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Self-Learning Package Continence Care Education



Advanced Clinical/Practice Fellow
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Registered Nurses' Association of Ontario
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autorisés de l'Ontario

Based on the Registered
Nurses' Association of Ontario
Best Practice Guideline:

*Promoting Continence Using
Prompted Voiding*

Acknowledgement

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- ▶ **Barbara Cassel, RN, BScN, MN, GNC(C), NCA**, recipient of an RNAO Advanced Clinical Practice Fellowship (ACPF), who developed this resource as an outcome of her fellowship. This resource has been adapted for web dissemination by the RNAO.
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- ▶ The RNAO *Promoting Continence Using Prompted Voiding* development panel who developed the guideline on which this resource is based.

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Goal and Target Audience

The goal of this learning package is to serve as an educational resource for health care professionals caring for adult patients experiencing urinary incontinence.

Learning Objectives

Upon completion of this self-learning package the learner will:

- ▶ Understand the process of normal voiding
- ▶ Understand the neurological control of the lower urinary tract
- ▶ Understand the specific physiological reasons for incontinence
- ▶ Understand the contributing factors that impact on incontinence
- ▶ Understand the age-related changes that may affect continence in an older person
- ▶ Understand the components of a comprehensive assessment in the management of urinary incontinence
- ▶ Be able to describe the components of a functional assessment
- ▶ Understand the utilization of a voiding record as a tool in the assessment of incontinence
- ▶ Be able to describe the types of urinary incontinence
- ▶ Be able to describe the difference between treatment and management related to continence care
- ▶ Understand the effects of dementia on older persons' abilities
- ▶ Be able to explain iatrogenic incontinence
- ▶ Understand the multiple components which can contribute to iatrogenic incontinence
- ▶ Be able to describe the strategies which can be utilized in management of iatrogenic incontinence
- ▶ Understand the principles of prompted voiding

Definitions

Hesitancy Hesitancy is the term used when an individual describes difficulty in initiating micturition resulting in a delay in the onset of voiding after the individual is ready to pass urine.

Incomplete Emptying Feeling of incomplete emptying is a self-explanatory term for a feeling experienced by the individual after passing urine.

Mixed Urinary Incontinence Mixed urinary incontinence is the complaint of involuntary leakage associated with urgency and also with exertion, effort, sneezing or coughing.

Nocturia Nocturia is the complaint that the individual has to wake at night one or more times to void.

Nurse Continence Advisor A Nurse Continence Advisor (NCA) is a nurse who has been specially educated to help people with bladder control problems. The focus of the Nurse Continence Advisor's practice is the education of individuals (and their families) about what they can do to regain bladder control.

Post Micturition Dribble Post micturition dribble is the term used when an individual describes the involuntary loss of urine immediately after he or she has finished passing urine, usually after leaving the toilet in men, or after rising from the toilet in women.

Residual Urine Residual urine is defined as the volume of fluid remaining in the bladder immediately following the completion of micturition. The measurement of residual urine forms an integral part of the study of micturition.

Straining Straining to void describes the muscular effort used to initiate, maintain or improve the urinary stream.

Stress Urinary Incontinence Stress urinary incontinence is the complaint of involuntary leakage on effort or exertion, or on sneezing or coughing.

Urgency Urgency is the complaint of a sudden compelling desire to pass urine, which is difficult to defer.

Urge Urinary Incontinence Urge urinary incontinence is the complaint of involuntary leakage accompanied by or immediately preceded by urgency.

Urinary Incontinence Urinary incontinence is a condition where involuntary loss of urine is a social or hygienic problem.

Voiding Record The voiding record is a recording of fluid intake and urine output per 24-hour period. This record gives objective information on the number of voidings, the distribution of voidings between daytime and nighttime and each voided volume. The chart can also be used to record episodes of urgency and leakage and the number of incontinence pads used. The voiding record is very useful in the assessment of voiding disorders, and in the follow-up of treatment.

Reference: International Continence Society Standardization Documents.

<http://www.continet.org/>

RNAO Best Practice Guideline Recommendations: *Promoting Continence Using Prompted Voiding*

Recommendation 1

Obtain a history of the client's incontinence.

Assessment for a history of incontinence includes:

- ▶ Frequency and pattern of incontinence.
- ▶ Client's awareness of the urge to void, and behaviours exhibited when needing to void.
- ▶ Motivation to be continent.
- ▶ Fluid intake.
- ▶ Frequency of bowel movement.
- ▶ Medical/ surgical history.
- ▶ Medications.
- ▶ Functional ability.
- ▶ Environmental barriers.
- ▶ Presence of urinary tract infection.
- ▶ History of urinary tract infection.
- ▶ Identification of client goals/motivation.

Level of Evidence = IV

Recommendation 2

Gather information on:

- ▶ The amount, type and time of daily fluid intake, paying particular attention to the intake amount of caffeine and alcohol.
- ▶ The frequency, nature and consistency of bowel movements.
- ▶ Any relevant medical or surgical history, which may be related to the incontinence problem, such as but not limited to diabetes, stroke, Parkinson's disease, heart failure, recurrent urinary tract infections or previous bladder surgery.

Level of Evidence = IV



The RNAO Best Practice Guideline *Promoting Continence Using Prompted Voiding* is available for free download from the RNAO website at www.rnao.org/bestpractices.

Recommendation 3

Review the client's medications to identify those which may have an impact on the incontinence.

Medications most often cited in the literature are:

- ▶ Diuretics
- ▶ Sedatives
- ▶ Hypnotics
- ▶ Anticholinergics
- ▶ Amitriptyline
- ▶ Opioid analgesics.

Level of Evidence = IV

Recommendation 4

Identify the client's functional and cognitive ability.

Cognitive impairment should not be considered a barrier to using prompted voiding. The client's ability to be toileted is highly dependent on his/her level of self-care, ability to understand, ability to process information, and ability to respond accordingly.

Level of Evidence = III

Recommendation 5

Identify environmental barriers to successful toileting.

Barriers include:

- ▶ Proximity and availability of the nearest bathroom
- ▶ Accessibility of commode
- ▶ Satisfactory lighting
- ▶ Use of restraints
- ▶ Staff expectation that incontinence is an inevitable consequence of aging
- ▶ Staff belief that few interventions exist to promote continence

Level of Evidence = III

Recommendation 6

Check urine to determine if infection is present.

Level of Evidence = IV

INTERPRETATION OF EVIDENCE

Levels of Evidence

- Ia Evidence obtained from meta-analysis or systematic review of randomized controlled trials.
- Ib Evidence obtained from at least one randomized controlled trial.
- IIa Evidence obtained from at least one well-designed controlled study without randomization
- IIb Evidence obtained from at least one other type of well-designed quasi-experimental study without randomization
- III Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies
- IV Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

Recommendation 7

Determine how the client perceives their urinary incontinence and if they will benefit from prompted voiding. Before initiating prompted voiding, identify the client's pattern of incontinence using a 3-day voiding record.

Level of Evidence = III

Recommendation 8

Ensure that constipation and fecal impaction are addressed.

Level of Evidence = IV

Recommendation 9

Ensure an adequate level of fluid intake (1500 – 2000 ml per day), and minimize the use of caffeinated and alcoholic beverages where possible.

Level of Evidence = III

Recommendation 10

Initiate individualized prompted voiding schedule based on the client's toileting needs, and as determined by a 3-day voiding record.

Level of Evidence = Ia

Recommendation 11

Initiate a 3-day voiding record, a minimum of 3 weeks and a maximum of 8 weeks, after the prompted voiding schedule.

Level of Evidence = IV

Recommendation 12

Implement an educational program on promoting continence using prompted voiding. The program should be structured, organized, and directed at all levels of healthcare providers, clients, family and caregivers. The educational program should identify a nurse with an interest in and/or advanced preparation in continence care (e.g. nurse continence advisor, nurse clinician, or clinical nurse specialist) to be responsible for providing the educational program. The program should be updated on a regular basis to incorporate any new information.

The program should include information on:

- ▶ Myths related to incontinence and aging
- ▶ Definition of continence and incontinence
- ▶ Continence assessment
- ▶ Prompted voiding
- ▶ Individualized toileting
- ▶ The impact of cognitive impairment on ability to be continent and strategies to manage aggressive behaviours
- ▶ Relation of bowel hygiene care to healthy bladder functioning
- ▶ Using a voiding record with individualized toileting.

Level of Evidence = IV

Recommendation 13

Nurses should be knowledgeable about community resources for professional development, referral and ongoing assistance.

Level of Evidence = IV

Recommendation 14

Successful implementation of prompted voiding requires:

- ▶ Management support
- ▶ Opportunities for education and training
- ▶ Active involvement of key clinical staff
- ▶ Gradual implementation of the prompted voiding schedule
- ▶ Collection of baseline information about clients, resources and existing knowledge
- ▶ Interpretation of this data and identification of problems
- ▶ Development of implementation strategy
- ▶ Monitoring of the program

Level of Evidence = IV

Recommendation 15

Organizations are encouraged to establish an interdisciplinary team approach to continence care.

Level of Evidence = IV

Recommendation 16

Nursing best practice guidelines can be successfully implemented only where there is adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. The implementation of the guideline must take into account local circumstances and should be disseminated through an active educational and training program. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed the *Toolkit: Implementation of Clinical Practice Guidelines* based on available evidence, theoretical perspectives and consensus. The *Toolkit* is recommended for guiding the implementation of the RNAO Nursing Best Practice Guideline *Promoting Continence Using Prompted Voiding*.

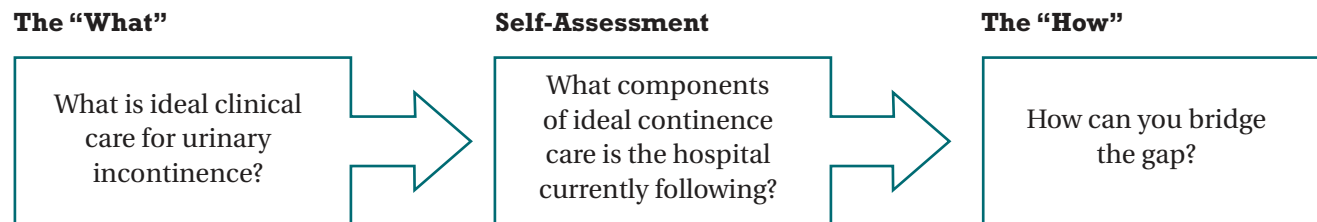
Level of Evidence = IV

Improving Continence Care in Complex Continuing Care (IC-5)

The IC-5 collaborative project is the first multi-hospital quality improvement project conducted by the Hospital Report Research Collaborative in the Complex Continuing Care sector.

The author and the RNAO would like to acknowledge the work of the Hospital Report Research Collaborative, IC-5 Improving Continence Care in Complex Continuing Care (Continence Care Model).

IC-5 Clinical Model



The “What”: What is Optimal Continence Care?

Conduct Initial Assessment

- ▶ Presence of Urinary Incontinence
- ▶ When person was last continent
- ▶ Patient’s continence goals

Conduct Detailed Assessment for Urinary Incontinence

(include patients with catheters)

- ▶ History of patient’s Urinary Incontinence
- ▶ Presence of delirium
- ▶ Type, amount and time of fluid intake
- ▶ Frequency of BMs
- ▶ Relevant and related medical or surgical history
- ▶ Medications
- ▶ Cognitive awareness of voiding
- ▶ Environmental barriers (e.g. access to toilet, privacy, toilet height and comfort etc.)
- ▶ Rule out urinary retention
- ▶ Functional ability
- ▶ 3-day voiding record to determine pattern of incontinence
- ▶ Urinalysis and urine culture
- ▶ In/out catheter to evaluate post-void residual urine

- ▶ Presence of vaginal prolapse
(should be referred to Nurse Continence Advisor (NCA) or Physician)
- ▶ Appropriateness of indwelling catheter, if present*
- ▶ Patient's goals and motivation

***Refer to intractable incontinence section on page 43 for indications for indwelling catheter use.**

Identify Contributing Factors

- ▶ Mobility
- ▶ Environmental Factors
(different from those that might restrict mobility)
- ▶ Infection
- ▶ Delirium
- ▶ Constipation
- ▶ Fluid Intake
(amount, timing and type with attention to caffeine)
- ▶ Urinary retention
- ▶ Urinary Tract Infection (UTI)
- ▶ Pharmaceuticals (e.g. meds causing polyuria – diuretics; constipating medications – codeine, iron; retention-causing meds – antidepressants)

Determine type of Urinary Incontinence

- ▶ Assess for type of urinary incontinence:
 - a) Transient
 - b) Functional
 - c) Overflow
 - d) Stress
 - e) Urge

Manage Contributing Factors of Urinary Incontinence

Conservative Management of Urinary Incontinence†

- ▶ Adjust fluid intake: increase fluid to 1500 to 2000 mL/day; eliminate caffeine; address timing of fluid intake (i.e. consider restriction after 1800 to address nocturia)
- ▶ Treat constipation (increased fluid, fibre, exercise routine, positioning)
- ▶ Product selection while working on management strategies: size and fit; absorbent for correct volume; wick moisture away; comfort; patient ease of use (i.e. can pull up and down themselves if toileting); day versus night needs for absorbency.

†These strategies should be applied to patients with **any type of incontinence** (global strategies).

Plus Urinary Incontinence type specific interventions

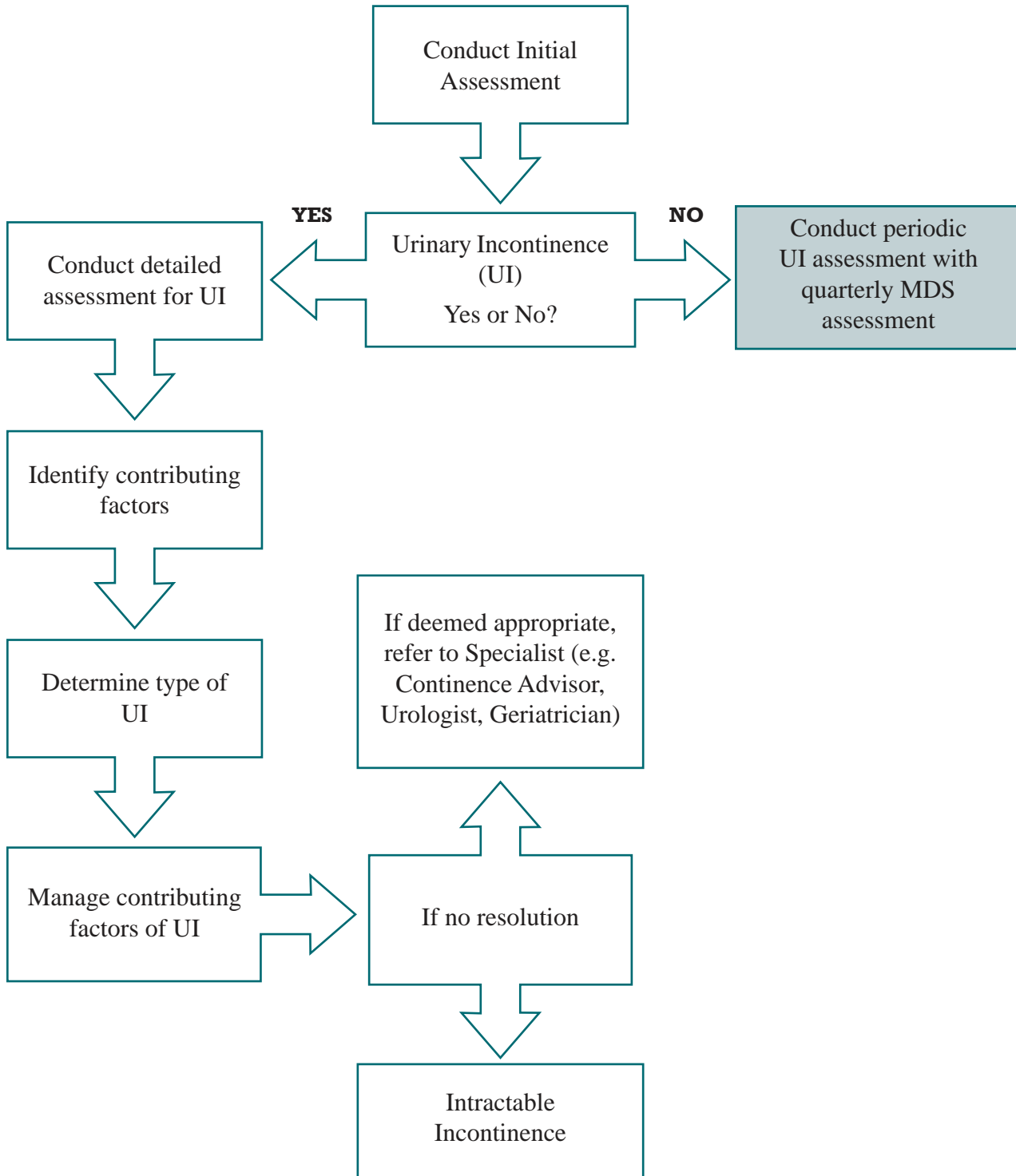
- a) Transient Urinary Incontinence**
 - Treat constipation
 - Treat delirium
 - Treat UTI
 - Review medications that may impact incontinence (i.e., diuretics, anticholinergics, antidepressants, sedatives etc.)
- b) Functional Urinary Incontinence**
 - Individualized prompted voiding schedule to assess, plan and monitor individual prompted voiding (based on needs and determined by assessment); 3-day voiding record after prompted voiding initiated (use briefs and pay attention to skin integrity if applicable during this process)
 - Involve the interdisciplinary team members:
 - i.** OT for assistive device aids – commode, modified/ adaptive clothing, cognitive aids (i.e., signage), environmental barriers in bathroom
 - ii.** PT for mobility aids/mobility enhancement
 - iii.** Speech/Language pathologist for communication strategies/aids (i.e., if patient has aphasia)
- c) Overflow Urinary Incontinence**
 - Evaluate impact of medications
 - Liaise with MD for treatment of overflow incontinence with intermittent catheterization or indwelling catheter or suprapubic catheter
 - Referral to specialist if overflow related to vaginal prolapse or to check for enlarged prostate
- d) Stress Urinary Incontinence**
 - Consider referral to specialist if related to vaginal prolapse (i.e., pessary or surgery)
- (e) Urge Urinary Incontinence**
 - Evaluate impact of medications
 - Prompted voiding
 - Management of conditions that cause polyuria (i.e., diabetes, CHF)
 - If nocturia is related to cardiac status, consider elevating legs above level of the heart for 2 hours/day or compression stockings

No resolution

(i.e. actions to be taken after there is no initial resolution to the Urinary Incontinence)

- 1)** Refer to one of the following specialist(s): Nurse Continence Advisor, Urologist, Urogynecologist, Geriatrician
- 2)** Intractable Incontinence
 - Catheterization is indicated as a last resort in the following situations:
 - a)** Urinary retention that is characterized by: persistent overflow incontinence, symptomatic infections, or renal dysfunction; cannot be corrected surgically or medically; patient prefers not to be managed with intermittent catheterization.
 - b)** Skin wounds, pressure sores, or irritations that are being contaminated by incontinent urine that cannot be managed with briefs or condom catheters
 - c)** Care of terminally ill or severely impaired for whom bed and clothing changes are uncomfortable or disruptive
 - d)** Preference of patient when patient has not responded to more specific treatments

Summary: Components of Optimal Continence Care



The “HOW”: How to achieve Optimal Continence Care

Project Team Success Factors

Implementing change at the bedside

- ▶ Using decision aids, algorithms and/or reminders for continence care practices and processes that will help to increase the likelihood of implementing the clinical model
- ▶ Educating providers on the following:
 - Risk factors for incontinence
 - How to do a proper continence assessment
 - Various approaches to treatment and
 - Optimal use of catheters

Measuring and Monitoring

- ▶ Collecting and using baseline data about: patients, resources, existing knowledge, practice, process and outcomes
- ▶ Provide and help teams use regular, timely and easy accessed data on quality improvement initiatives and potentially better practices and clinical processes and outcomes
- ▶ Provide senior management timely and useful information on progress and barriers to successful implementation of optimal continence care practices

Organizational Success Factors

Strategic/Organizational

- ▶ Positioning continence as a strategic (and improvement) priority for the organization
- ▶ Having visible organizational leadership support for continence care
- ▶ Making continence care multidisciplinary/team-based
- ▶ Providing resources (time, money) and opportunities for education and training
- ▶ Having a central continence advisor and educator with specialist training and knowledge for the organization
- ▶ Implementing staffing models and scheduling to promote optimal continence care
- ▶ Creating an optimal physical environment (layout, availability of equipment/devices and specific types of products)

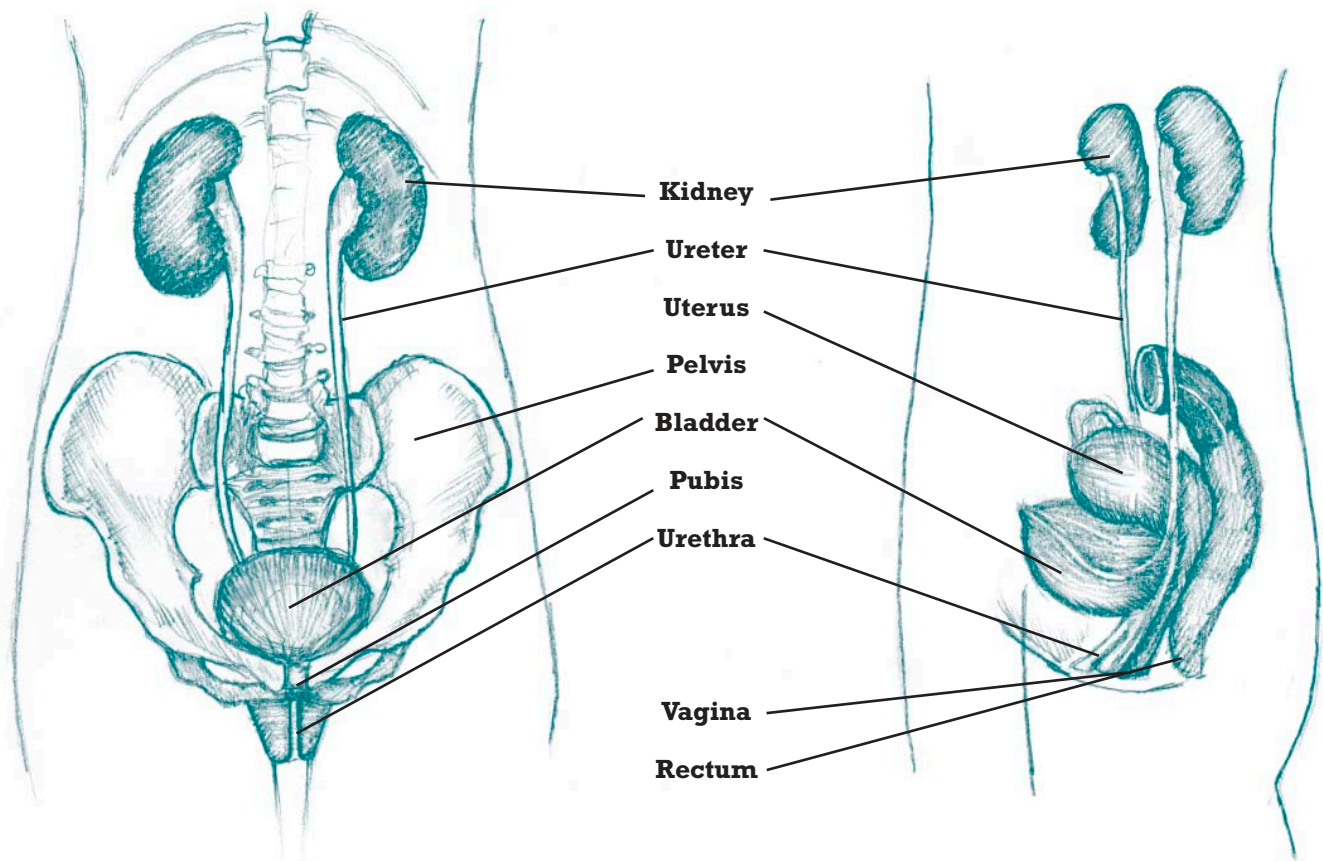
Educational

- ▶ Providing educational programs that are structured, organized, comprehensive and directed at all levels of providers, patients and families
- ▶ Including guidelines as part of active educational and training programs, and using strategies from *RNAO Toolkit: Implementing Clinical Practice Guidelines* to facilitate implementation*.

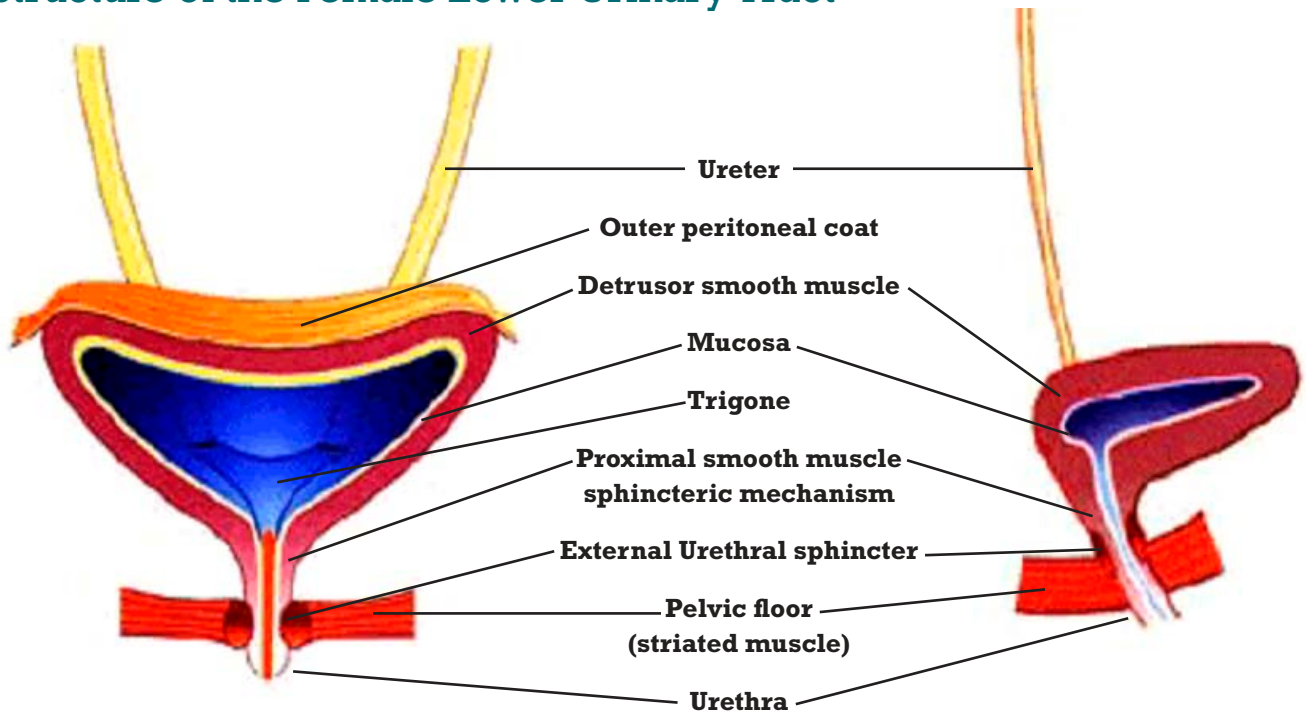
*The Toolkit is available through the Registered Nurses' Association of Ontario. The document is available in a bound format for a nominal fee, and is also available free of charge from the RNAO website. For more information, an order form or to download the Toolkit, please visit the RNAO website at www.rnao.org/bestpractices.

Anatomy of the Urinary System

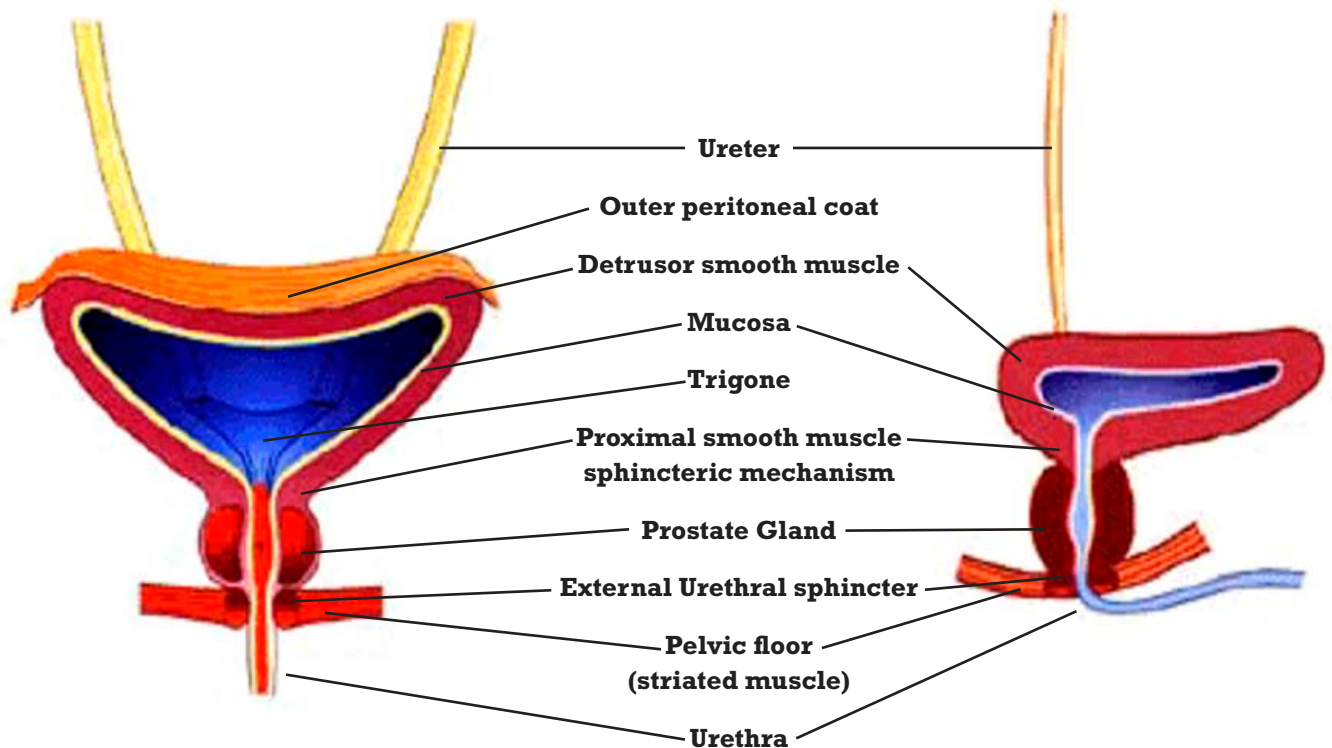
Bladder Function



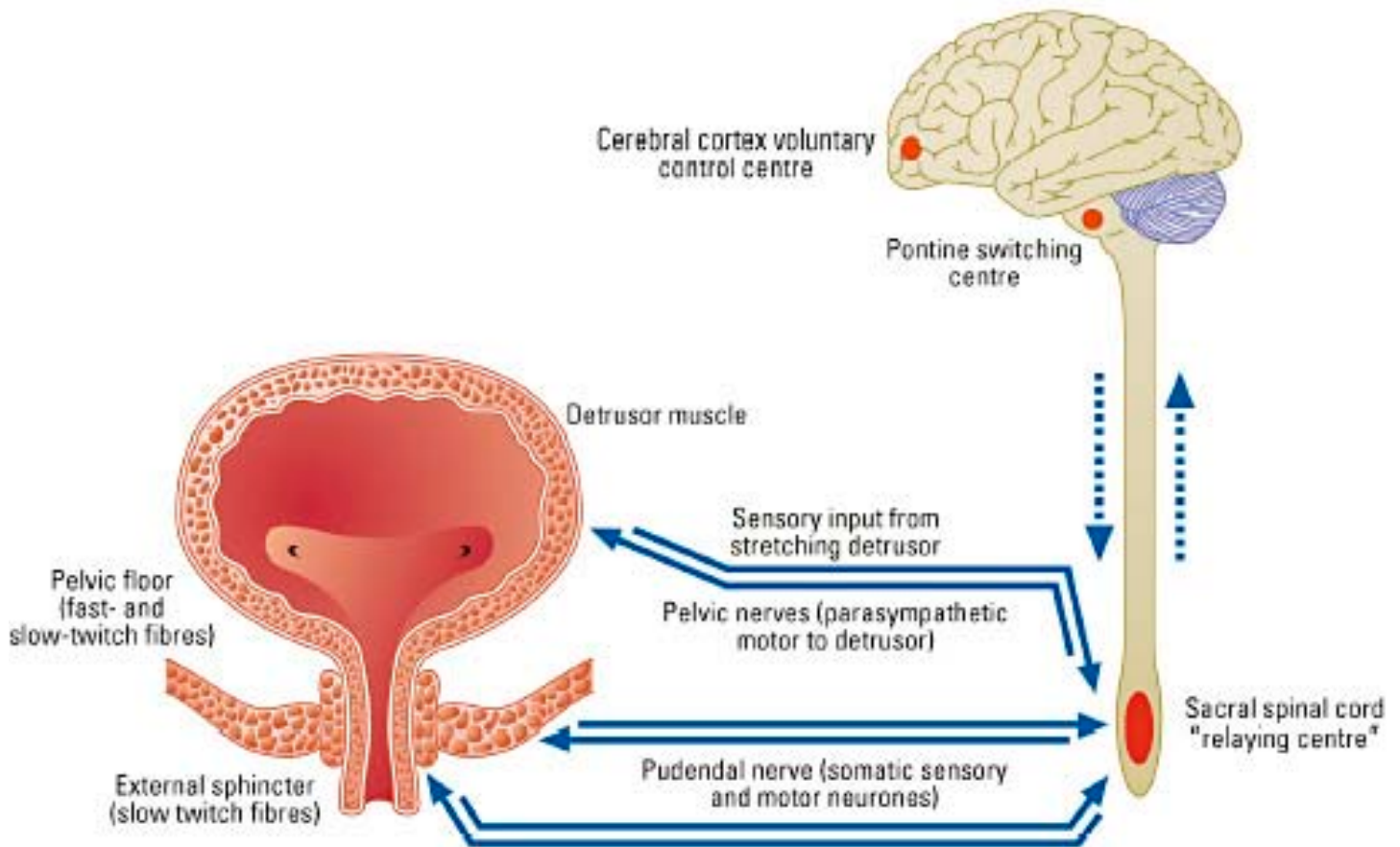
Structure of the Female Lower Urinary Tract



Structure of the Male Lower Urinary Tract

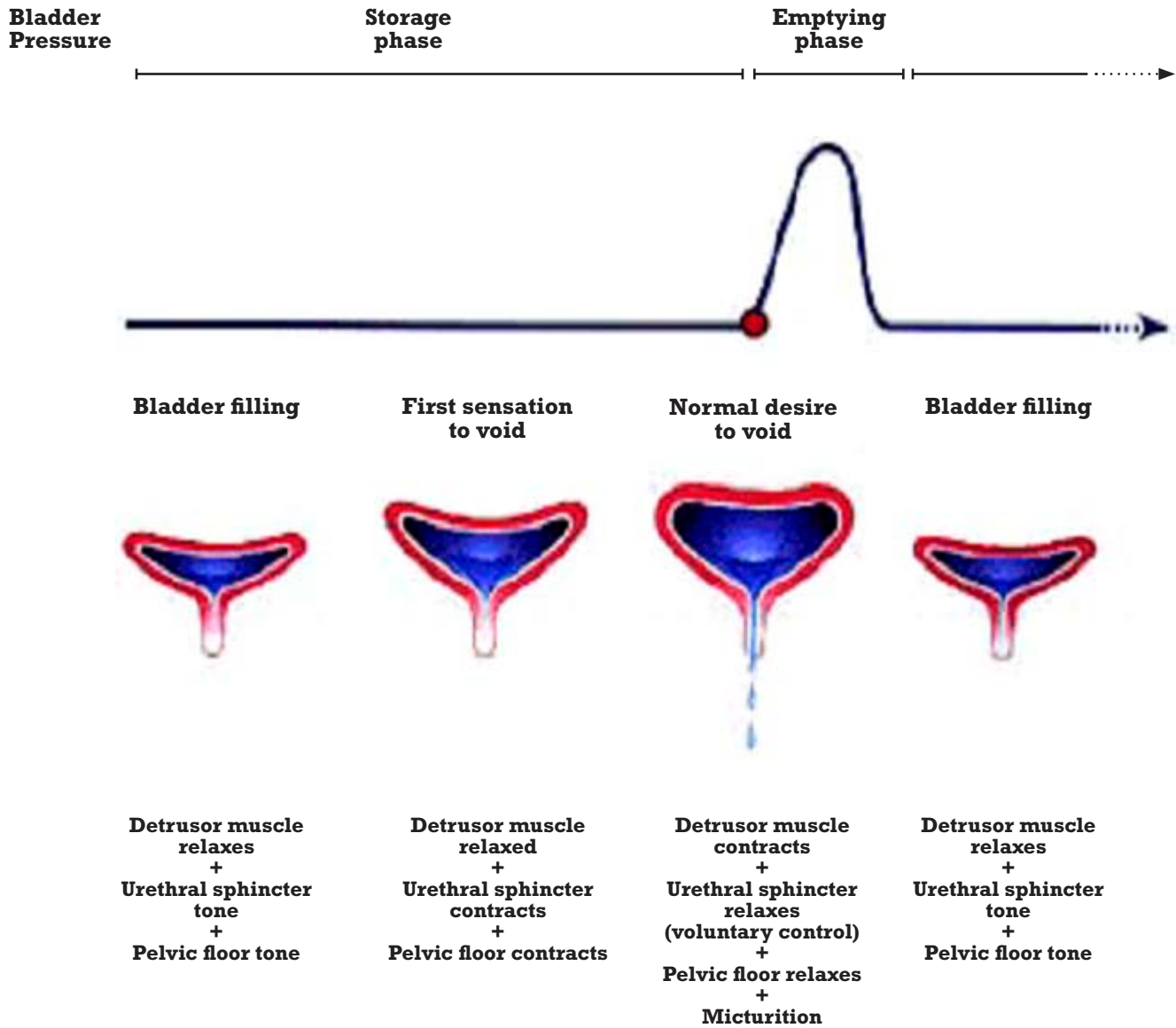


Innervations of the Lower Urinary Tract

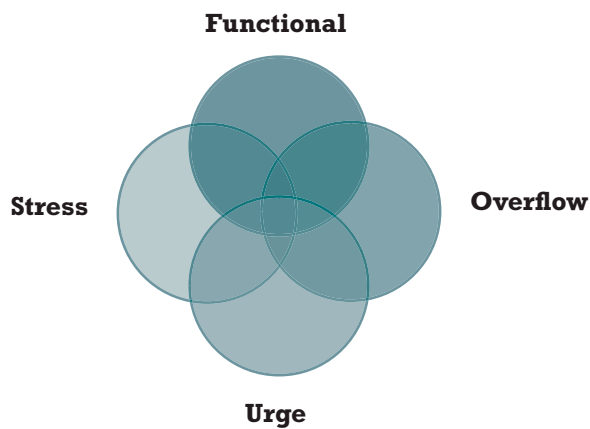


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Normal Micturition Cycle



Types of Incontinence



Stress Incontinence

- ▶ loss of urine with a sudden increase in intra-abdominal pressure (e.g. coughing, sneezing, exercise)
- ▶ most common in women
- ▶ sometimes occurs in men following prostate surgery

Urge Incontinence

- ▶ overactive bladder
- ▶ loss of urine with a strong unstoppable urge to urinate
- ▶ usually associated with frequent urination during the day and night
- ▶ common in women and men
- ▶ sometimes referred to as an overactive bladder

Overflow Incontinence

- ▶ bladder is full at all times and leaks at any time, day or night
- ▶ usually associated with symptoms of slow stream and difficulty urinating
- ▶ more common in men as a result of enlarged prostate gland

Functional Incontinence

- ▶ patient either has decreased mental ability (e.g. Alzheimer's disease), or
- ▶ decreased physical ability (e.g. arthritis) and is unable to make it to the bathroom in time

Duration of Incontinence

- ▶ Acute
- ▶ Recent and abrupt onset
- ▶ Transient Incontinence is caused by reversible or transient factors
- ▶ Chronic intractable incontinence
- ▶ Cognitive or physical deficits that render the individual unable to participate in behavioral treatment and are not candidates for surgery or medication

Continence Assessment

A comprehensive continence assessment facilitates the collection of data required to identify the factors that contribute to the patient's incontinence and to formulate a treatment plan. Questions should follow a logical format to guide you through the information gathering and to allow the patient to tell his/her story, if the patient's cognitive status allows for this.

Incontinence History

The first questions address the onset of the problem of incontinence. The patient is asked to identify whether or not it was a sudden or gradual problem, the length of time the incontinence has been occurring and whether or not it has remained the same or has worsened in the last 6 months. Patients should be asked to identify what they think has caused the problem, and while the majority of patients respond that they do not know, there are some who are able to identify the cause.

Next, identify the frequency of voiding both during the day and at night, any associated incontinence that may be occurring, and whether or not a containment product is used. The information provided by the client can be *verified on the voiding record* when they complete it as part of the assessment process. It is not unusual to find that the patient's initial estimate during the history taking is somewhat exaggerated when the actual voiding record is completed.

Next, collect information related to specific symptoms of incontinence, such as stress loss of urine, urge loss of urine and overflow.

Examine the patient's cognitive awareness of voiding and identify whether or not the messages sent to the brain when voiding are being received and interpreted by the patient. In clients where *cognitive impairment* is a problem, it is not uncommon to find that they are *not*

A comprehensive **Continence Assessment** includes:

- ▶ **Incontinence history**
- ▶ Fluid intake
- ▶ Bowel function
- ▶ Medical history
- ▶ Medication
- ▶ Functional assessment
- ▶ Abilities assessment
- ▶ Physical assessment
- ▶ Contributing factors

aware of the urge to void or when they are incontinent. This is because their brain has lost the ability to interpret the voiding stimulus and therefore has also lost the ability to inhibit the urge to void.

Next, consider symptoms specifically related to the passing of urine. Hesitation with voiding may identify some type of outlet obstruction or inability to relax the external sphincter. Straining or manual expression of urine provides information about the tone of the bladder muscle and the patient's ability to relax this muscle when voiding. The strength of the urine stream may also be a symptom of a urethral outlet obstruction. Pain or dysuria with voiding may indicate an underlying urinary tract infection. Dribbling following voiding, or constant dribbling, provides information regarding the external sphincter's ability to completely close.

Finally, identify the patient's use of incontinence products, the type used, and the number on a daily basis.

Fluid intake

Information is gathered regarding the patient's fluid intake and whether or not fluids are restricted. Ask the client to describe on an average day what they drink at various points during the day. You should ask the client to clarify if their coffee, tea or pop is caffeinated or decaffeinated but be careful not to imply a judgement on the amount of caffeine that they are consuming. If you have asked the client to provide their normal fluid intake accurately, you should be able to determine caffeine intake. You will have enough information to identify if they are drinking caffeine, in which case you should be able to calculate the amount. Be sure you ask the client about their alcohol intake if they do not voluntarily reveal this information. *Both alcohol and caffeine act as diuretics on the kidneys and irritate the bladder* and can be major contributing factors to problems of urgency and urge type incontinence.

Bowel Function

Questions that specifically assess bowel function are essential. It is important to identify the patient's normal pattern of bowel movements and whether or not constipation is a factor. While patients may come with the problems of urinary incontinence, there may also be an underlying problem of faecal incontinence or constipation which they have not revealed. You should also identify how they manage their bowels in terms of diet regulation and any laxatives or medication they may be using.

A comprehensive **Continence Assessment** includes:

- ▶ Incontinence history
- ▶ **Fluid intake**
- ▶ **Bowel function**
- ▶ Medical history
- ▶ Medication
- ▶ Functional assessment
- ▶ Abilities assessment
- ▶ Physical assessment
- ▶ Contributing factors

Refer to the RNAO nursing best practice guideline *Prevention of Constipation in the Older Adult* (2005) for a comprehensive discussion of assessment and intervention strategies.

Medical History

The review of the medical history identifies common surgical procedures that the patients may have undergone, or common medical problems that the patient may have that would have a bearing on their problem of incontinence. When identifying if a woman has had an abdominal or vaginal hysterectomy, it is also important to inquire as to whether or not her ovaries were removed and at what age this occurred. This is to ascertain whether her ovaries are still intact and producing estrogen. The stimulation of estrogen receptors in the submucosa of the urethra raises urethral pressure to promote continence. Previous bladder repair surgeries and the frequency with which they occurred are also important to note.

Questions are asked that relate to a woman's obstetrical history. The number of children she has delivered and the type of delivery with each birth should be noted. Other factors related to the birth in terms of trauma to the pelvic floor are also requested.

It is important to ask the patient if he or she has discussed their problem of incontinence with their family physician and if they have received any previous treatment for incontinence.

Medication

Ask the patient to list the medications they are currently taking. During the assessment, it is necessary to identify any medications that may have an impact on bladder function.

Functional Assessment

This assessment includes the identification of issues related to function that may have an impact on the patient's ability to be continent. Whether the patient lives alone or whether there is assistance provided in the home can be a major factor in determining a care plan, particularly if there is any cognitive impairment. Access to the bathroom and toilet can also be factors that contribute to the incontinence problem. The patient's ability to ambulate and their general functional ability is information that is very important to assess in order to implement an appropriate and realistic plan of care.

A comprehensive Continence Assessment includes:

- ▶ Incontinence history
- ▶ Fluid intake
- ▶ Bowel function
- ▶ **Medical history**
- ▶ **Medication**
- ▶ **Functional assessment**
- ▶ Abilities assessment
- ▶ Physical assessment
- ▶ Contributing factors

The primary goal of the functional assessment is to determine the interventions needed to solve problems such as reaching the toilet or bathroom, manipulating clothing and transfers on and off the toilet (Wilson, 2003). The components related to functional assessment that are important to understand include the following (Williams and Gaylord, 1990):

- ▶ *Transfer ability* – bed to chair; standing to sitting (independent or aided)
- ▶ *Mobility* – walking with or without aids
- ▶ *Balance* – standing without help and being able to adjust clothing
- ▶ *Arm strength and body flexibility* – being able to lift the toilet seat
- ▶ *Manual dexterity* – adjust clothing, includes buttons, zips and other fasteners
- ▶ *Eyesight* – able to see well enough to reach the toilet without help
- ▶ *Toileting ability* – able to clean self or manage incontinence products if used

Abilities Assessment

Consider these four categories of abilities^{1, 2, *}

1. Self-Care Abilities
 - ▶ Voluntary and purposeful movement
 - ▶ Spatial orientation
 - ▶ Daily functions i.e. toileting
2. Interactional Abilities
 - ▶ Comprehension
 - ▶ Expression of language
3. Social Abilities
 - ▶ Attention deficits (personal greeting, inquiry, introduction, handshake)
 - ▶ Conversation
 - ▶ Motivation to be continent

A comprehensive **Continence Assessment** includes:

- ▶ Incontinence history
- ▶ Fluid intake
- ▶ Bowel function
- ▶ Medical history
- ▶ Medication
- ▶ Functional assessment
- ▶ **Abilities assessment**
- ▶ Physical assessment
- ▶ Contributing factors

*See page 34–35 for more details about the Abilities Framework.

¹ Dawson, P., Kline, K., Crinklaw Wiancko, D., Wells, D. (1986). Nurses must learn to distinguish between excess and actual disability to prolong the patient's competence. *Geriatric Nursing*, Nov./Dec. 289-301.

² Wells D.L. and Dawson P. (2002). A framework for developing nursing knowledge about the effects of dementia on older persons' abilities. *Journal of Applied Gerontology*, 21(1). 90-102(13).

4. Interpretive Abilities

- ▶ Capacities to derive meaning from the external world and subjective feeling states
- ▶ Recall
- ▶ Recognition

Physical Assessment

Prior to examination, it is important to have the client attempt to void and measure the amount of urine voided. The residual urine should be determined by bladder ultrasound or by an in-and-out catheterization. It is important to determine whether or not the client is completely emptying their bladder and measuring residual urine is the method of doing that. The urine obtained should be sent for culture, or alternatively a urine dipstick may be used to determine if there are any bacteria present. If the dipstick is positive for white blood cells or nitrates, the urine should be sent for culture to rule out infection (see urinalysis handout).

In the female patient have her lie on her back with her knees bent, her ankles together and with her knees relaxed open. You should be able to get a good visual inspection of the perineum. You need to identify any atrophic vaginal changes that may be visible. In particular, you are looking for any evidence that the tissues are not the usual pink colour that you would expect them to be but rather are *very pale* and *almost white in appearance*. You may also note that the tissues have considerably shrunk and the vaginal opening is now significantly smaller than what it would have been in a younger woman. You may also note that the tissues are visibly *red and thin and friable* which is also another sign of *atrophic vaginitis*. If there is any evidence of vaginal discharge, a vaginal swab should be obtained prior to any examination. Now ask the client to cough and observe for any evidence of a cystocele, urethrocele or rectocele.

In male patients you will be observing the male genitalia for any abnormalities, in particular, to determine if there are any congenital abnormalities related to the urethral opening or a retracted penis. *Epispadias* is a congenital defect in which the urethra opens on the dorsum of the penis at some point proximal to the glans. *Hypospadias* is also a congenital defect in which the urinary meatus is on the underside of the penis.

Assessing for the sensation and presence of anal tone is particularly important in patients with fecal incontinence. You should also observe for any evidence of haemorrhoids or sphincter weakness. Finally, the condition of the perineum itself should be remarked upon in terms of recurring incontinence and prolonged use of product that may have caused a deterioration of the skin. You may need to make some recommendations regarding appropriate barrier creams.

Cystocele is a condition where the bladder herniates into the vaginal canal.

Urethrocele is a form of pelvic organ prolapse in women in which the urethra moves from its natural position and presses into the vagina.

Retrocele is the herniation of the rectum through a defect in the intervening fascia into the vagina.

Contributing Factors

You should now review the assessment questions and responses, and identify factors that you think are contributing to the problem of incontinence. These factors will help you identify the type of incontinence with which you are dealing.*

***See page 30 for more information regarding factors that contribute to the problem of incontinence.**

Treatment

The list of contributing factors will help to identify the appropriate conservative treatment methods. As part of the initial assessment, you will need to conduct a 4-day voiding record. This will be completed by client/family caregivers, nursing staff, or both, depending on the setting of care. You may wish to wait until you have received all the information before starting a program of treatment. However, this will be dependent on the client's individual needs and you should make an individual assessment on this issue.

The Voiding Record

A voiding record is a tool that allows the client to record the amount he/she voids or is incontinent in a 4 day period. The voiding record provides a picture of the patient's incontinence and fluid intake.

Most people underestimate the severity of their problem and are surprised at the number of accidents that they actually have. The voiding record also helps to identify any relationship between fluid intake and voiding frequency or urine loss. Each voiding record is one day, which begins at 6:00 am and then proceeds in half hour intervals through the day.

The patient or staff records the amount each time the patient voids and writes it down in the 'void' column next to the nearest half hour. The patient or staff documents the wetting episodes and fluid intake in the same manner.

At the end of the 4 days, you have a detailed record of all toileting and wet events. This completed record, along with a complete assessment, will help you determine your diagnosis. It will also help you to recognize factors that contribute to urinary incontinence, for example, the amount of fluid intake (too much, too little), amount of caffeine the patient drinks, and the relationship between these contributing factors and the incontinent episodes.

Void: Write in the amount each time you pass urine in the toilet.
Drink: Write in the amount each time you have a drink.
Wet event: Write in each time you are wet.

Time	Void	Drink	Wet Event	Time	Void	Drink	Wet Event
6:00 am				6:00 pm			
6:30 am				6:30 pm			
7:00 am				7:00 pm			
7:30 am				7:30 pm			
8:00 am				8:00 pm			
8:30 am				8:30 pm			
9:00 am				9:00 pm			
9:30 am				9:30 pm			
10:00 am				10:00 pm			
10:30 am				10:30 pm			
11:00 am				11:00 pm			
11:30 am				11:30 pm			
12:00 noon				12:00 night			
12:30 pm				12:30 am			
1:00 pm				1:00 am			
1:30 pm				1:30 am			
2:00 pm				2:00 am			
2:30 pm				2:30 am			
3:00 pm				3:00 am			
3:30 pm				3:30 am			
4:00 pm				4:00 am			
4:30 pm				4:30 am			
5:00 pm				5:00 am			
5:30 pm				5:30 am			

Collaborative Continence Program, St. Joseph's Community Health Centre
 Reprinted with permission: Jennifer Skelly, RN, PhD, Associate Professor, McMaster University School of Nursing, Director, Continence Program,
 St. Joseph's Healthcare, Hamilton, Ontario.

Urinalysis Strip Tests: Interpretation of Results

Depending on the product being used, reagent strips provide tests for glucose, bilirubin, ketones, specific gravity, blood, pH, protein, urobilinogen, nitrite, and leucocytes in urine. Always handle specimens under sanitary conditions. Test within one hour, or if not possible, refrigerate and restore to room temperature before testing.

Glucose

VISUAL READING TIME 30 SECONDS

Glucose is a monosaccharide that is naturally occurring in fruits. It is also formed from the digestion of carbohydrates and the conversion of glycogen by the liver and is the body's main source of cellular energy. Glucose is essential for brain and erythrocyte function. Excess glucose is stored as glycogen in the liver and muscle cells. Hormones influencing glucose metabolism include insulin, glucagon, thyroxine, somatostatin, cortisol and epinephrine. Normally, the kidneys reabsorb glucose, however it is normal for small amounts of glucose to spill into the urine. These amounts are usually below the test sensitivity, but may produce a result above negative on some occasions.

NORMAL FINDING: NEGATIVE

Bilirubin

VISUAL READING TIME 30 SECONDS

The urinalysis strip tests screens for the presence of conjugated bilirubin in the urine. Bilirubin is a by-product of hemoglobin breakdown that is normally excreted by the gastrointestinal tract. When obstructive or hepatic jaundice occurs, conjugated bilirubin enters the bloodstream, rather than the gastrointestinal tract, and is filtered and excreted by the kidneys.

NORMAL FINDING: NEGATIVE

Ketone (Acetone) Bodies

VISUAL READING TIME 40 SECONDS

Ketone bodies are by-products of fat and fatty acid metabolism. For various reasons (such as diabetes mellitus, starvation, alcoholism) the body is unable to use glucose from glucose metabolism for energy. Therefore the body utilises fatty acids through fat metabolism for energy and ketones are formed because they are the by-products of fat metabolism. Ketones present in the urine can help you to identify a possible problem with glucose metabolism. However, physiological stress conditions such as pregnancy, and frequent strenuous exercise may show positive for ketones.

NORMAL FINDING: NEGATIVE

Blood

VISUAL READING TIME 60 SECONDS

The significance of the 'trace' reaction may vary among patients, and clinical judgement is required for assessment in an individual case. Development of green spots (intact erythrocytes) or green colour (free hemoglobin) on the reagent area within 60 seconds indicates the need for further investigation. Blood is often found in the urine of menstruating females. Elevated specific gravity may reduce the reactivity of the blood test. Captopril may also cause decreased reactivity.

NORMAL FINDING: NEGATIVE

Specific Gravity

VISUAL READING TIME 60 SECONDS

Specific gravity is the ratio of the mass of urine compared to the mass of an equal volume of water. Specific gravity is dependent on the ratio of urine solutes (chloride, creatinine, glucose, phosphates, protein, sodium, sulphates, urea, uric acid) dissolved in solvent. Specific gravity helps to evaluate the concentrating and filtration status of the kidneys, as well as the hydration status of the body. This test is helpful for a nurse continence advisor to be able to predict if the patient is adequately drinking fluids. If the specific gravity is increased this could mean: Adrenal insufficiency, congestive heart failure, dehydration, diabetes mellitus, diarrhea, proteinuria, etc. If the specific gravity is decreased, this could mean: Chronic renal insufficiency, diabetes insipidus, hypothermia, increased intracranial pressure. Drugs that may cause a decrease in the specific gravity are: aminoglycosides, lithium, and methoxyflurane.

NORMAL FINDING: 1.016-1.022 mg/dL

Protein

VISUAL READING TIME 60 SECONDS

Normally the urine is free of protein, or contains trace amounts of albumin and globulin, as the glomeruli prevent the passage of proteins from the plasma to the glomerular filtrate. Protein in the urine is established when a random sample is positive for more than a trace of protein. Normally, only low molecular weight proteins are small enough to pass through the glomerular membrane into the glomerular filtrate, and most of these are reabsorbed by the renal tubules. Proteinuria is a key indicator of renal pathology and can result from glomerular leakage, tubular impairment, breakdown of renal tissue, or from excess concentrations of low molecular weight proteins. Transient proteinuria may result from nonpathological states such as physical or emotional stress and body position.

NORMAL FINDING: NEGATIVE

Nitrite

VISUAL READING TIME 60 SECONDS

Humans normally oxidize ingested nitrite and excrete it as nitrate. The presence of nitrite in the urine indicates a urinary tract infection caused by organisms that reduce nitrate back to nitrite. A positive nitrite may mean: Cystitis, dysuria, pyelonephritis, and urinary tract infections.

NORMAL FINDING: NEGATIVE

Leucocytes

VISUAL READING TIME 2 MINUTES

Normal urine specimens generally yield negative results; positive results are clinically significant. Elevated glucose concentrations or high specific gravity may cause decreased test results. The presence of cephalexin, or high concentrations of oxalic acid may also cause decreased test results. Tetracycline may cause decreased reactivity and high levels of the drug may cause a false negative reaction. Nitrofurantion gives a brown colour to the urine that may mask the colour reaction on the reagent strip.

NORMAL FINDING: NEGATIVE

Additional Assessments

Cystoscopy

- ▶ performed by a physician when the condition cannot be completely diagnosed by simpler, less invasive tests

Urodynamics

- ▶ used to assess the function of the bladder and urethra
- ▶ used to determine the problem in more complicated situations
- ▶ often done in conjunction with a cystoscopy

Contributing Factors to Urinary Incontinence

Incontinence can be caused by multiple factors superimposed on one another. For example, disease processes superimposed on age related factors could complicate the overall clinical picture. An important principle to keep in mind is that association does not imply causation. It is imperative to consider all of the potential contributing factors and how the interconnection of multiple factors impact on the person's ability to maintain bladder control. Finkelstein (2002) emphasizes that many of these factors are related, so it is imperative to have a full understanding of all possible predisposing or provocative factors. All potential associated factors need to be considered during the assessment process. Holroyd-Leduc and Straus (2004) in a scientific review conclude that multiple factors have been found to be associated with urinary incontinence, some of which are amenable to modification.

Urinary Tract Infections (UTI)

- ▶ burning feeling or pain when voiding
- ▶ having to void frequently and urgently
- ▶ bacteria irritate the bladder and makes it contract more often
- ▶ vaginitis results in itching, redness and soreness in and around the vagina. Discharge from the vagina can lead to UTI.

Increased urinary frequency means needing to urinate more often than usual. Increased urgency is a sudden, compelling urge to urinate, along with discomfort in the bladder. Together, urinary frequency and urgency are classic signs of urinary tract infection. Since inflammation reduces the bladder's capacity to hold urine, even small amounts of urine cause discomfort. Certain people are more likely to get UTIs. For example, women tend to get them more often because their urethra is shorter and closer to the anus, resulting in transfer of E Coli. Elderly people and people with diabetes also get more UTIs. Diabetes is a common cause of these symptoms.

Brown, Grady, Ouslander, Herzog, & Varner (1999) report a 50% increased risk of urge incontinence in women who reported two or more urinary tract infections in the prior year. These authors state that data from several studies showed urge incontinence lessens after antibiotic treatment for urinary tract infections. The literature also suggests that urinary tract infections stimulate detrusor hyperreflexia or that an Escherichia coli endotoxin inhibits alpha-adrenergic contractions in the urethra, which reduces sphincter pressure and results in incontinence.

Fluid Intake

Myth: If you drink less you urinate less and you have less incontinent episodes. In fact the opposite is true. The less you drink, the more concentrated your urine becomes and the more irritating. You urinate just as often, only in smaller amounts.

Reduced fluid intake can contribute to urinary tract infection, which causes irritative voiding symptoms and can result in urge incontinence. Daily fluid intake should be approximately 1-2 litres.

Caffeine / Alcohol acts as a “diuretic”. Bladder muscles become irritated (which causes the bladder to contract more often), making you want to void more. For every cup of caffeinated liquid, you need 2 cups of non-caffeinated liquid to replace the fluid lost.

Because caffeine is a diuretic, more fluid is excreted by the kidneys when caffeine is contained in the fluids consumed. Patients with symptoms of urgency and frequency, particularly due to detrusor instability, often report that these symptoms are worsened by drinking tea or coffee. Caffeine is a xanthine derivative occurring naturally in tea and coffee. Caffeine causes a mild diuresis by acting on the renal tubules to increase renal blood flow. Caffeine is also thought to have a direct effect on the detrusor muscle, therefore exhibiting an excitatory effect on the detrusor smooth muscle by irritating the bladder wall and potentially causing an uninhibited bladder contraction. Any substance that irritates the detrusor muscle can contribute to urge incontinence.

Alcohol is a bladder stimulant (Getliffe & Dolman, 2003). It also has sedative and diuretic effects (Newman, 1999). Palmer (1996) advises that some side effects of alcohol can contribute to the development of incontinence. Alcohol’s significant sedative effect can compromise the conscious awareness of the need to void. The diuretic effect causes the body to produce a larger volume of urine that the person may not be able to compensate for (Palmer, 1996).

The potential effects of moderate alcohol intake on continence include polyuria, frequency, and urgency (Reilly, 2000).

Constipation

Pushing too hard and too often when having a bowel movement can weaken pelvic floor muscles. Stool “impaction” (hard, “stuck” feces in the rectum) adds to urinary incontinence.

“Smearing” or “staining” of stool seen on underwear, may be caused by constipation or possible rectocele. Chronic constipation adversely affects urologic function. A distended rectum can compress the bladder neck and contribute to urinary retention and urinary tract infection. Frequent straining during bowel evacuations can injure pelvic muscles and nerves through traumatic overstretching and muscle ischemia.

Medications

Certain medications can make the bladder too active or not active enough. Learn about herbal preparations that can negatively effect the bladder. There are prescription medications that can lessen urge incontinence.

Holroyd-Leduc and Straus (2004) in a scientific review report that several medications have been independently associated with urinary incontinence in women including diuretics, estrogen, benzodiazepines, tranquilizers, antidepressants, hypnotics, laxatives and antibiotics. Finkelstein (2002) reports significant associations between incontinence and psychoactive medications (tranquilizers, antidepressants, hypnotics) among women. These medications are associated with sedation and retention.

Finkelstein (2002) also reports a strong association with the use of diuretics in men and women; these medications increase urine volume and might contribute to frequency and urgency. Palmer (1994) advises that the administration of diuretics should occur during the hours of maximum alertness and functioning of the older person, such as mid or late morning.

Finkelstein (2002) explains that drugs that stimulate alpha-receptors, located primarily in the urethra, and bladder neck, increase urethral tone. Medications that stimulate beta-receptors, located primarily in the bladder body, result in decreased tone in the bladder muscle. Acetylcholine is the main neurotransmitter used by the parasympathetic nervous system to promote bladder emptying. Drugs that influence the autonomic nervous system can have profound effects on lower urinary tract function (Finkelstein, 2002).

Weight

Too much weight on the abdomen constantly pushes down on the bladder causing stress on the bladder and pelvic floor muscles. Poor abdominal muscle strength from excess weight adds excess weight on the pelvic floor muscles.

Holroyd-Leduc and Straus (2004) in a scientific review report that many studies have found that increasing body mass index (BMI) is associated with increasing rates of urinary incontinence. Penn et al (1996) report that obesity, defined as greater than 20% over the average weight, for height and age, is associated with increased risk for urinary incontinence and is more common in women who are incontinent. Excessive body weight weakens pelvic muscle supports. Sampselle et al's (2002) report on data that suggests that increased BMI is a significant predictor of any incontinence as well as severity.

Mobility

Any problems that lessen an individual's ability to get to a toilet in time can cause functional incontinence. Problems or diseases of the nervous system can lead to or result in incontinence (Multiple Sclerosis, Parkinson's Disease, dementia, delirium, and stroke).

DuBeau (1995) emphasizes that there is a need to differentiate between micturition pathophysiology and an impaired functional ability. Holroyd-Leduc and Straus (2004) in a scientific review report that functional impairment appears to be independently associated with urinary incontinence.

Environmental Factors

- ▶ Restraints
 - physical
 - sedation / analgesics
- ▶ Clothing
- ▶ Access to bathroom
- ▶ Distance to the bathroom

Palmer (1994) reports that impaired mobility is considered one of the major factors in functional incontinence. Penn et al (1996) advise that the environmental assessment identifies the location and accessibility of the toilet, availability of toilet substitutes, distance travelled to the toilet, cleanliness and safety in the toileting area, adaptive toilet equipment such as grab bars and raised seats. Good lighting and an uncluttered environment is also helpful. It would be important to observe the patient's actual ability to ambulate and transfer to the toilet. It is important to assess types of garments that are easy to remove to facilitate toileting. Garments that are difficult or time consuming to remove can contribute to the development of incontinence.

Cognitive Impairment

Skelly and Flint (1995) in a review article report that urinary incontinence associated with dementia is a significant problem. These authors critically review the literature on urinary incontinence associated with Alzheimer's disease and vascular (multi-infarct) dementia, with particular reference to its prevalence, etiology, assessment, and management. They conclude that incontinence in persons with dementia has received limited study despite the fact that it is a potentially treatable condition. DuBeau (1995) emphasizes that urinary incontinence in demented persons may not be causally related to dementia, as previously assumed, but instead is often a multifactorial epiphenomenon with treatable causes and precipitants. The multifactorial model expands the diagnostic and therapeutic options for incontinence management in demented individuals.

Refer to the RNAO Nursing Best Practice Guideline *Screening for Delirium, Dementia and Depression* (2003) for a comprehensive review of screening tools.

Wells and Dawson (2002) have published a framework that can be used by nurses to systematically focus practice, and in this case continence care practice, concerning the care of people suffering from dementia.

Self-Care Abilities

Self-Care abilities are defined as essential to daily living functions, such as bathing, toileting, and feeding or eating. The following abilities are at risk and may impact on a patient's continence status: spatial orientation concerning left-right discrimination of one's own and another person's body part; initiation and follow thorough related to object cues; and purposeful movements for simple activities of daily living (Dawson and Wells, 2002). The ability to independently complete self-care tasks such as toileting may be compromised.

Social Abilities

Social abilities are the characteristics needed to engage in various social activities. The following abilities are at risk and may impact on a patient's continence status: attention in terms of a personal greeting, inquiry, introduction and handshake (Dawson and Wells, 2002). Social awareness of the appropriate place to void may be compromised. Other considerations in regards to social abilities are relationship dynamics and whether continence problems have restricted social activity and involvement (Wilson, 2003).

Interactional Abilities

Interactional abilities involve the comprehension and expression of language. The following abilities are at risk and may impact on a patient's continence status: comprehension related to yes-no sentences and verbal and written commands and expression abilities with regard to room description, sentence completion, and verbal and written object identification and use (Dawson and Wells, 2002). The patient's ability to follow and understand prompts or cues may be compromised. The impact on continence includes both the difficulty with understanding reminders and in asking for assistance to toilet. The assessment will confirm whether or not the person is able to interpret their body signals concerning when they need to void and whether they are able to understand and follow instructions.

Interpretive Abilities

Interpretive abilities denote the capacities necessary to derive meaning from the external world and subjective feeling states. The following abilities are at risk and may impact on a patient's continence status: recognition of self, time, date, and touch; recall of familiar objects and places; and subjective feeling states and recognition of facial affect.

Screening

Mini Mental Status Examination

The MMSE is a brief, quantitative measure of cognitive status in adults. It can be used to screen for cognitive impairment, to estimate the severity of cognitive impairment at a given point in time, to follow the course of cognitive changes in an individual over time, and to document an individual's response to treatment.

The MMSE is the most widely used mental status assessment.

Clock Drawing Test

There are numerous versions of the clock-drawing test. They all involve asking the patient to draw the face of a clock. The clock drawing test is a quick screening test for cognitive dysfunction secondary to dementia or delirium. It is well tolerated and accepted among patients and is easy to score.

Some scoring systems may have greater sensitivity than others in monitoring progression of cognitive deterioration. A brief clock-drawing test, together with results from the Mini-Mental Status Exam (MMSE), significantly improves the ability to identify patients with possible Alzheimer's disease on initial screening.

Childbirth

Vaginal childbirth can cause damage to the pelvic floor muscles by weakening the strength and tone of the muscles holding up the bladder, uterus and rectum. The more births, the greater the risk for urinary incontinence. Vaginal births with an "episiotomy" or a tear increases the chance of incontinence.

Handa, Harris & Ostergard (1996) published a review of the literature regarding the effects of childbirth on the muscles, nerves, and connective tissue of the pelvic floor and a review of the evidence to support an association between childbirth and faecal incontinence, urinary incontinence, and pelvic organ prolapse. These authors conclude that childbirth was found to be associated with a variety of muscular and neuromuscular injuries of the pelvic floor that are linked to the development of faecal incontinence, urinary incontinence, and pelvic organ prolapse. Risk factors cited for pelvic floor injury include forceps delivery, episiotomy, prolonged second-stage of labor, and increased fetal size. The pelvic floor plays an important role in continence and pelvic organ support.

Pelvic Muscle Tone

Stress incontinence occurs when coughing or sneezing, laughing, standing, lifting and other movements cause the abdominal muscles to put pressure on the bladder. The International Continence Society defines stress incontinence as 'the involuntary loss of urine when the

intravesical pressure exceeds the maximum urethral closure pressure in the absence of detrusor activity'. Stress incontinence occurs due to the deficiency in the urethral closure mechanism during episodes of raised intra-abdominal pressure such as coughing, sneezing, laughing, etc. (Dolman, 2003).

Stress incontinence often causes urine leakage of small amounts and sometimes the loss of the entire bladder contents. Anatomical changes are the primary cause of stress incontinence. Weak pelvic floor muscles make it difficult for bladder sphincter mechanisms to control the flow of urine when the abdominal muscles exert pressure against the bladder neck.

Manual examination is conducted to determine the tone of the pelvic floor muscles and movement of the urethra and bladder neck in a downward, rotating direction when straining or coughing (Palmer, 1996). A manual vaginal examination can be used to determine circumvaginal muscle strength.

Loss of Estrogen

- ▶ causes the “tissues” around the bladder to lose their tone. This makes it hard to hold onto your urine.
- ▶ causes loss of tightness of the “sphincter muscle”
- ▶ leads to “urethritis”, “vaginitis”, “cystocele”, and “uterine prolapse” which all can cause urinary incontinence

Lack of estrogen may cause urethritis and trigonitis often associated with atrophic vaginitis. A cystocele is a prolapse of the bladder through the anterior vaginal wall. Prolapses are staged, using objective criteria, by the severity of the maximum protrusion of the prolapse during examination (Palmer, 1996, page 182). A cystocele is a herniation of the bladder into the vaginal vault. It may be evident only during “bearing down” maneuvers (Doughty, 2000 page 448). Visual examination of the urethra and vagina can reveal the presence of urethroceles, cystoceles, rectoceles, discharge, reddened thin epithelium lining, and atrophy of tissue (Palmer, 1996, page 69). Burns (2000) states to assess for a cystocele or urethrocele, the examiner inspects the anterior vaginal wall while the patient “bears down” to increase intraabdominal pressure.

Atrophic Changes

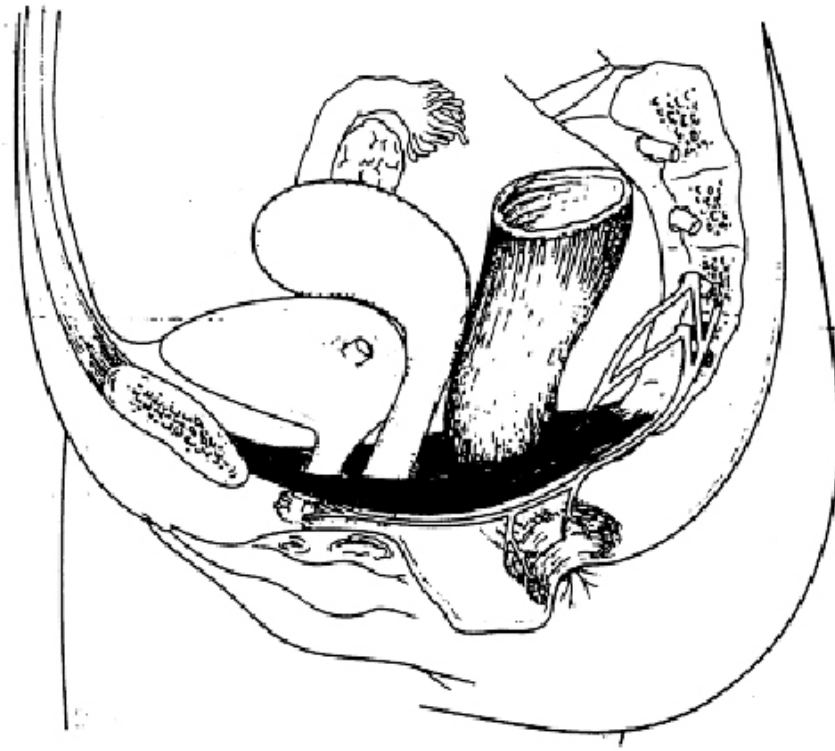
Signs of atrophic changes to the vaginal epithelium, including erythema, friability, or bleeding.

Commonly Used Grading System for Cystoceles

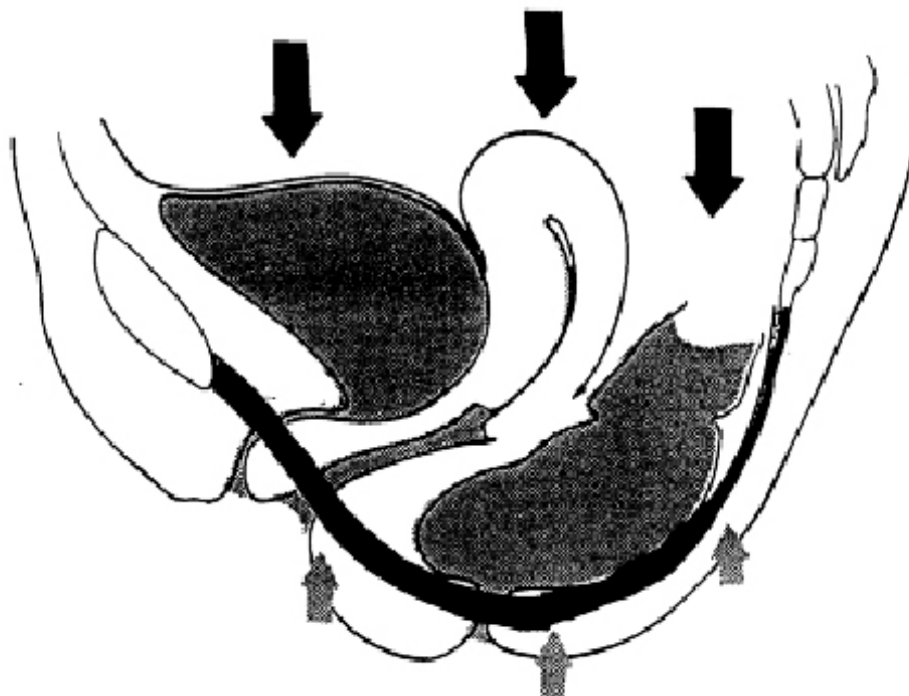
(Burns, 2000, page 68)

Grade	Description
I	Minimal bladder descensus
II	Bladder descensus to vaginal introitus with straining
III	Bladder descensus to vaginal introitus at rest
IV	Bladder prolapse through the labia at rest or with straining, or both

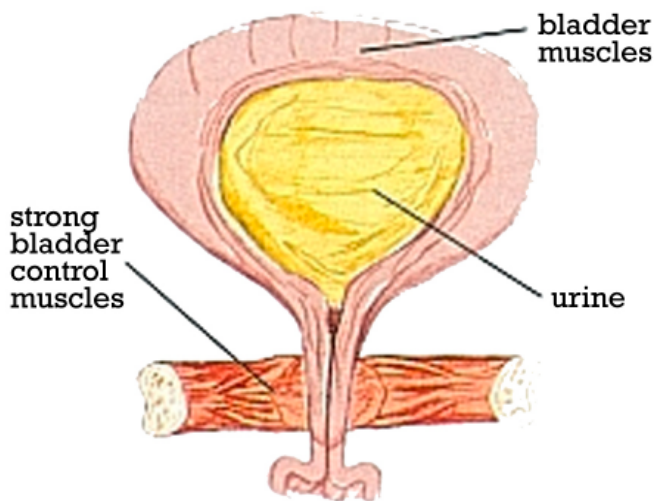
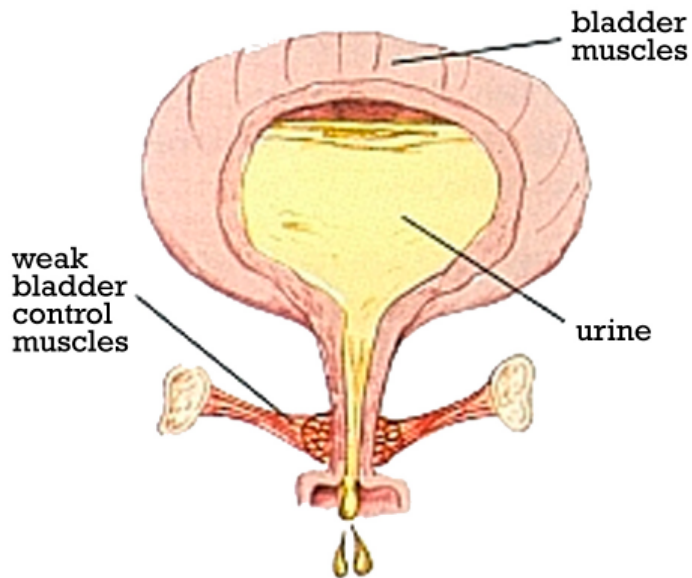
Pelvic Floor



Pelvic Floor Descent



Bladder Control Muscles



Conservative Treatment

Conservative treatment:

- ▶ is client focused
- ▶ uses educational strategies
- ▶ includes behaviour modification
- ▶ utilizes problem solving strategies

Preventing Urinary Tract Infections*

- ▶ Drink extra fluids, such as water
- ▶ Cranberry juice attacks the most common bacteria, E-coli, that often causes a UTI
- ▶ Cranberry capsules can be another option to cranberry juice

*For more information about preventing Urinary Tract Infections, see page 45.

Personal Care

- ▶ Wash and wipe from the front to the back
- ▶ Wash with warm water and pat or blow dry

Increase Water Intake

- ▶ Try to drink more water in a day
- ▶ If you don't like the taste of water, try adding a slice of lemon or a sprig of mint to the water
- ▶ Try carrying a water bottle that you can sip on all day long

Reduce Caffeine

- ▶ Slowly cut down on the amount of caffeine you drink until you reach 1-2 cups a day (1cup=250ml)
- ▶ Slowly switch to decaffeinated beverages (e.g. decaffeinated tea, decaffeinated coffee, caffeine-free beverages)

Facilitate Mobility

- ▶ Have a toilet that you can get to close by (a bedside commode or bedpan)
- ▶ Make regularly timed trips to the washroom
- ▶ Keep walking aide near you (cane, crutches, or walker)
- ▶ Wear clothing that can be removed easily

Prompted Voiding

- ▶ Has been shown to decrease the number of incontinent episodes per day and increase the number of continent voids

- ▶ Can be used with persons who have physical or mental impairments or little ability to determine how best to meet their needs
- ▶ Identification of individual voiding patterns (individualised toileting) rather than routine toileting (e.g. q2h) can promote the highest level of success with toileting
- ▶ Initiate individualised prompted voiding schedule based on patient's toileting needs as determined by the voiding record

There are three primary behaviours that the caregiver uses each time prompted voiding is initiated:

- ▶ Monitoring
- ▶ Prompting
- ▶ Praising

Constipation

- ▶ 30 -50% of the elderly in the community use laxatives on a regular basis and this increases with institutionalization
- ▶ The increased abdominal pressure associated with constipation contributes to bladder instability and can result in incontinence

Refer to the RNAO nursing best practice guideline *Prevention of Constipation in the Older Adult (2005)* for a comprehensive discussion of assessment and intervention strategies.

Contributing Factors

- ▶ Low fluid intake
- ▶ Low dietary fibre intake
- ▶ Prolonged use of laxatives
- ▶ Ignoring urge to defecate
- ▶ Sedentary lifestyle
- ▶ Polypharmacy

Interventions

- ▶ Exercise everyday
- ▶ Drink plenty of “good” fluid
Warm water may stimulate the bowel
- ▶ Fluid intake should be between 1500 -2000 mls per day

Strategies

- ▶ Container of fluid at the bedside
- ▶ Ensure fluids at meals are consumed
- ▶ Eliminate caffeine and alcohol
- ▶ Dietary fiber intake should be 25 to 30 grams per day. This can be gradually increased as fluids increase
- ▶ Eat foods high in fibre such as bran, oatmeal, whole wheat, green leafy vegetables
- ▶ Avoid using laxatives on a regular basis

- ▶ Regular consistent toileting each day
- ▶ Physical activity

Patient Information

Include the RNAO Health Information Fact Sheet *Incontinence: Breaking the Silence* which can be found at http://www.rnao.org/bestpractices/PDF/Fact_Sheet_Incontinence.pdf.

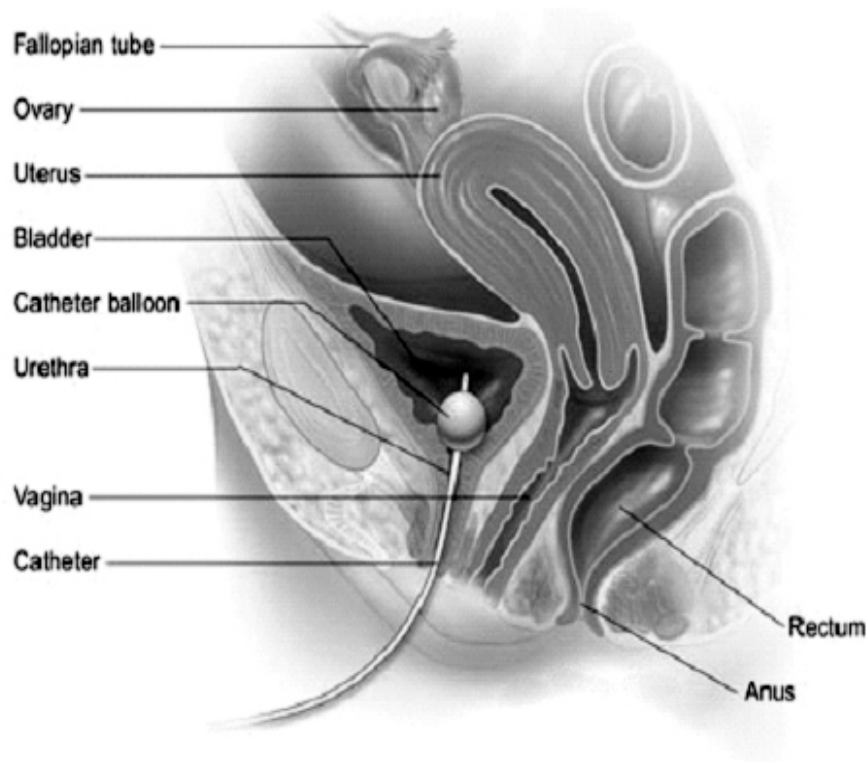
Set a Goal: Continence Management Plan

Once the focused history is complete and the targeted physical assessment is done, a continence management plan should be developed in collaboration with the patient.

Catheterization*

- ▶ Smaller sizes are better 12-14 French
- ▶ Balloons inflated with 5 – 10 ccs
- ▶ Ensure proper drainage
- ▶ Connecting tubing for leg bags
- ▶ If leaking occurs, increasing the size of the catheter or the balloon is not the answer
- ▶ Clamping catheters is no longer considered good practice

* This section is not intended to provide a comprehensive overview of catheters and catheterization. Readers are encouraged to seek further information from existing sources (Getliffe & Dolman, 2003).



- ▶ Select the smallest French size (12 or 14) of catheter possible as the smaller the size, the less irritating it is to the urethra and bladder.
- ▶ Inflate the balloon per the manufacturer's guidelines. Select a catheter with a smaller balloon size (i.e., 10cc) as the larger the size, the more irritating it is to bladder and urethra.
- ▶ Male catheterization – Daneshgari et al (2002) provide objective evidence supporting the need to insert the urethral catheter to the bifurcation of the drainage and inflate the balloon only after reaching this point in the insertion procedure.

Appropriate Indications for Use of a Chronic Indwelling Catheter in the Long-Term Care Setting

- ▶ Urinary retention that
 - Causes persistent overflow incontinence, symptomatic infections, or renal dysfunction
 - Cannot be corrected surgically or medically
 - Cannot be practically managed with intermittent catheterization
- ▶ Short-term for skin wounds or pressure ulcers when other measures are not viable and healing is enhanced by keeping the area dry
- ▶ Provision of palliative care or care of severely impaired patients for whom bed and clothing changes are uncomfortable or disruptive
- ▶ Preference of a patient who has not responded to more specific treatments

Excerpted from AMDA's Clinical Practice Guideline: [Urinary Incontinence](#). © 2005 American Medical Directors Association. Columbia, MD. All rights reserved.

Nursing Interventions to Prevent Blockage of Indwelling Catheters

Manual bladder irrigations are done only under special circumstances, such as post urological surgical procedures. Getliffe (1990) reports that research has shown that over 50% of long-term catheterized patients experience recurrent blockage. The effectiveness of nursing care related to managing catheter blockages can be improved by individualized care planning regarding catheter changes (Getliffe, 1990). Change a catheter when it blocks instead of irrigating. To help with the assessment, record all catheter changes on a tracking form. Plan catheter changes prior to when the catheter tends to block (Getliffe, 1994; Getliffe, 2003).

Prevention of Urinary Tract Infections (UTI)

Definition

- ▶ Urinary tract infections are infections of the urine and the structure of the urinary tract, and they occur when bacteria enters the system and multiplies
- ▶ The infection often begins in the lower urinary tract (urethra and bladder), where it is easy for bacteria to enter
- ▶ The most common bacteria that causes this infection is E.coli

Types of UTI

- ▶ *Urethritis*: Bacteria from the outside, often enters through the urethra, where they multiply and cause an infection of the urethra.
- ▶ *Bladder bacteriuria*: In bladder bacteriuria, the infection is restricted to the urine and has not spread to the other structures.
- ▶ *Cystitis*: An infection of the lower urinary tract, which occurs when bacteria from the urethra spreads into the bladder. Cystitis is the most common urinary tract infection.
- ▶ *Pyelonephritis*: Infection of the upper urinary tract. If bacteria that have already infected the urethra and the bladder is left untreated, it may continue upward along the ureters, into the kidneys.

Causes of UTI

- ▶ Bacteria from the bowel and vagina
- ▶ Delaying urination
- ▶ Urinary retention
- ▶ Presence of a foreign body (e.g., urinary catheter)
- ▶ Tugging, or putting pressure on a urinary catheter, can irritate the urethra and invite infection
- ▶ Certain antibiotics may eliminate the protective bacteria of the urinary tract, and cause an overgrowth of E. coli

Symptoms of UTI

- ▶ Frequent urge to urinate
- ▶ Trickle of urine despite a strong urge to void
- ▶ Painful burning sensation when urinating
- ▶ Strong smelling urine
- ▶ Cloudy urine
- ▶ Blood in urine

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- ▶ Fever
- ▶ Chills
- ▶ Nausea
- ▶ Vomiting
- ▶ In the elderly, mental confusion may occur

Prevention

- ▶ Good personal hygiene
- ▶ Empty bladder regularly and completely
- ▶ Drink plenty of fluids—at least eight to ten glasses of fluids a day
- ▶ Drinking cranberry juice prevents bacteria from sticking to the bladder wall*
- ▶ Wipe from front to back after going to the bathroom
- ▶ With a catheter, the drainage bag should not be left on the floor, but should be lower than the bladder

*Cranberries contain a substance that prevents bacteria from sticking to the walls of the bladder, particularly E-coli (Avom, Monane, Gurwitz, Glynn, Choodnovskiy and Lipsitz, 1994 and Busuttill-Leaver, 1996). Cranberries contain two compounds that inhibit adherence: Fructose and a polymeric compound. It has been suggested in the past that it was the acidification of the urine that was important in preventing bacterial growth, but that has been shown to make no difference.

Case Study

- ▶ Mrs. Georgina Jones, age 83, experienced a sudden onset of incontinence following her stroke.
- ▶ She voids every hour during the day and usually experiences a loss of urine on her way to the bathroom.
- ▶ At night, she gets up to void at least twice and is incontinent on her way to the bathroom. She loses urine when she coughs and sneezes.
- ▶ She is aware of the urge to void and is unable to postpone the urge for any length of time.
- ▶ Mrs. Jones drinks tea with all her meals and restricts her intake between meals.
- ▶ She has experienced several urinary tract infections in the past few months.
- ▶ She also has problems with osteoarthritis.
- ▶ She takes a diuretic each day.
- ▶ Mrs. Jones shares a room with 3 other women and there is only one bathroom.
- ▶ Mrs. Jones' stroke has reduced her ability to walk without the assistance of a wheeled walker.
- ▶ She is able to get to the toilet but does not get much warning and her walker will not fit easily into the bathroom.
- ▶ As part of the assessment, Mrs. Jones voided 125 mls and a post-voiding residual of 5 cc was determined by ultrasound. A mid stream urine test was positive for WBC's (white blood cells) using the urinalysis strip test, so a sample was sent to the lab for culture and sensitivity.

Questions

1. What factors may be contributing to Mrs. Jones's incontinence?

2. How would you classify Mrs. Jones's incontinence?

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