Nephrology Nursing and Pelvic Health Integration for the Prevention of Recurrent Urinary Tract Infections and Preservation of Renal Function: An Integrative Review

Integração entre Enfermagem Nefrológica e Saúde Pélvica na Prevenção de Infecções Urinárias Recorrentes e Preservação da Função Renal: Uma Revisão Integrativa

Integración de la Enfermería Nefrológica y la Salud Pélvica para la Prevención de las Infecciones Urinarias Recurrentes y la Preservación de la Función Renal: Revisión Integrativa

RESUMO

Objetivo: Analisar as evidências científicas sobre a integração entre a enfermagem nefrológica e a saúde pélvica na prevenção de infecções do trato urinário recorrentes e na preservação da função renal. **Método:** Revisão integrativa da literatura realizada nas bases PubMed, SciELO, LILACS, CINAHL e Biblioteca Virtual em Saúde. Foram incluídos estudos publicados entre 2020 e 2025 relacionados à doença renal crônica, infecções urinárias recorrentes, saúde pélvica e enfermagem nefrológica. **Resultados:** As evidências demonstraram que disfunções do assoalho pélvico e alterações miccionais favorecem a recorrência de infecções urinárias e podem contribuir para o comprometimento progressivo da função renal. Intervenções multiprofissionais, como educação em saúde, treinamento da musculatura do assoalho pélvico, monitoramento clínico e reabilitação pélvica com biofeedback eletromiográfico, estiveram associadas à redução das infecções, melhora dos sintomas urinários, preservação da função renal e aumento da qualidade de vida. Protocolos assistenciais integrados também apresentaram potencial para reduzir hospitalizações. **Conclusão:** A integração entre enfermagem nefrológica e saúde pélvica favorece melhores desfechos clínicos e reforça a importância do cuidado interdisciplinar baseado em evidências.

DESCRITORES: Enfermagem em Nefrologia. Infecção do Trato Urinário. Doença Renal Crônica. Assoalho Pélvico. Educação em Saúde.

ABSTRACT

Objective: To analyze scientific evidence on the integration of nephrology nursing and pelvic health in the prevention of recurrent urinary tract infections and the preservation of renal function. **Method:** An integrative literature review was conducted using the PubMed, SciELO, LILACS, CINAHL, and Virtual Health Library databases. Studies published between 2020 and 2025 addressing chronic kidney disease, recurrent urinary tract infections, pelvic health, and nephrology nursing were included. **Results:** Evidence showed that pelvic floor dysfunctions and voiding disorders contribute to recurrent urinary tract infections and may be associated with progressive renal function impairment. Multidisciplinary interventions, including health education, pelvic floor muscle training, clinical monitoring, and pelvic rehabilitation using electromyographic biofeedback, were associated with reduced infection recurrence, improvement of urinary symptoms, preservation of renal function, and enhanced quality of life. Integrated care protocols also demonstrated potential to reduce hospitalizations. **Conclusion:** The integration of nephrology nursing and pelvic health promotes better clinical outcomes and reinforces the importance of interdisciplinary, evidence-based care.

DESCRIPTORS: Nephrology Nursing. Urinary Tract Infections. Chronic Kidney Disease. Pelvic Floor Dysfunction. Health Education.

RESUMEN

Objetivo: Analizar la evidencia científica sobre la integración entre la enfermería nefrológica y la salud pélvica en la prevención de las infecciones urinarias recurrentes y la preservación de la función renal. **Método:** Revisión integradora de la literatura realizada en las bases de datos PubMed, SciELO, LILACS, CINAHL y Biblioteca Virtual en Salud. Se incluyeron estudios publicados entre 2020 y 2025 relacionados con la enfermedad renal crónica, las infecciones urinarias recurrentes, la salud pélvica y la enfermería nefrológica. **Resultados:** La evidencia mostró que las disfunciones del suelo pélvico y las alteraciones miccionales favorecen la recurrencia de las infecciones urinarias y pueden contribuir al deterioro progresivo de la función renal. Las intervenciones multidisciplinarias, como la educación para la salud, el entrenamiento de la musculatura del suelo pélvico, el seguimiento clínico y la rehabilitación pélvica mediante biofeedback electromiográfico, se asociaron con la reducción de la recurrencia de las infecciones, la mejoría de los síntomas urinarios, la preservación de la función renal y el aumento de la calidad de vida. Los protocolos asistenciales integrados también demostraron potencial para reducir las hospitalizaciones. **Conclusión:** La integración entre la enfermería nefrológica y la salud pélvica favorece mejores resultados clínicos y refuerza la importancia de una atención interdisciplinaria basada en la evidencia.

DESCRIPTORES: Enfermedad Renal Crónica; Infecciones del Tracto Urinario; Salud Pélvica; Enfermería Nefrológica; Prevención de Enfermedades.

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INTRODUCTION

Chronic Kidney Disease (CKD) and recurrent urinary tract infections (RUTIs) constitute major public health problems due to their high prevalence, association with significant morbidity and mortality, and substantial impact on health care systems. CKD ranks among the leading causes of preventable hospitalizations, reduced quality of life, and increased healthcare costs, especially when associated with repeated urinary tract infections[1-2] . In this context, preventing complications and preserving kidney function become priorities in healthcare, requiring integrated, evidence-based approaches focused on patient safety.

Nephrology nursing plays a strategic role in this scenario, contributing to continuous clinical monitoring, the early identification of urinary signs and symptoms, the implementation of care protocols, and health education. Through the Systematization of Nursing Care, nurses contribute to reducing complications associated with CKD by promoting treatment adherence, preventing healthcare-associated infections, and providing longitudinal patient follow-up [3–5] . This role is essential for mitigating the progression of kidney damage and reduce hospitalizations resulting from potentially preventable complications [6] .

At the same time, pelvic floor dysfunction and changes in voiding patterns are significant risk factors for the development and recurrence of UTIs. Conditions such as incomplete bladder emptying, urinary incontinence, detrusor overactivity, and vesicosphincteric dyscoordination promote urinary stasis and bacterial proliferation, allowing microorganisms to ascend into the upper urinary tract [7-8] . When not properly identified and managed, these abnormalities can progress to pyelonephritis, trigger persistent inflammatory processes, and culminate in tubulointerstitial fibrosis, contributing to progressive and irreversible impairment of renal function [9-10] .

Scientific evidence shows that recurrent episodes of urinary tract infection, especially when associated with pyelonephritis, are linked to renal scarring and the progression of nephropathy, with a gradual decline in glomerular filtration rate [11–13] . This process underscores the importance of early preventive interventions capable of breaking the cycle of infection, inflammation, and structural kidney damage.

Pelvic health therefore plays a central role in preserving kidney function, especially in vulnerable populations such as women, the elderly, patients with neurological conditions, and individuals with CKD. However, it has been observed that the assessment and management of voiding dysfunction often occur in a fragmented manner and are disconnected from nephrological care, limiting the effectiveness of preventive strategies and contributing to the recurrence of urinary tract infections [14–15] . Given this scenario, it is pertinent to ask how the integration of nephrology nursing and pelvic health can contribute to the prevention of recurrent urinary tract infections, the preservation of kidney function, and the reduction of healthcare costs.

The integration of nephrology nursing, stoma care, and pelvic health is emerging as a relevant care strategy that has yet to be fully systematized. This approach enables the early identification of functional changes in the lower urinary tract, the implementation of educational and rehabilitative interventions, and the use of technologies—such as electromyography—aimed at training and re-educating the pelvic floor [15–16] . Such interventions promote improved bladder emptying, reduce urinary stasis, and decrease the recurrence of UTIs, positively impacting the preservation of renal function and patients' quality of life.

> "In addition to clinical benefits, integrated and preventive care models have a significant impact on the optimization of healthcare resources."

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The reduction in hospitalizations for UTIs, the use of broad-spectrum antibiotics, and supplies related to the management of urinary incontinence directly contributes to lower hospital costs and the sustainability of health care systems[17-18] . In this regard, value-based care stands out as a contemporary paradigm by prioritizing better clinical outcomes associated with the rational use of available resources.

The relevance of this study is grounded in the need to consolidate preventive, integrated, and evidence-based approaches to the care of patients with renal impairment. Recurrent urinary tract infections, urinary dysfunction, and deficiencies in pelvic health management are factors that are often underestimated but are critical in the progression of nephropathy and the increase in morbidity and mortality. There is also a gap in the literature regarding the systematic integration of pelvic health, stoma care, and nephrology nursing from the perspective of preventing kidney damage and ensuring the operational efficiency of health services. Thus, this study holds scientific, clinical, and social relevance by supporting the development of more effective, preventive, and sustainable care models.

In light of the above, the overall objective of this study is to analyze, through an integrative literature review, the contribution of the integration between nephrology nursing and pelvic health to the preservation of renal function. The specific objectives are to identify the relationship between lower urinary tract dysfunction and the progression of structural kidney damage; to describe the role of nephrology nursing in the prevention of recurrent urinary tract infections and cases of pyelonephritis; to analyze the effectiveness of pelvic rehabilitation interventions in managing urological complications; to assess the impact of these practices on reducing hospitalizations, resource use, and hospital costs; and to discuss the importance of health education and multidisciplinary care in promoting patient safety and quality of life for patients with renal impairment.

METHODOLOGY

This is an integrative literature review, a method that allows for the critical synthesis of scientific evidence from studies with different methodological designs, thereby enabling a broader understanding of the phenomenon under investigation.

The literature search was conducted in the following databases: PubMed, Scientific Electronic Library Online (SciELO), Latin American and Caribbean Health Sciences Literature (LILACS), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and the Virtual Health Library (BVS). The search strategy utilized controlled descriptors from the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH) vocabularies, combined using Boolean operators, including the terms: *Nephrology Nursing*, *Urinary Tract Infection*, *Chronic Kidney Disease*, *Pelvic Health*, and *Health Education*, adapted according to the specific characteristics of each database.

The search strategy was structured by combining controlled descriptors and free-text terms, using the Boolean operators AND and OR, according to the following syntax: ("Nephrology Nursing" OR "Nephrology Nursing") AND ("Urinary Tract Infection" OR "Urinary Tract Infection") AND ("Chronic Kidney Disease" OR "Chronic Kidney Disease") AND ("Pelvic Health" OR "Pelvic Health") AND ("Health Education" OR "Health Education").

We included scientific articles published between 2020 and 2025, available in full text and free of charge, in Portuguese, English, or Spanish, that addressed the intersection of nephrology nursing, pelvic health, recurrent urinary tract infections, and outcomes related to the preservation of kidney function or the effectiveness of health care. Duplicate studies, publications without access to the full text, and articles that did not align with the research objectives were excluded.

Data analysis was conducted using both descriptive and analytical methods, with findings organized into thematic categories, enabling the construction of an integrative synthesis of the scientific evidence relevant to the study's scope.

The study selection process was conducted in accordance with the PRISMA 2020 guidelines. Initially, 324 records were identified in the PubMed, CINAHL, SciELO, LILACS, and BVS databases. After removing 86 duplicate records, 238 studies remained for screening by title and abstract. At this stage, 183 studies were excluded for failing to meet the eligibility criteria, resulting in 55 articles selected for full-text review. After detailed analysis, 35 studies were excluded because they did not present clinical outcomes related to renal function, did not address the integration between nephrology nursing and pelvic health, or because the full text was unavailable. At the end of the process, 20 studies comprised the final sample of this integrative review, including scientific articles and institutional guidelines relevant to the topic under investigation.

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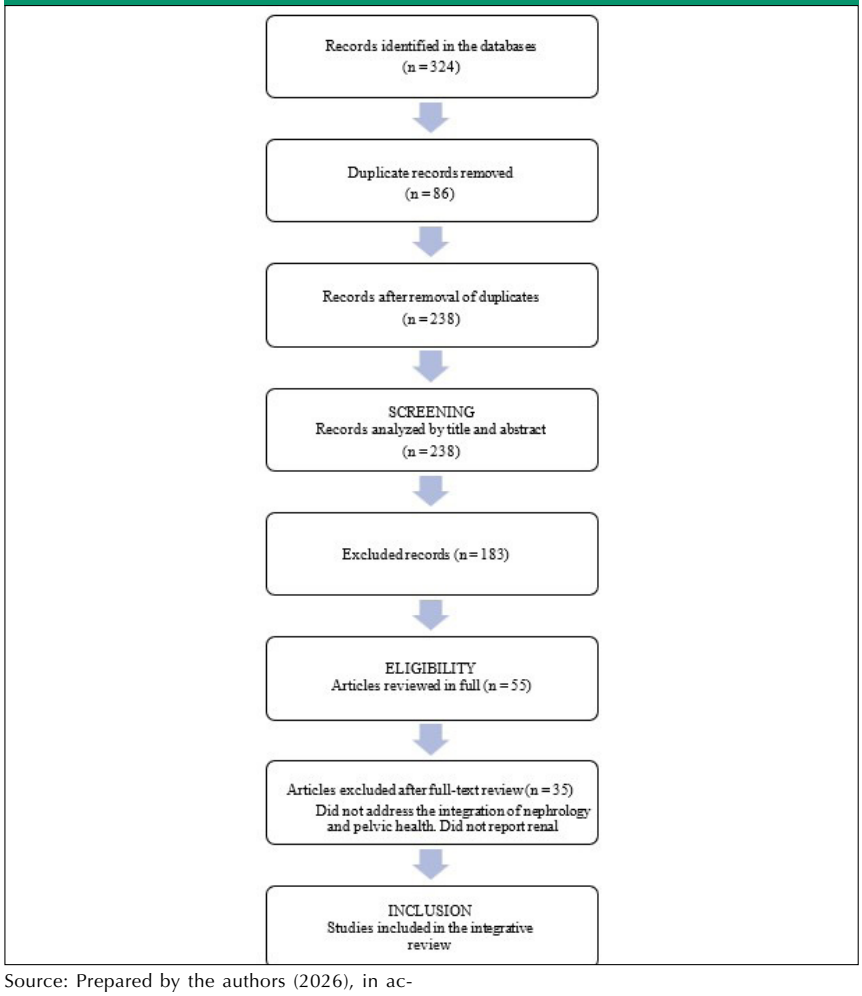
Flowchart 1 – Flowchart of the study selection process according to PRISMA 2020



Source: Prepared by the authors (2026), in accordance with the PRISMA 2020 guidelines.

RESULTS AND DISCUSSION

Recurrent Urinary Tract Infections and Kidney Damage

Recurrent urinary tract infections (RUTIs) constitute a major risk factor for the development and progression of kidney damage, especially when associated with repeated episodes of pyelonephritis and anatomical or functional abnormalities of the lower urinary tract. The literature demonstrates that recurrent infections facilitate bacterial ascension into the renal parenchyma, triggering persistent inflammatory processes that compromise the structural and functional integrity of the nephrons [6,19].

Recurrent pyelonephritis, especially in the presence of vesicoureteral reflux, is directly related to the development of reflux nephropathy, characterized by the formation of focal or diffuse renal scarring. This chronic inflammatory process can progress to secondary hypertension, proteinuria, and a progressive decline in the glomerular filtration rate, constituting an important mechanism for the progression of chronic kidney disease (CKD) [11,20]. Although classically described in the pediatric population, evidence suggests that reflux nephropathy may persist or manifest in adulthood, especially in individuals with a history of inadequately treated recurrent urinary tract infections (UTIs).

From a histopathological perspective, recurrent infectious episodes are associated with sustained activation of inflammatory and fibrogenic pathways, culminating in tubulointerstitial fibrosis. This process, considered one of the main common end-stage mechanisms of CKD progression, involves the activation of fibroblasts and myofibroblasts, increased deposition of the extracellular matrix, and progressive loss of tubular architecture, resulting in irreversible impairment of renal function [9–10].

Population-based studies indicate that the presence of recurrent urinary tract infections (UTIs) is associated with an increased risk of declining kidney function over time, especially in vulnerable groups such as postmenopausal women, older adults, and patients with urological comorbidities or pelvic floor dysfunction [8,21]. In this context, early identification of recurrent UTIs and the implementation of integrated preventive strategies are essential to break the cycle of infection, inflammation, and progressive kidney damage.

Thus, the appropriate management of recurrent urinary tract infections, combined with functional assessment of the lower urinary tract, stands out as a fundamental strategy for preserving kidney function. Integrated collaboration between nephrology nursing and pelvic health reinforces the need for care models based on prevention, continuous monitoring, and interdisciplinary care.

Pelvic Floor Dysfunction and Risk of Urinary Tract Infections

Pelvic floor dysfunction is a significant and often underestimated clinical factor in the development of urinary tract infections (UTIs), especially when associated with chronic changes

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in voiding patterns. Conditions such as vesicosphincteric dyscoordination, functional urinary retention, detrusor overactivity, and alterations in muscle tone compromise effective bladder emptying, promoting urinary stasis and bacterial proliferation [7,22].

Prolonged urinary stasis is directly associated with an increased intravesical bacterial load and a higher likelihood of ascending colonization of the urinary tract. Evidence indicates a higher incidence of recurrent UTIs in individuals with incomplete bladder emptying, particularly women, the elderly, and patients with neurological diseases or a history of pelvic surgery [23-24].

In addition, pelvic floor dysfunction interferes with the physiological defense mechanisms of the lower urinary tract, such as effective urethral closure and coordination of the micturition reflex. The loss of this functional synergy contributes to irritative urinary symptoms and episodes of incontinence, which are often associated with prolonged use of absorbent products. This scenario contributes to changes in the perineal microbiota, increased local moisture, and a higher risk of periurethral contamination [25–26].

In patients with neurogenic bladder, the relationship between voiding dysfunction and UTIs becomes even more evident. The absence of coordinated bladder contractions and increased intravesical pressures not only promote recurrent infections but also increase the risk of functional vesicoureteral reflux and progressive renal impairment[27-28].

In this context, early interventions focused on pelvic floor assessment and rehabilitation have been shown to significantly reduce the incidence of recurrent UTIs. The use of tools such as surface electromyography allows for the objective identification of dysfunctional patterns and the development of individualized treatment plans, promoting improved bladder emptying and normalization of the voiding pattern [23,29].

Thus, understanding pelvic floor dysfunction as a relevant clinical determinant of UTI risk reinforces the need for integration among nephrology nursing, pelvic health, and ostomy care, with the aim of preventing ascending urinary tract infections and preserving renal function.

The Role of Nephrology Nursing in the Prevention of Recurrent Urinary Tract Infections (RUTI) Nephrology nursing plays a central role in the prevention of recurrent urinary tract infections, especially in patients with chronic kidney disease (CKD), individuals on renal replacement therapy, and those with lower urinary tract dysfunction. Its role is grounded in evidence-based practices, systematic clinical monitoring, and health education, with the goal of breaking the cycle of infection and renal inflammation.

Continuous monitoring of urinary signs and symptoms allows for the early identification of infectious episodes and the implementation of timely interventions, preventing progression to more severe conditions, such as pyelonephritis and urinary sepsis [1,6]. In patients with a history of recurrent urinary tract infections (UTIs), this monitoring is essential for reducing recurrences and minimizing the cumulative impact on the renal parenchyma.

Another key aspect of the nephrology nurse's role involves the strict application of protocols for the prevention of healthcare-associated infections (HAIs). The adoption of aseptic techniques when handling urinary catheters and invasive devices significantly reduces the incidence of catheter-associated UTIs, one of the leading causes of hospital-acquired infections in renal patients [30–31].

Health education is one of the most effective pillars in the prevention of catheter-associated UTIs. Guidance on perineal hygiene, adequate fluid intake, proper bladder emptying, and adherence to antimicrobial therapy has a direct impact on reducing infection recurrence and controlling bacterial resistance [6,32].

In addition, nephrology nursing plays an integrated role in the identification and management of risk factors associated with RUTIs, such as voiding dysfunction, constipation, and prolonged use of absorbent devices, facilitating early referral for a multidisciplinary approach [12].

Pelvic Rehabilitation, Electromyography, and the Economic Impact on Renal Patient Care

Pelvic rehabilitation is an important therapeutic strategy in the management of voiding dysfunctions associated with recurrent urinary tract infections (UTIs) and chronic kidney disease (CKD). The incorporation of electromyography (EMG) allows for an objective assessment of pelvic floor muscle activity, enabling individualized interventions and greater therapeutic effectiveness [15-16].

From a clinical perspective, EMG-guided rehabilitation contributes to improved bladder emptying, reduced urinary stasis, and control of urinary urgency—factors directly related to a decrease in the incidence of recurrent UTIs. These benefits are also reflected in reduced use of absorbent products and the prevention of incontinence-associated dermatitis [7,17].

From an economic perspective, structured pelvic rehabilitation programs demonstrate cost-effectiveness by reducing hospitalizations for UTIs, the consumption of broad-spectrum antibiotics, and the use of high-cost antimuscarinic medications [16,32]. Furthermore, the reduction in falls related to urinary urgency has a positive impact on lowering costs associated with hospitalizations and prolonged rehabilitation.

Integrative Synthesis of Findings

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Table 1 – Characterization and correlation of the references included in the integrative review.

Author / Year	Database	Study Type	Main Findings	Correlation with the Study
Hooton et al., 2021 [19]	PubMed	Narrative review	Recurrent urinary tract infections are associated with progression to pyelonephritis and risk of structural kidney damage when not adequately treated.	Supports the relationship between recurrent UTIs, pyelonephritis, and impaired renal function addressed in section 3.1.
KDIGO, 2020 [1]	PubMed / Guidelines	Clinical guideline	Defines mechanisms of Chronic Kidney Disease progression and highlights infection prevention as a strategy for preserving renal function.	Supports the importance of nephrology nursing in preventing renal decline.
Abrams et al., 2019 [7]	PubMed	International consensus	Voiding dysfunctions and increased intravesical pressure are associated with the risk of UTIs and progressive kidney injury.	Corroborates the association between pelvic health, voiding dysfunctions, and renal risk (section 3.2).
Dumoulin et al., 2018 [23]	PubMed	Systematic review	Pelvic floor muscle training reduces urinary symptoms, infections, and the need for absorbent devices.	Supports the use of pelvic rehabilitation as a preventive and cost-effective intervention.
Bo et al., 2021 [33]	PubMed	Systematic review	Demonstrates the efficacy of pelvic muscle training combined with electromyography in reducing urinary symptoms.	Supports the clinical and functional impact of EMG described in section 3.4.
ANVISA, 2022 [5]	BVS	Normative document	Rigorous protocols for preventing infections associated with urinary devices and ensuring safe care.	Supports nursing interventions related to patient safety and infection control.
COFEN, 2021 [34]	BVS	Professional resolution	Establishes nurses' competencies in the systematization of care, health education, and prevention of health problems.	Legally supports the role of nephrology nursing integrated with pelvic health.
Silva et al., 2020 [35]	SciELO	Observational study	Health education reduces rates of recurrent UTIs and preventable hospitalizations.	Reinforces the role of patient education in reducing healthcare costs.
Fitzpatrick et al., 2019 [36]	CINAHL	Economic study	Preventive interventions for urinary dysfunctions reduce hospital costs and readmissions.	Supports the value-based care model proposed in the study.
ICS – International Continence Society, 2021 [14]	PubMed	Clinical consensus	Integrates pelvic health, voiding management, and prevention of urinary tract infections.	Supports the integrated approach among nursing, wound/ostomy care nursing, and pelvic rehabilitation.

Source: Author (2026)

Proposed Clinical Monitoring Protocol for the Early Identification of Urinary Signs Using SAE

The integrative analysis of the included studies showed that the early identification of urinary signs depends on the systematic application of SAE, with an emphasis on targeted data collection, continuous monitoring, and structured clinical documentation. The literature indicates that urinary changes often precede the onset of a urinary tract infection and are amenable to preventive intervention when recognized early by nursing staff [1,6,14] .

In light of this, we propose a care protocol based on SAE, focusing on the clinical monitoring of urinary signs, with the aim of supporting the practice of nephrology nursing integrated with pelvic health, in accordance with current scientific evidence.

Table 2 – Clinical monitoring protocol for the early identification of urinary signs using the Systematization of Nursing Care (SAE).

SAE Stage	Clinical Monitoring Actions	Urinary Indicators Assessed	Nursing Diagnoses (NANDA-I)	Expected Outcomes (NOC)	Nursing Interventions (NIC)	Clinical / Preventive Impact
Data Collection / History	Directed urinary and pelvic history; history of UTI; catheter use; urological surgeries; comorbidities	Frequency, urgency, nocturia, dysuria, incontinence, weak stream, incomplete emptying	Impaired urinary elimination (00016); Risk for infection (00004); Functional urinary incontinence (00020)	Urinary elimination (0502); Infection control (0703)	Urinary elimination monitoring (0590); Health education (5510); Risk factor identification (6610)	Early identification of voiding dysfunctions before the onset of UTI

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Systematic Physical Examination	Inspection, suprapubic palpation, perineal assessment, observation of urination	Bladder distension, odor, color, volume, post-void residual	Urinary retention (00023); Risk for impaired skin integrity (00047)	Effective bladder emptying (0503); Tissue integrity (1101)	Urination assessment (0610); Skin care (3584); Environmental management (6486)	Prevention of urinary stasis and ascending UTI
Nursing Diagnosis	Critical analysis and clinical correlation of data	Changes in voiding pattern; subclinical signs	Urinary retention (00023); Impaired urinary elimination (00016); Risk for urinary tract infection (00004)	Stabilized urinary function (0502)	Individualized care planning (7640)	Anticipation of infectious and renal complications
Planning	Definition of measurable goals and reassessment criteria	Urine output/hour; frequency; absence of symptoms	—	Urinary continence (0501); Renal function (0402)	Bladder training (0614); Voiding schedule (0612)	Reduction of recurrent UTI and CKD progression
Implementation	Continuous monitoring and systematic documentation	Urine output, suprapubic pain, behavioral changes	—	Urinary elimination control (0502)	Fluid management (4120); Pelvic floor muscle training (0560); UTI prevention (6550)	Early interruption of the infection–inflammation cycle
Evaluation	Periodic reassessment and adjustments to the care plan	Normalization of voiding pattern	—	Urinary stability (0502)	Continuity of care (7310); Multidisciplinary referral (8100)	Patient safety and sustainability of care

Source: Author (2026), based on NANDA-I, NIC, NOC, COFEN (2009), KDGO (2020), ICS (2021).

The proposed protocol highlights that SAE is a central tool for the clinical monitoring of urinary changes, enabling the identification of subclinical signs such as incomplete bladder emptying, changes in urinary frequency, and suprapubic distension. The use of standardized nursing diagnoses facilitates clinical decision-making, the planning of preventive interventions, and timely referral for a multidisciplinary approach, thereby reducing the progression to recurrent urinary tract infections and structural kidney damage.

DISCUSSION

An integrated review of the literature shows that recurrent urinary tract infections (RUTIs) are a key factor in the progression of kidney damage, especially when associated with lower urinary tract and pelvic floor dysfunction. Repeated episodes of infection promote chronic inflammatory processes, culminating in irreversible renal scarring and progressive impairment of renal function [32,37].

In this context, nephrology nursing stands out as a central element in preventing these complications by integrating systematic clinical monitoring, health education, and adherence to evidence-based care protocols. Collaboration with pelvic health and stoma care expands the scope of preventive interventions, promoting the early identification of urinary changes, reducing re-infections, and optimizing clinical outcomes, in line with the principles of person-centered care and the sustainability of health systems [4].

The proposal for a care protocol based on the Systematization of Nursing Care (SAE)—developed from a synthesis of scientific evidence—reinforces the strategic role of nephrology nursing in the transition from a predominantly reactive care model to a preventive and proactive approach. The protocol is a "light-to-hard" care technology aimed at preventing hospital-acquired urinary tract infections (UTIs) and protecting kidney function. Structured clinical monitoring, supported by standardized nursing diagnoses, interventions, and outcomes, contributes to the reduction of adverse events, avoidable hospitalizations, and healthcare costs, aligning with the principles of value-based healthcare [18].

FINAL CONSIDERATIONS

This integrative review achieved its objective by demonstrating that the integration of nephrology nursing and pelvic health constitutes an effective care strategy for reducing recurrent urinary tract infections, preserving kidney function, and mitigating the progression of chronic kidney disease. The findings show that the early identification of voiding dysfunction, combined with systematic clinical monitoring through the Systematization of Nursing Care, health education, and pelvic rehabilitation, helps to break the infection-inflammation cycle responsible for cumulative kidney damage. The study consolidates evidence supporting the adoption of an integrated, preventive, and value-based care model, in which nephrology nursing plays a central role in clinical decision-making, multidisciplinary coordination, and the rational allocation of care resources. It is recommended that pelvic health assessment be systematically incorporated into nephrology protocols and that

strengthening of nursing training for interdisciplinary practice, with the aim of improving the quality of care, enhancing patient safety, and meeting the demands of health care systems.

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