence or leakage patient information packet for both patients and health care providers. This packet first provides a brief overview of nonsurgical behavioral changes to improve symptoms of UI. The packet is centered around behavioral changes, with several embedded links about bladder health, and small group classes about bladder health. The packet displays video links and quick response (QR) codes for videos in both English and Spanish. Additionally, there are embedded links for handouts with information on bladder exercises, stress incontinence, OAB, and vaginal estrogen therapy. There are also links to refer patients to the Mind over Matter: Healthy Bowels, Healthy Bladder class; patients can also register themselves.
WI-INTUIT	UI 101 Practice Video	• Provider education	• Primary care providers	• Management (treatment)	A presentation by PCPs from the University of Wisconsin-Madison and the Medical College of Wisconsin educates on integrating UI management. It addresses UI prevalence, the initial evaluation, and emphasizes behavior modification. The video also discusses vaginal estrogen, pelvic floor therapy, and nonsurgical treatments, including pessaries.
WI-INTUIT	UI Referral List & Template	• Provider education	• Referring primary care providers	• Referral	Physical therapy, urogynecology, and urology referral list instructions includes instructions with embedded links for providers to build referral networks for pelvic floor therapy, urogynecology, and urology. There is a note for providers within a large health

Team	Title	D&I Type	Audience	Stage	Description
					system to use their health system's website to search for female UI providers. Unfilled tables of PT, urogynecology, and urology practices are included beneath the instructions.
PURSUIT	Patient Recruitment Flyer	• Study recruitment	• Women veterans	• Management (treatment)	Patient recruitment flyer for the PURSUIT Managing Urinary Incontinence project. The flyer targets women as its primary audience, as depicted by the image of a woman, and specifically focuses on those who experience accidental urine leakage or urgency, are veterans, and are 20 years of age or older. Potential participants must be willing to answer questions about their medical history and have access to the internet using a cell phone or a computer. Below the listed requirements, key points are bolded to emphasize that compensation is provided, all treatment is free of charge, and no in-person visits are required during the study. Several entry links, such as a QR code and an email, are embedded for potential participants to learn more about the program.
PURSUIT	UI Clinician Pocket Guide	• Provider education	• Providers	• Diagnosis • Management (treatment)	A UI pocket guide for providers in Veterans Affairs that outlines lifestyle modifications, diagnosis codes, and treatment options.
OPTIMA	UI Pocket Guide	• Provider education	• Primary care providers	• Diagnosis • Management (treatment)	A comprehensive pocket guide that provides clinicians with a quick view of the UI treatment algorithm and descriptions of clinical decision support tools. Clinical decision support tools include indicating if a patient is part of the INTUIT study, note templates from SmartSet, and the use of SmartSet to send referral.
OPTIMA	CDS Tools	• Provider education	• Primary care providers	• Screening • Diagnosis • Management (medications, lab orders) • Referral	Slides that present an overview of a clinical decision support tool used as a practice-based intervention to improve care for women with UI. Geared toward educating providers, the slides depict best practices for patient screening with detailed screenshots of an epic EHR system. The slides provide information on note templates and accessing note templates. The SmartSet feature assists with UI diagnosis, medications, lab orders, advanced practice practitioner referrals, electronic referrals, and patient education resources. The intervention also features a co-manager option.
IT2	Primary Care Clinician Educational Module on UI	• Provider education	• Primary care providers	• Diagnosis • Management (treatment)	This brief (less than 10 minutes) module includes educational material covering current evidence-based best practices for various types of incontinence. These include one clinical vignette for each of the five topics covered. The vignette topics are (1) diagnosis of mixed UI, (2) specialist-guided pelvic floor PT, (3) anticholinergic

Team	Title	D&I Type	Audience	Stage	Description
					medication, (4) procedural therapies for UUI, and (5) a mid-urethral sling.

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