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The Effectiveness of Nurse-Led Bladder Training Programs in Managing Urinary Incontinence Among Older Adults

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ABSTRACT: Nurse-led bladder training programs have emerged as a vital intervention for managing urinary incontinence among older adults. These programs, which emphasize patient-centered approaches and education, empower individuals to take an active role in

their bladder health. By incorporating personalized strategies and techniques, such as scheduled toileting and pelvic floor exercises, nurses play a crucial role in reducing the frequency and severity of incontinence episodes. Research has shown that such programs not only improve patients' functional outcomes but also enhance their quality of life, fostering a sense of dignity and independence in older adults who may otherwise feel stigmatized by their condition. The effectiveness of these programs lies in the holistic care provided by nurses, who can assess individual needs and develop tailored interventions. Furthermore, regular follow-ups and support from nursing professionals ensure sustained adherence to the training regimen. Studies reveal that nurse-led bladder training significantly decreases the incidence of urinary incontinence in older populations, thereby alleviating the emotional and social burdens associated with the condition. Ultimately, these programs highlight the importance of specialized nursing care in geriatric health and the potential for non-pharmacological interventions to significantly improve patient outcomes.

INTRODUCTION

Urinary incontinence (UI) is one of the most prevalent and consequential geriatric syndromes, affecting millions of older adults worldwide and placing a substantial burden on individuals, families, and health systems. Although UI is often treated as an unavoidable part of ageing, it is a treatable condition, and conservative behavioural interventions are recommended as first-line management for most older adults [1]. Among these interventions, bladder training delivered through structured, nurse-led programs has attracted considerable attention because it is non-invasive, low-risk, and closely aligned with nursing competencies. The central question addressed in this essay is whether nurse-led bladder training programs are effective in managing UI among older adults [2].

The epidemiological scale of UI in later life is substantial. Prevalence estimates vary according to definitions, settings, and methods of ascertainment, but community-based studies consistently demonstrate a marked age gradient [2]. In the Swedish general elder population, the prevalence of UI in men ranged from 10% among those aged 60–69 years to 28% among those older than 80 years, while corresponding values for women ranged from 21% to 42% [2]. Other epidemiological reviews report that most studies place the prevalence of UI in women at 25–45% and in men at 5–35%, with estimates rising steeply after the age of 60 [2]. The condition is even more concentrated in long-term care settings: UI affects approximately 60–70% of nursing home residents, and some multicentre studies report prevalence as high as 75% or more among institutionalised older adults [3]. These figures indicate that UI is not a marginal problem but a defining feature of geriatric care.

The consequences of UI extend far beyond the symptom of leakage. Older adults with UI are at increased risk of skin breakdown, urinary tract infections, falls associated with hurried toileting, and social withdrawal [3]. The condition is strongly associated with reduced health-related quality of life, depressive symptoms, caregiver burden, and premature institutionalisation [3]. Economically, the costs are considerable. In England and Wales, the National Health Service spends approximately GBP 80 million annually on containment products alone, and extrapolations from the United States have estimated an annualised cost of nursing home admissions attributable to UI of approximately USD 6 billion [4]. These costs are driven not only by absorbent products but also by nursing labour, laundry, and the management of complications [4]. Given this burden, interventions that can reduce leakage episodes, restore continence, or delay functional decline have substantial clinical and economic value.

The human cost of UI is equally important. Older adults often describe shame, fear of odour, restriction of social activities, and loss of dignity [5]. Many reduce fluid intake to avoid leakage, which paradoxically worsens urgency and may lead to dehydration and constipation [5]. Family carers report increased workload, sleep disruption, and emotional strain [5]. These consequences mean that effective continence care is not simply a matter of symptom control but a fundamental component of dignified geriatric care.

Types of Urinary Incontinence and Implications for Bladder Training

UI in older adults is not a single condition but a heterogeneous group of disorders with different pathophysiological mechanisms [6]. The main types relevant to bladder training are urge incontinence, stress incontinence, mixed incontinence, overflow incontinence, and functional incontinence [6]. Urge incontinence, often associated with detrusor overactivity, is characterised

by a sudden and compelling desire to void that is difficult to defer, followed by involuntary leakage [6]. Stress incontinenc e involves leakage on effort, exertion, sneezing, or coughing, reflecting failure of urethral closure mechanisms under conditions of increased intra-abdominal pressure [6]. Mixed incontinence, the coexistence of urge and stress symptoms, is particularly common in older women, and older adults frequently present with multiple contributing factors, including impaired mobility, cognitive decline, and polypharmacy [6]. Overflow incontinence, associated with incomplete bladder emptying, and functional incontinence, in which the bladder itself may be normal but the individual cannot reach the toilet in time because of physical, cognitive, or environmental barriers, require different management approaches [6].

This heterogeneity has direct implications for the design and expected effectiveness of bladder training. Bladder training is primarily indicated for urge incontinence and mixed incontinence with a prominent urgency component, because its core mechanism involves gradually extending the voiding interval and teaching the patient to suppress urgency through cortical and pelvic floor-mediated inhibition [7]. The intervention is less directly applicable to pure stress incontinence, where pelvic floor muscle training (PFMT) is the first-line conservative approach [8], and to overflow incontinence, which may require catheterisation or pharmacological management [6]. Functional incontinence requires environmental adaptation, mobility support, and carer-assisted toileting rather than bladder retraining in the strict sense [9]. Consequently, the effectiveness of nurse-led bladder training depends heavily on appropriate patient selection and on the nurse's ability to distinguish among types of UI and to tailor the intervention accordingly. Table 1 summarises the principal types of UI and their alignment with bladder training.

Table 1. Types of urinary incontinence and alignment with nurse-led bladder training

Type of UI	Predominant mechanism	Suitability for bladder training	Common adjuncts
Urge incontinence	Detrusor overactivity; involuntary detrusor contractions	High; bladder training is a first-line behavioural intervention	Timed voiding, urgency suppression techniques, PFMT
Stress incontinence	Urethral sphincter weakness; increased intra-abdominal pressure	Low as monotherapy; PFMT is first-line	PFMT with or without biofeedback, lifestyle modification
Mixed incontinence	Combination of urge and stress components	Moderate to high when urgency predominates	Bladder training combined with PFMT and fluid management
Overflow incontinence	Incomplete bladder emptying; detrusor underactivity or outlet obstruction	Low; requires evaluation for retention and catheterisation	Intermittent catheterisation, pharmacological review
Functional incontinence	Physical, cognitive, or environmental barriers to toileting	Variable; depends on remediable barriers	Environmental modification, prompted voiding, carer training

Rationale for Nurse-Led Programs

The rationale for nurse-led bladder training rests on several interconnected arguments. First, behavioural interventions for UI are labour-intensive and depend on repeated assessment, education, reinforcement, and documentation [10]. These activities fall squarely within nursing scope of practice and are difficult to deliver consistently within traditional physician-led consultation models, which are constrained by time and competing clinical priorities [10]. Second, nurses are uniquely positioned to build therapeutic relationships with older adults over time, particularly in community and long-term care settings, and this relational continuity is essential for sustaining adherence to scheduled voiding and lifestyle change [11]. Third, task-shifting to nurses can improve access to evidence-based continence care, especially in settings where specialist continence services are scarce or unevenly distributed [10]. The available evidence supports this rationale: systematic reviews of nurse-led continence services report reductions in UI episodes and improvements in health-related quality of life and satisfaction, indicating that protocol-based nursing interventions can achieve clinically relevant benefits [10]. In long-term care, nurses are consistently described as key professionals for continence assessment, individualised care planning, implementation of conservative measures such as

prompted voiding, and monitoring of outcomes [11]. The nurse-led model therefore represents a pragmatic response to both the epidemiological scale of UI and the structural limitations of conventional care delivery.

Components of Nurse-Led Bladder Training Programs

Although programs vary across studies and settings, the most effective nurse-led bladder training interventions share a common architecture. The first component is structured assessment. Before training begins, the nurse establishes a baseline through a voiding diary, typically kept for three to seven days, which records voiding frequency, leakage episodes, fluid intake, and precipitating factors [12]. This assessment allows the nurse to identify the patient's current voiding interval and to set an initial scheduled interval that is achievable rather than aspirational [12]. The second component is patient education. Older adults need to understand normal bladder function, the rationale for scheduled voiding, the nature of urgency, and the distinction between genuine bladder signals and conditioned patterns of frequent voiding [13]. Education should be delivered in accessible language and reinforced over multiple contacts, because knowledge alone is insufficient to change longstanding habits [13].

The third component is scheduled voiding with gradual interval extension. Bladder training encourages people to extend the time between voids so that continence might be regained [14]. In practice, the nurse and patient agree on a starting interval—commonly one to two hours during the day—and the patient voids according to the schedule rather than in response to every urge [14]. As tolerance improves, the interval is lengthened in increments of 15 to 30 minutes, with the goal of achieving a three- to four-hour voiding interval [14]. For cognitively impaired older adults, prompted voiding may be more appropriate, in which the carer initiates toileting at regular intervals rather than waiting for the patient to request assistance [15]. The fourth component is urgency suppression training. When an urge occurs before the scheduled voiding time, the patient is taught to remain still, contract the pelvic floor muscles several times, breathe slowly, and allow the urge to subside before proceeding to the toilet at a normal pace [16]. This technique is based on the observation that a detrusor contraction can be inhibited by a pelvic floor muscle contraction, and it is a core skill in bladder retraining [16]. The fifth component is PFMT, which is often combined with bladder training to improve sphincter function and to enhance the patient's ability to suppress urgency [17]. PFMT should be taught individually with attention to correct technique, and adherence should be monitored at follow-up visits [17]. The sixth component is lifestyle and fluid management, including advice on adequate but not excessive fluid intake, reduction of caffeine and alcohol where relevant, and management of constipation [18]. Finally, structured follow-up and documentation are essential. Nurse-led programs typically include planned review contacts, either in person or by telephone, at which the voiding diary is reviewed, progress is reinforced, and the schedule is adjusted [19]. This cycle of assessment, education, scheduled voiding, urgency suppression, PFMT, lifestyle modification, and review constitutes the operational core of nurse-led bladder training.

Table 2. Core components of nurse-led bladder training programs

Component	Purpose	Typical delivery
Structured assessment and voiding diary	Establish baseline voiding pattern and leakage frequency	3–7-day diary reviewed by nurse
Patient education	Explain bladder function, rationale for training, and urgency mechanisms	Face-to-face sessions with written reinforcement
Scheduled voiding with interval extension	Reduce frequency and increase bladder capacity	Starting interval of 1–2 hours, gradually increased to 3–4 hours
Urgency suppression training	Teach inhibition of detrusor contraction and controlled response to urgency	Pelvic floor contractions, distraction, slow breathing
Pelvic floor muscle training	Improve sphincter support and urgency control	Individualised teaching with adherence checks
Lifestyle and fluid management	Reduce bladder irritants and optimise hydration	Caffeine/alcohol reduction, fluid scheduling, bowel regulation
Structured follow-up	Reinforce adherence, adjust schedule, and monitor outcomes	Planned contacts at 2–4-week intervals

Evidence of Effectiveness: Findings from Randomized Controlled Trials

The strongest evidence for nurse-led bladder training comes from randomised controlled trials conducted in community and primary care settings. One of the largest and most frequently cited trials evaluated a continence nurse practitioner-led service in Leicestershire and Rutland, United Kingdom [20]. The intervention comprised an eight-week package delivered by specially trained nurses and included advice on diet and fluids, bladder training, pelvic floor awareness, and lifestyle advice [20]. At three months, 59% of participants in the intervention group improved with at least one symptom alleviated, compared with 48% in the standard care group, a difference of 11% (95% CI 7–16; P<0.001) [20]. The proportion reporting no symptoms or being "cured" was 25% in the intervention group and 15% in the standard care group, and the difference was maintained at six months [20]. The intervention reduced symptoms of incontinence, frequency, urgency, and nocturia, and satisfaction with the new service was high [20]. This trial demonstrates that a protocol-driven, nurse-led program can produce clinically meaningful improvements at the population level.

More recent trials have examined hybrid models that combine offline and online self-management support. In a single-blind, two-arm parallel randomised controlled trial with 66 community-dwelling older people with mild to moderate UI, a nurse-led hybrid self-management program produced statistically significant improvements at six months in self-efficacy (mean difference 45.3, 95% CI 38.9–51.8, p<0.001), UI-related knowledge (mean difference 10.5, 95% CI 8.8–12.2, p<0.001), attitude (mean difference 4.1, 95% CI 3.0–5.1, p<0.001), quality of life (mean difference 19.3, 95% CI 15.4–23.2, p<0.001), and UI severity (mean difference 4.1, 95% CI 2.8–5.4, p<0.001) compared with usual nursing care [21]. The intervention also improved adherence to PFMT [21]. Although the sample was modest, the trial is important because it demonstrates that nurse-led programs can be effective when delivered through blended modes that may be more scalable than purely face-to-face services [21].

Other randomised trials have focused on specific populations and delivery formats. A cluster randomised controlled trial among female nursing home residents found that residents in the intervention group were five times more likely to receive recommended conservative interventions, including bladder training, than residents in the control group (OR = 5.16, p = 0.00) [22]. This finding is significant because it shows that nurse-led implementation strategies can change care processes even in the highly constrained environment of nursing homes [22]. Trials of nurse continence advisor-led interventions have also reported reductions in incontinence symptoms, although the evidence base is smaller and more heterogeneous than that for community-based programs [20]. Taken together, the randomised controlled trial evidence supports the conclusion that nurse-led bladder training is superior to usual care for improving symptoms, knowledge, self-efficacy, and quality of life, particularly when the intervention is multicomponent and delivered with structured follow-up [20–22].

Table 3. Summary of key randomised controlled trial evidence on nurse-led bladder training

Trial and setting	Population	Intervention	Key outcomes
Williams et al., UK primary care [20]	Adults aged ≥40 with UI (n = 3,746)	8-week continence nurse practitioner-led package including bladder training, PFMT, and lifestyle advice	59% improved at 3 months vs 48% with standard care; 25% vs 15% became symptom-free
Yan et al., community primary care [21]	Older adults with mild-to-moderate UI (n = 66)	Nurse-led hybrid self-management program with bladder training, PFMT, and education	Significant improvements in self-efficacy, knowledge, quality of life, and UI severity at 6 months
Cluster RCT in nursing homes [22]	Female nursing home residents	Nurse-led implementation of conservative UI management, including bladder training	Residents five times more likely to receive recommended interventions (OR = 5.16)

Evidence of Effectiveness: Findings from Systematic Reviews and Meta-Analyses

Systematic reviews provide a broader perspective on the consistency and magnitude of effects across studies. An executive summary of evidence on behavioural interventions for community-dwelling seniors reported that multicomponent behavioural interventions, including bladder training, PFMT, bladder control strategies, education, and self-monitoring, produced a significant reduction in the mean number of incontinent episodes per week (weighted mean difference 3.63, 95% CI 2.07–5.19) and a significant improvement in patients' perception of UI (OR 4.15, 95% CI 2.70–6.37), with a suggestive beneficial impact

on health-related quality of life [23]. The same review found that PFMT alone also reduced incontinent episodes, but the evidence for multicomponent programs was stronger and more consistent with the design of nurse-led bladder training [23].

A systematic review of multifaceted self-management interventions for older women with UI reported a reduction of 10.00 episodes per week (95% CI −13.89 to −6.11), equivalent to approximately 1.4 fewer episodes per day, in the intervention group compared with no treatment [23]. Another synthesis of behavioural training comprising PFMT, lifestyle modification, and bladder retraining found that the intervention group experienced 0.8 fewer UI episodes per day than controls (mean difference −0.80, 95% CI −1.42 to −0.18), along with better self-reported quality of life and subjective UI severity [23]. These effect sizes are clinically meaningful, particularly for older adults whose baseline leakage frequency may be several episodes per day [23].

At the same time, systematic reviews have highlighted important limitations. A Cochrane review of bladder training concluded that clear conclusions regarding effectiveness are difficult because of heterogeneity in populations, interventions, and outcome measures, and only a minority of included studies focused predominantly on people older than 65 years [24]. A broader overview of Cochrane reviews noted that bladder retraining may be a beneficial intervention for UI, but the strength of the recommendation is tempered by methodological limitations [24]. A meta-analysis of 11 randomised trials comparing nurse-led care with general practitioner-led care found no clear benefit in terms of health outcomes, although data on cost were limited [25]. These findings do not negate the positive results of individual trials; rather, they indicate that the effectiveness of nurse-led bladder training is conditional on the content, intensity, and implementation quality of the program [24,25]. Programs that are brief, poorly specified, or delivered without adequate training and follow-up are unlikely to reproduce the effects observed in well-resourced trials [24].

Clinical and Patient-Reported Outcomes

The outcomes used to evaluate nurse-led bladder training extend beyond leakage frequency. Patient-reported outcomes are particularly important in geriatric continence care because the goal is not only to reduce episodes but also to restore digni ty, confidence, and participation in social life [21]. Trials have consistently shown improvements in health-related quality of life. In the hybrid self-management trial, the quality-of-life mean difference of 19.3 points at six months represents a substantial change on the instrument used [21]. A nurse-led multidisciplinary non-pharmacological program in an intermediate care hospital reduced UI severity, increased voiding awareness, enhanced functional autonomy, and improved quality of life in older adults [19]. Structured nurse-led toileting programs have also been associated with improvements in satisfaction and in the preservation of dignity and functional independence, which are outcomes that matter deeply to older people and their families [19].

Self-efficacy is another important intermediate outcome. Older adults who understand their bladder function and believe they can influence their symptoms are more likely to adhere to scheduled voiding and PFMT [21]. The hybrid self-management trial demonstrated a large improvement in self-efficacy, and this improvement was accompanied by better adherence to PFMT [21]. Knowledge and attitude also improved, suggesting that nurse-led education can address the misconceptions and fatalism that often surround UI in later life [21]. These patient-reported benefits are not merely secondary; they are central to the effectiveness of bladder training, because behavioural interventions depend on the patient's active participation and sustained engagement [21].

Cost-Effectiveness and Resource Utilization

The economic case for nurse-led bladder training is plausible but not yet fully established. On the cost side, UI imposes substantial direct and indirect costs. In addition to the GBP 80 million spent annually on containment products in England and Wales, nursing labour costs are the largest component of UI care in nursing homes, and the costs of managing complications add further to the total [4]. Interventions that reduce leakage episodes and dependency on absorbent products have the potential to generate savings, but the magnitude of those savings depends on the intensity of the intervention, the cost of nursing time, and the duration of effect [20].

Several studies have examined the cost-effectiveness of nurse-led continence services. The Leicestershire trial included a concurrent cost-effectiveness evaluation, and the intervention was found to reduce symptoms at three and six months with high satisfaction, although the economic results were not uniformly favourable [20]. More recent implementation research has explicitly addressed the gap between evidence and practice, and it will provide data on whether nurse-led programs can be cost-effective when delivered at scale [10]. A randomised controlled trial on the cost-effectiveness of involving nursing specialists

for adults with UI in primary care has also been conducted, and the results suggest that nurse-led care can be cost-effective under certain assumptions [25]. However, the evidence is not yet sufficient to conclude that nurse-led bladder training is cost-saving in all settings [25]. The economic case is strongest when programs target patients who are likely to benefit, use group-based or blended delivery to reduce per-patient costs, and are integrated into existing nursing workflows rather than added as a separate service [20,25].

Implementation Barriers and Facilitators

The effectiveness of nurse-led bladder training in research settings does not automatically translate into effectiveness in routine care. Implementation is the critical mediating factor, and the literature identifies a consistent set of barriers and facilitators [10]. The most frequently reported barriers are staff shortages, high workload, time pressure, and competing clinical priorities [11]. Nurses in long-term care and hospital settings report that proactive continence care is difficult to deliver when staffing levels are inadequate, and scheduled toileting regimens are often the first casualty of a busy shift [11]. A related barrier is the lack of training and confidence in continence assessment. Nurses may feel uncertain about how to distinguish among types of UI, how to conduct a voiding diary assessment, or how to teach PFMT, and this uncertainty undermines the consistency and quality of the intervention [10]. Documentation burden, lack of bladder scanners, and difficulty maintaining individualised routines—especially for patients with cognitive impairment—are also commonly cited [11].

Attitudinal and cultural factors are equally important. Incontinence is frequently regarded as a taboo subject associated with shame and stigma, and this inhibits disclosure and acceptance of structured toilet training [3]. Staff may experience embarrassment, disgust, or uncertainty in intimate care situations, and negative or ambivalent attitudes towards incontinence management can weaken engagement with conservative interventions even when protocols exist [3]. Some nurses regard UI as a low-priority problem that is unavoidable in older adults, and this belief can become a self-fulfilling prophecy [3]. Organisational factors, including fragmented documentation and a lack of explicit priority for continence care, further undermine reliability, with many facilities defaulting to containment with pads instead of active continence promotion [10].

Facilitators operate at multiple levels. At the individual level, nurses who receive structured training in continence assessment and bladder training report greater confidence and are more likely to deliver the intervention with fidelity [10]. At the tea m level, clear protocols, documentation tools, and regular review of continence status support consistency [19]. At the organisational level, leadership commitment, adequate staffing, and the integration of continence care into routine quality improvement activities are essential [22]. Implementation fidelity can be enhanced through training from continence nurse specialists, quality assurance checks, and regular study meetings, as demonstrated in intervention studies [19]. The evidence therefore suggests that nurse-led bladder training is effective when it is implemented as a system-level intervention rather than as an individual nurse's discretionary activity [10,19].

Adaptations for Cognitive Impairment and Frailty

Older adults with cognitive impairment represent a large and growing segment of the UI population, and the effectiveness of bladder training in this group requires specific consideration [15]. Standard bladder training relies on the patient's ability to understand the rationale, remember the schedule, and suppress urgency voluntarily, capacities that may be compromised in moderate to severe dementia [15]. For this reason, prompted voiding is often the preferred behavioural approach for cognitively impaired older adults [15]. In prompted voiding, the carer initiates toileting at regular intervals, prompts the patient to void, and provides positive feedback for successful toileting [15]. This approach does not require the patient to initiate the toileting sequence and is therefore more feasible in advanced cognitive impairment [15].

The evidence on bladder training in mild cognitive impairment is more encouraging. One study showed that bladder training can produce positive effects in older persons with mild dementia, suggesting that cognitive impairment should not be treated as an absolute contraindication to structured behavioural intervention [19]. The key is to adapt the program to the patient's cognitive capacity: shorter intervals, simpler instructions, visual cues, and greater involvement of family or professional carers [19]. For frail older adults with limited mobility, bladder training should be combined with environmental modification, such as a commode within reach, adequate lighting, and clear signage, and with assistance to reach the toilet in time [9]. The nurse's assessment skills are critical in determining whether the patient is best served by bladder training, prompted voiding, or a hybrid approach that shifts the initiative from the patient to the carer as cognitive function declines [9,15].

Sustainability and Quality Improvement

Sustainability is the ultimate test of effectiveness. Many nurse-led programs produce benefits during the funded study period, but the gains dissipate when the research infrastructure is withdrawn [10]. Sustainability depends on embedding bladder training into routine workflows, documentation systems, and staff training curricula [10]. It also depends on ongoing monitoring of outcomes. Simple indicators, such as the proportion of residents with a documented voiding diary, the proportion receiving scheduled toileting, and the mean number of leakage episodes per resident per day, can be used to track performance and to identify units or services that require additional support [19]. Quality improvement collaboratives, audit and feedback, and peer-led training can reinforce adherence over time [22]. The evidence from implementation studies suggests that protocol-based nursing interventions can achieve clinically relevant benefits when they are supported by fixed schedules, documentation tools, and regular review of continence status [10,19]. Sustainability therefore requires not only clinical competence but also organisational commitment and a culture in which continence care is treated as a core quality domain rather than an optional extra [22].

Limitations of the Evidence Base

Several limitations temper the conclusions that can be drawn from the current evidence. First, many trials are relatively small, and some are underpowered to detect modest but clinically important differences [24]. Second, the interventions are heterogeneous: "bladder training" may refer to programmes of different intensity, duration, and composition, making it difficult to identify the active ingredients [24]. Third, outcome measures vary widely across studies, which limits the pooling of data in meta-analyses and complicates comparisons between trials [23]. Fourth, many studies exclude older adults with significant cognitive impairment or frailty, precisely the groups in whom UI is most prevalent and in whom management is most challenging [9]. Fifth, follow-up periods are often short, typically three to six months, and there is limited evidence on the durability of effects beyond one year [20,21]. Sixth, the evidence on cost-effectiveness is not yet sufficient to support definitive economic claims, and the implementation literature is dominated by studies from high-income countries, limiting generalisability to low- and middle-income settings [25]. Finally, publication bias and the predominance of investigator-developed interventions may inflate the observed effects [24]. These limitations do not undermine the conclusion that nurse-led bladder training can be effective, but they do qualify the strength of that conclusion and point to the need for larger, better-specified, and more pragmatic trials [23–25].

Future Directions

Future research should address four priorities. First, trials should be designed with sufficient power and follow-up duration to evaluate both short-term and long-term effectiveness, including outcomes such as nursing home admission, caregiver burden, and health-economic impact [20]. Second, interventions should be standardised and described in sufficient detail to permit replication and to identify the active components [24]. Core outcome sets for continence research would facilitate comparability across studies [23]. Third, implementation research should test strategies for scaling nurse-led bladder training in routine care, including training models, audit and feedback, and the use of digital tools for voiding diaries and remote follow-up [21]. Fourth, research should give greater attention to older adults with cognitive impairment, frailty, and multimorbidity, and to culturally diverse populations, so that the evidence base reflects the heterogeneity of the people who most need continence care [9,15]. Hybrid effectiveness–implementation designs, such as the one used in the hybrid self-management trial, are particularly promising because they evaluate clinical effectiveness and implementation processes simultaneously [21].

CONCLUSION

Nurse-led bladder training programs effectively manage urinary incontinence in older adults, supported by evidence demonstrating their feasibility and alignment with nursing practice. Randomized controlled trials indicate that these programs reduce leakage, enhance self-efficacy, and improve quality of life, especially when they include structured assessments, education, scheduled voiding, training, lifestyle modifications, and follow-ups. While effective for community-dwelling older adults with urge or mixed incontinence, adaptations allow for broader application. The success of these interventions relies on appropriate patient selection, fidelity, organizational support, and overcoming barriers like staff shortages and stigma. Economic benefits are promising but not fully confirmed. Overall, broader implementation of nurse-led training as a conservative strategy for urinary incontinence is recommended, emphasizing investment in education and evaluation to enhance dignity and quality of life for older individuals.

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