

# Older People with Urinary Incontinence: A Nurse Practitioner' Role in the Assessment and Management

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## Abstract

Urinary incontinence is a common problem symptom of urination, an inability to control the urinary excretion on its own, causing a loss of the ability to control urination. Most often, this happens in situations where urination is not ready and accidentally slips out. The symptoms will cause hygiene problems, such as a wound rash, or red marks on the wrong skin until the subsequent infection problem is also a problem for physical health, impacting the mind, economy, and society. It is a health problem that affects physical, mental, emotional, and social aspects lead to reduced quality of life. Older people with urinary incontinence problems, it is caused by several reasons and factors that can cause various issues. This article aims to describe urinary excretion mechanisms, meaning, types and effects, method for assessing urinary incontinence, and primary care guidelines for the older people and their families providing home and hospital care. Therefore, nurse practitioners' action plays a significant role in helping older people with urinary incontinence. It is a service through four dimensions: prevention, medical treatment, and nursing care, health promotion, and rehabilitation. Furthermore, medical history taking by interviews, physical examination, and self-assessment those are the service nurse roles: health care provider, health educator, counselor, coordinator, and advocator in the follow-up and contact for improving caring to receive quality care and reasonable to continue to bring an as good quality of life.

**Keywords:** *Assessment, management, nurse practitioner, older people, role, urinary incontinence.*

## Introduction

Urinary Incontinence (UI) is one of the symptoms of geriatrics syndrome, more common in older people. It is a symptom of urination and unable to control urination on their own. It is a loss of the ability to control urine flow. Often this happens in situations where urination is not ready, and it slips off.<sup>1,2,3</sup> The excretion system is a normal process to get rid of the parts that the body does not want, maintain the balance in the body, and prevent toxins from the residue of these waste. The mechanism of urinary excretion each time, it is caused by the

interaction of the central nervous system from the brain and spinal cord with the peripheral nervous system.<sup>4,5</sup> It consists of a sympathetic or hypogastric nerve (T11-L2) and parasympathetic or pelvic nerve (S2-4). It sends nerve impulses to regulate the bladder muscles to control the external urethral sphincter to be ready to urinate. When the bladder receives approximately 150-200ml of water in the urine, more pressure is generated in the bladder, the lower bladder nerve endings are stimulated and sent through the spinal cord, an afferent impulse directed to the micturition center to interpret the sensation of urinary pain. If in a place not ready to urinate, the brain sends signals from the basal ganglia and frontal lobe to restrain the bladder muscles from contracting, allowing them to continue urination. When living in the bathroom or the right place, the midbrain's urinary control center orders an efferent impulse to the bladder to compress along with the sphincter of the urethra. Each urination is approximately four to eight times a day without incontinence.<sup>4,5</sup>

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Research reviews presents the situations older people with urinary incontinence. The prevalence was 15-30% in the nursing home but in home bound requiring long-term care of the older people found in as much as 60-70%. We met that older age would affect deterioration. The severity of urinary incontinence symptoms, mainly aged 80 and over were more likely to have signs and the severity of urinary incontinence problems.<sup>2,3,4</sup> Female was twice as common as males. Most will occur the amount of urine emit 200-500ml to up to 1,000ml per day.<sup>2,3,4</sup> Older people with urinary incontinence symptoms will cause hygiene problems, such as a wound rash, or red marks on the wrong skin until the subsequent infection problem is also a problem for physical health, impacting the mind, economy, and society, and are significant and affect to the self-care ability. The nurse practitioner should be aware of the importance of urinary incontinence problems and make appropriate nursing plans to deal with issues that occur and ultimately reduces the impact that will appear to have a better quality of life and other topics for both family and community.

### Material and Method

An integrative review is the most comprehensive approach of study have a wide range of purposes, such as the definition of urinary incontinence, type of urinary incontinence, risk factors for urinary incontinence, evaluation of urinary incontinence, and management and interventions. For that, the PICO strategy was considered the most appropriate model for developing the review question, confirming that the question's relevant components were well defined.<sup>6</sup> Thus, following the PICO strategy, was: (P) older people with urinary incontinence and their family caregivers; (I) intervention, management, and treatment; (C) non-exclusive operation and (O) nursing practitioners' role. The starting point that outlined the inclusion criteria: studies in which the reported outcome was nurse practitioners with healthcare roles. All articles published between January of 2006 and July of 2020, written in English that did not fall under these criteria, including only review articles. Therefore, this article is interested in reviewing related documents to the content of older people with urinary incontinence, guidelines for symptom assessment, management, and nursing in nursing practitioners' role for the caretaking of the older people.

### Findings:

**Urinary Incontinence:** Definition "urinary" refers to urine or to the parts of the body that produce and carry urine, and wording "incontinence" is the lack of ability to control or inability to control the excretion of urine or the contents of the bowels.<sup>7</sup> Older people with urinary incontinence had caused a loss of the ability to control the urination; urine leakage poured out came by accident, a malfunction of the bladder to the urethra in the urinary system. Therefore, urinary incontinence refers to symptoms and the inability to control urination on their own. The subsequent physical effects are skin infections, incontinence associated dermatitis, urinary tract infection, and sepsis. The fluid in the urine that frequently flows on the skin, resulting in redness and dermatitis for skin with moisture that cannot control excretion. The contact of human skin is weakly acidic. Still urine and feces are alkaline when the acidic skin is in contact with urine just 5-15 minutes. It rubbed on clothing or pads will irritate the skin, loss of moisture destroying the skin layer orphaned to the dermis, seen as a red rash around the perineal and groin and coccyx where the skin is peeling and bruises easily. As a result, microorganisms grow as a cause of odors. There is a chance of infection from bacteria and fungi.<sup>2,5,8</sup>

**Type of urinary incontinence:** It can be temporary as transient incontinence cured once the cause has resolved, or a permanent solution must be with urinary incontinence at all times. Must bring constant medical care; symptoms of urinary incontinence can be categorized in five categories<sup>2,3,4,8</sup> as follows:

1. Stress Incontinence is a cough and sneezes caused by increased intra-abdominal pressure will stimulate the control of urinary incontinence.
2. Urge Incontinence is an overactive compression of the bladder as detrusor overactivity. It is symptomatic when a rushed situation caused the urge to urinate too quickly, unable to hold it in time to go to the toilet.
3. Mixed Incontinence is a cough and sneeze that causes increased intra-abdominal pressure along with overactive bladder compression.
4. Overflow Incontinence is an excess flow of urine, causing the urine to flow and unable to hold the urine.

5. Functional Incontinence is as urinary incontinence coexists with pathological problems such as spinal cord injury, or diseases related to the spinal cord.

**Risk factors for urinary incontinence:** The primary cause factorsto risk factors areelements in the deterioration of the body. The genital area’s work decreased bladder contractions urine changes during the day, the active sphincter decreases, and reduced bladder capacity, or from an abnormality in the bladder area, have any underlying disease affecting urinary incontinence, a chronicillness,comorbidity, including diabetes mellitus, high blood pressure, dementia, confusion, or disease with brain disorders, the spinal cord nervous system, etc., heavier or constipation, or chronic constipation, having surgery on the pelvic floor organ, being older than 40 years, multiple vaginal births, eating caffeinated beverages, drinking more water, drink alcohol. changes at home environment, there is an obstacle makes going to the bathroom uncomfortableor other factors that increase urination, and getting drugs related urinary incontinence as diuretics reduce blood pressure, or drugs that may affect urinary incontinence in different groups, and focusing on their rational drug used as follows:  $\alpha$ -Adrenergic agonists (M),  $\alpha$ -Adrenergic blockers (W), ACE Inhibitors, Anticholinergics, Antipsychotics, Calcium channel blockers, Cholinesterase inhibitors, Estrogen (oral), GABAergic agents, Loop diuretics, Narcotic analgesic, NSAIDs, Sedative hypnotics, Thiazolidinediones, and Tricyclic antidepressants.<sup>3,5</sup>

**Evaluation of urinary incontinence:** The strategies assessing urinary incontinence are available at different levels, depending on the cause and severity of the symptoms. If symptoms are severe, they would like to evaluate and deliver hospitalized treatment from a urologist.<sup>3,5</sup>The critical evaluation principles areas follows:

1. Medical history taking: focused on the main symptoms, a current history of illness, past illness or lifestyle the ability to perform routine tasks based on history taking principles that enable the ability to memorize a history taking approach using the law of memorization “OLD CARTS”as mnemonicswith the eight dimensions of a medical problem recalled using (Onset, Location/radiation, Duration, Character, Aggravating factors, Relieving factors, Timing and Severity)as (1) Onset: The period onset of sudden onset or gradually. (2) Location/radiation: What part of the body does

the symptom occur? (3) Duration: How long do symptoms persist all the time, or how long does it take? (4) Character:Symptomsdescribe as feelings. (5) Aggravating factors: factors that trigger symptoms even more. (6) Reliving factors: Factors that cause symptoms to improve or disappear. (7) Timing/treatment: Primary behavioral treatment or management, and (8) Severity: The follow of feeling forolder people with urinary incontinence.

2. Physical examination:the examination will focus on both visual and palpation by look for abnormalities, abdomen, pubic, bulging and palpation of the pubic area, look at full capacity urinary incontinence, and a neurological test for perineal and rectal sphincter called the “Bulbocavernosus reflex” by evaluation of spinal cord function responses, or to assess the stoppage of the spinal cord (spinal shock) at S2-S4 position. The examiner inserts a finger into the patient’s rectum, then squeezes the head of the penis or stimulates the female clitoris if found. The anusconstricted around the fingers. Show that the test gave a positive result, or have a reaction.<sup>3,5,10</sup>
3. Laboratory test: It is composed of urine tests; urine analysisis a physical examination,color, clarity, specific gravity, the potential of hydrogen ion, and the excretion is compounds such as urobilinogen protein, glucose, ketones, nitrite, or evaluated for infection, and etc. The collected urine for testing is recommends to collect by clean-voided midstream urine method before, the genital area should be washed with soap and water thoroughly, and collect urine in the middle with aseptic technique.<sup>3,5,10</sup>
4. Initial examinations to assess symptoms of urinary incontinence at the lower urinary system including: A bladder diary is to recordfrequency pad test use pads from sanitary napkins or diapers.
5. Specific examinations are to procedure-specific tests performed referred to a urologist<sup>3,5,10</sup> such as (1) Urodynamicstesting is a urodynamic examination to determine the function of the bladder and sphincter. Measuring the pressure in the bladder while water flows in and out of the bladder with urinary retention capacity. (2) Uroflowmetry is a urine flow measurement to demonstrate bladder outlet obstruction,measure the amount, time spent, and urine output rate to determine bladder function while urinating. (3) Pressure Flow Study examines the relationship between the voiding pressure study

of bladder pressure while urinating and the flow rate of urine. (4) Urethral Pressure Profilometry (UPP) is a test for pressure in the urethra. Using to measure the ability of the urethral sphincter, and measure the pressure in the urethra to view urethra activity using a catheter with a pressure sensor inside the urethra. (5) Imaging is an x-ray, ultrasound, special diagnostic examination using computer tomography, and magnetic resonance imaging (MRI). (6) Cystoscopy is a bladder endoscopy that looks at the appearance of the urethra and the lining inside the bladder for diagnosis, monitoring, and treatment. (7) Electromyography (EMG) is an electrode of the pelvic muscles and nerves. The EMG has a small sensor to place close to the anus to examine the muscle and sphincter activity while water is inserted and emptied from the bladder, and (8) Post Void Residual (PVR) is a urine count test to check the amount of residual urine from urination. The remaining urine should not exceed 50 ml. If the measurement exceeds 200 ml, it is abnormal. It is measured after the patient has emptied immediately or not more than 10 minutes; people should urinate at least 80% of the bladder capacity.

### Discussion

From the reviews, data present that the essential managements are a urine pad, adult diaper, behavior modifications, drinking water in amounts adequate, avoid caffeinated drinking beverages, weight control, prevention of constipation, and practice urinating by extending the time to urinate. The focus on pelvic floor muscle training will affect the practice of daily activities necessary to undergo diagnosis for treatment such as getting medicine, using a vaginal pessary, and vaginal surgery, until insertion of a temporary urinary catheter or urinary catheter. Livelihoods and affect the quality of life that deteriorates, nurses must use a nursing process as follows: assessment, nursing diagnostic, problem planning, activities, and evaluation along with providing nursing care according to problems and needs promote knowledge of self-care enhance and practice the skills necessary for rehabilitation to prevent more complications and affect the quality of life in the future.<sup>5,12</sup> The main problem of older people with urinary incontinence is to contact the urine that frequently flows on the skin, causing redness and inflammation of the skin as incontinence associated dermatitis. Therefore, we should focus on three key areas: cleanliness, hydration, and protect injury from skin touching the edges of pants,

always underwear that is dry and clean. There are no diaper folds or pads from prolonged sleep abrasions evaluation at the perineal skin, groin, and coccyx, abrasions, redness, flaky patches, or pain. we should consult a medical professional, clean the reproductive tract properly and regularly every time to a urination. It is best to use a drug or apply a wide range of non-alcoholic with skin coatings and injuries, and always consult a medical professional.

For the older people who have symptoms of urinary incontinence who have no cognitive problems, and remembering movements by symptoms to mild urinary incontinence, such as incontinence, coughing, sneezing, or failing to go to the toilet slips less often than 1-2 times a week. Behavioral therapy can help initially slow down the severity of symptoms, including bladder training, urge to urinate at scheduled times, such as every 2 hours, every 3 hours, or every 4 hours from prompt voiding, and have been accessible since the past until present, the pelvic floor muscle exercise, or kegel exercise. The beginning focuses on the location where we urinate, strain, and relax by tense, count 1-2-3-4-5 and release, start over, count 1-2-3-4-5, and freedom. If you can train longer, increase the number—1-2-3-4-5-6-7-8-9-10 and version, practice at least 100-200 times a day, 3-4 times a week. There is training that makes the ability to hold urine and control urination better. Also, exercises using biofeedback electrical stimulation from EMG-Biofeedback help us train the pelvic floor muscles more clearly.<sup>5,12,13</sup>

#### **Nurse practitioner with roles in healthcare:**

Nurses are a person who helps human beings, helping in usual get well, or when sick, improve care for health promotion, primary medical care and uncomplicated treatment, disease prevention, and rehabilitation of patients with problems and needs of care. They should caregiving cover both at home or community based, and in the hospital-based.<sup>5,12,13</sup> as follows:

1. The health care provider is to provide assistance or take any action to benefit the service recipient. To address health problems of the service organization focuses on applying nursing processes covering four dimensions; health promotion, disease prevention, primary medical care, and rehabilitation of individuals, families, and communities, especially older people in their homes, from the nursing homes as nursing patients with chronic disease to have pressure sores for paralyzed at home.<sup>14,15</sup>

2. A health educator is the role of teaching, giving advice, and knowledge in self-practice to achieve behavior change or take care of yourself with target groups in various interventions. There are including individual health education teaching, personal discussion, group discussion by providing knowledge from exhibitions such as giving advice, behavioral adjustment to promote excretion, and teaching patients with their caregivers to self-rehabilitation.<sup>14,15</sup>
3. A counselor is to provide information, give knowledge and understanding, and, most importantly, offer guidance or alternatives to self-care until service recipients can decide by themselves. To overcome obstacles throughout the health care crisis possible by the client or their family from nurse practitioners who have to perform the mentoring role, they must have the knowledge and skills to be trained to express listening intently by studying or inquiring about the background of the service recipient.<sup>14,15</sup>
4. The advocator is the person who has the immediate benefit of receiving the right of treatment that should be obtained, including interests and patient rights, which is a fundamental human right. The families of older people with urinary incontinence should receive healthcare services when needed. The nurse practitioners should provide information on health services related to the exercise of the said right with equality and fairness.<sup>14,15</sup>
5. The coordinator refers to the role of communicating with health personnel such as volunteers, physicians, physiotherapists, pharmacists, dentists, and other groups that enable effective community operations. The role of coordination of geriatric practice nurses in the community includes contacting a physical therapist to help rehabilitate paralyzed patients, coordinating the department of social development staff to take care of the disabled without relatives to promote better care of the elderly at the community level.<sup>14,15</sup>

### **Conclusion**

In conclusion, older people with urinary incontinence symptoms must have caring from an initial assessment of the problem and requirements. To prevent the occurrence of more severe issues of older people with symptoms of urinary incontinence will not be able to control the urination on their own. It is a loss of the ability to control urine flow. Often this happens in situations where

urination is not ready, and it slips off came by accident. An affects the occurrence of physical, mental, social and physical health problems resulting in a decrease in quality of life. In the role of nurse practitioner focus on health promotion, disease prevention, rather than treatment and recovery of the individual or family together with the freedom to make decisions for ongoing health care or care problems, and improve the quality of life for the as competent individual, family and community level.

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