Female Urinary Incontinence Primary Care Pathway

Quick links: Pathway primer | Expanded details | Provider resources | Patient resources

Identify and treat reversible Urinary Incontinence (UI)

- If an older adult, assess for **DIAPPERS**:
  Delirium, **I**nfection (urinary), **A**trophic urethritis and vaginitis, **P**harmaceuticals, **P**sychological disorders, **E**xcessive urine output, **R**estricted mobility, **S**tool impaction

If no reversible causes are found, or symptoms persist

Identify relevant past medical history of:

- Chronic diseases (obesity, diabetes, neurological conditions, OSA, chronic cough, chronic constipation)
- Previous surgeries (abdominal / pelvic surgeries)
- Obstetric / post-menopausal history
- Cognitive decline, frailty, risk of falls
- Past history of pelvic cancers / radiation

Identify type of incontinence:

Stress
- Leak w/ exertion (cough, laugh, lift, sneeze, strain)

Urge / Overactive Bladder (OAB)
- Leak w/ urge on the way to washroom?
- Void > 8x in 24hr or > 2x at night

Mixed
- Leak with urge and exertion

Other (Overflow, Neurogenic)
- Trouble emptying completely
- Hard time starting stream

Alarm Features / Red Flags

Abdominal / pelvic mass with UI, obtain urgent ultrasound

- Non-gynecological mass (bladder/bowel) → Refer to Urology/Colorectal surgeon as indicated
- Mass of gynecological origin
  - If suspicious → Refer to Gynecology Oncology
  - If benign → Gynecology or Urogynecology

Suspicion of vesico/urethral vaginal fistula → Refer to Urology Central Intake or Urogynecology

Gross hematuria → Refer to Urology Central Intake

Microscopic hematuria (≥3-5 rbc/hpf on 2 of 3 specimens)

Contact Specialist LINK for questions or clarifications

Perform physical exam:

- General status (mental status, obesity, mobility)
- Abdominal exam
- Pelvic exam (pelvic floor muscles, pelvic organ prolapse, vaginal estrogenization, evidence of fistula)
- Cough stress test in dorsal lithotomy (for stress) or standing test

Perform investigations

- Routine lab, microscopic UA recommended to rule out proteinuria, leukocytes, nitrates, glycosuria, and urine for C and S as indicated
- 3-day patient bladder diary to define most troubling symptoms
- If concerned about emptying, measure post void residual (PVR) with pre and post void pelvic ultrasound

Conservative Management Therapies: Trial for 3 months

- Patient education
- Counselling about lifestyle changes (e.g. smoking cessation, fluid management, diet, weight loss)
- Scheduled voiding
- Vaginal estrogen for genitourinary syndrome of menopause (if appropriate)

Pelvic floor muscle training +/- pelvic floor physical therapy (self)referral

If Urge/OAB consider

Trial course of Antimuscarinics or Beta 3 agonist (medications)

If incontinence persists → Refer to Urology Urogynecology,

If Stress consider

- Not interested in pessary → Refer to Urology Urogynecology,
- Interested in pessary assessment → Refer to Urogynecology, Urology, Gynecology, or Skilled community physician

Failed pessary trial → Refer to Urology Urogynecology,

For non-urgent advice, please phone Specialist LINK or submit request through eReferral

Services available through Urogynecology and Urology Fees may apply and are clinic dependent

Useful information to aid triage with all referrals:
Include findings from pathway, patient preference for conservative management, pessary, or surgical intervention.
* Referrals to the Pelvic Floor Clinic: patient completes learning module "The Next Step" and indicates treatment preference.

PATHWAY PRIMER

Urinary incontinence (UI), the involuntary leakage of urine, is common and undertreated.[1,2] It is estimated that nearly 50 percent of adult women experience UI, and only 25 to 61 percent of symptomatic community-dwelling women seek care.[2,3] Patients may be reluctant to initiate discussions about their incontinence and urinary symptoms due to embarrassment, lack of knowledge about treatment options, and/or fear of surgery.

Overall prevalence of UI among non-pregnant women age 20 years and above has been reported at 12 to 16 percent[4,5] and rises to 19.3% in women over age 60.[5]

There are several types of UI affecting women. Women often experience stress urinary incontinence (SUI), urge or overactive bladder (OAB), mixed, or other (including neurogenic incontinence and overflow incontinence). Stress incontinence accounts for 50% of the UI in Canada (CUA guideline). OAB bladder accounts for 11% prevalence in the population, but rises to 75% among elderly population.[6]

UI is not associated with increased mortality. However, UI can impact many other aspects of a patient's health including quality of life, sexual dysfunction, morbidity, and presents an increased caregiver burden.

Nonsurgical management for urinary incontinence in women is focused on pelvic floor retraining, continence pessary fitting, bladder training and behavioural management[7,8] and pharmacotherapy (ACOG guideline).

Patient Resources for Self-Management of UI: For a selection of patient education and self-management resources, please refer to the Patient Resources section.

This pathway will provide guidance on how to manage most cases of UI within the patient medical home and clear criteria for which patients can be referred on to Urogynecology or the Pelvic Floor Clinic (Women's Health Centre, Calgary Zone).

All of the evaluation and non-surgical management for UI can be safely managed in the office setting of primary care physicians. Doing so can expedite care for all patients suffering from UI. The wait list to see a Urogynecologist at the Pelvic Floor Clinic is at least 18 months. If surgical intervention is indicated, offering conservative management as first line will reduce the wait once referred and improve access to surgical care for all patients.

EXPANDED DETAILS

1. Patient History

General Risk factors for Urinary Incontinence

- Lifestyle habits, such as any activity with heavy lifting, smoking, inadequate or inappropriate fluid intake (too much or too little), ingestion of high amounts of irritating fluids or foods, chronic coughing (whether from health conditions such as asthma or from habits like smoking), or obesity.
- Women who are advancing in their age makes them more likely to notice an increase in bladder issues, although UI is not to be expected by all who are aging.
- Some commonly prescribed medications may cause an impact and aggravate UI, such as those for diabetes, hypertension, or sleep disorders.

Investigate for Reversible Causes of UI

A basic patient history can attempt to distinguish between reversible and chronic types of urinary incontinence.

Consider applying a mnemonic like DIAPPERS[13] to identify and manage reversible causes of UI:

- **D**elirium
- **I**nfection
- **A**trophic urethritis or vaginitis
- **P**harmaceuticals
- **P**sychological disorder
- **E**xcessive urine output (e.g., hyperglycemia)
- **R**educed mobility
- **S**tool impaction

Infection

- Screen for a Urinary Tract Infection (UTI) which can cause or aggravate incontinence and treat if appropriate. Urinalysis is recommended if patient is symptomatic as UI can worsen in acute UTI, along with urgency and frequency, all of which are seen in OAB.
- Current guidelines advise AGAINST treatment of asymptomatic bacteriuria in non-pregnant women.9 If a physician chooses to treat a positive urinalysis (leukocytes, nitrates, WBC, Bacteria, +/- rbc), then patients should be monitored for sustained improvement in symptoms of UI, urgency, and frequency.
- If symptoms revert to baseline bother, then likely the positive urinalysis was actually a reflection of asymptomatic bacteriuria and further workup for non-UTI causes of UI should be pursued.

Atrophic Urethritis or Vaginitis

Genitourinary Syndrome of Menopause, particularly vaginal atrophy, can cause irritative symptoms and affect bladder function. Treat vaginal atrophy with vaginal estrogen cream – See Medication Management for regimen.

Pharmaceuticals

Investigate if prescribed medications are contributing to symptoms of UI. Commonly prescribed medications known to cause UI symptoms or worsen existing symptoms include antihypertensives, pain relievers (e.g. opioids), certain nervous system medications (e.g. antidepressants, antipsychotics), and anticholinergics, among others.[12]

You may wish to consult UpToDate for more information on medications that can affect bladder function:

- Lukacz ES MD. Evaluation of females with urinary incontinence. Brubaker, L, ed. Schmader, KE ed. UpToDate. Waltham, MA: UpToDate Inc. https://www.uptodate.com (Accessed on January 02, 2021.)

Stool Impaction

Constipation can be an aggravating factor for UI.

If no reversible causes of UI are identified or symptoms do not resolve after treatment for reversible causes, proceed to collect a detailed patient history for chronic urinary incontinence.

Chronic Urinary Incontinence

This includes discussion of the characteristics of the incontinence and collecting a medical history relevant to chronic incontinence.

Document the characteristics of UI:

- Onset
- Any pain with urination?
- Quality or volume of urine passed
- Frequency
- Timing/ Duration of UI

Relevant medical history related to chronic UI:

- Chronic diseases (e.g., Diabetes, neurological conditions, OSA, chronic cough, constipation)
- Obesity
- Previous surgeries (previous bladder / incontinence surgery, pelvic surgery)
- Relevant obstetric and post-menopausal histories
- Cognitive decline, frailty and risk of falling
- Pelvic cancers and/or radiation therapy are risk factors for UI

Type	Questions to Ask	Definition	Risk factors
Stress	• Do you leak with exertion (cough, laugh,lift, sneeze, strain)?	• This is the most commonly experienced type of UI in women. • Stress UI is marked by leakage of small amounts of urine when performing activities that place pressure on the bladder, such as coughing, sneezing, etc.	• Performing high impact sports, such as running, quick start and stop, and jumping activities. • Childbearing and vaginal birth.
Urge/Overactive Bladder (OAB)	• Do you leak with urge on the way to the washroom? • Do you void > 8x in 24h or ≥ 2x at night?	• Urge is marked by a strong, sudden need to urinate before being able to reach the toilet. • Patients with urge may also leak when drinking water or hearing running water. • OAB is a type of Urge that features frequent urination, even at night, but there may not be leakage of urine.	• Risk factors for OAB include age, obesity, parity, medical comorbidities (diabetes, hx of pelvic radiation, treatment with anti-estrogen medications ex. • Aromatase inhibitors), vaginal atrophy, menopause, stroke, and neurological conditions (MS, Parkinson's)
Mixed Type	• Do you leak with both? • Which is greater – urge or stress?	• A combination of Stressand Urge symptoms.	
Other Types • Overflow • Neurogenic • Functional	• Do you have trouble emptying completely? • Do you have a hard time starting your stream?	• **Overflow:** marked by frequent leakage of urine without the urge to empty the bladder or inability to urinate normal volumes. • **Neurogenic:** loss of bladder control due to problems with the brain, central nervous system. • **Functional:** occurs when a person's bladder and/or bowel are functioning but they are unable to access the toilet. This may be due to a physical or cognitive condition.	• Some neurological conditions can aggravate or impact the bladder, such as Diabetes, Parkinson's, Multiple Sclerosis.

2. Physical Examination(s)

- General status (mental status, obesity, mobility)
- Perform an abdominal exam
- Perform a pelvic exam:
  - Assess pelvic floor muscles and pelvic organ prolapse
    - **How to assess for prolapse:** Pelvic Floor Clinic Video: Pessary Training Course for Pelvic Organ Prolapse and UI: https://www.youtube.com/watch?v=myaZRrv79Y0
      - The video covers types of prolapse, assessment, risk factors, urinary incontinence symptoms, and how to perform a cough stress test
    - For more information, please see: Barber M D. Pelvic organ prolapse *BMJ* 2016; 354:i3853. doi:10.1136/bmj.i3853. PMID: 27439423
  - Check for vaginal estrogenization
  - Check for evidence of fistula
    - Risk factors for fistula: obstetrical trauma, previous pelvic surgery, radiation, PID, diverticulitis, inflammatory bowel disease
- Conduct a cough stress test in dorsal lithotomy or standing pad test.
  - **How to perform a cough stress test:** Patient needs a full bladder. Examine urethra in dorsal lithotomy position. Ask patient to bear down or cough and observe for urine. Alternatively, place a folded paper towel in underwear and have patient stand with legs apart and cough. Inspect paper towel for urine loss.
  - **More details on how to conduct a cough stress test:** Guralnick, ML et al. ICS Educational Module: Cough stress test in the evaluation of female urinary incontinence: Introducing the ICS-Uniform Cough Stress Test. *Neurourology and Urodynamics* 2018; 37(5): 1849-1855. DOI: (10.1002/nau.23519)

3. Alarm Features/Red Flags

- Abdominal or pelvic masses found upon examination should be referred for an urgent ultrasound.
- Next steps are as follows:
  - A non-gynecological mass: refer to Urology or Colorectal Surgeon as indicated
  - A mass of gynecological origin:
    - Suspicious mass with UI symptoms, refer to Gynecology Oncology
    - Benign mass with UI symptoms, refer to Gynecology or Urogynecology
  - For all masses, you may call Specialist Link for clarification on next steps or referral.
- Suspected vesicovaginal or urethrovaginal fistula can be referred to a Specialist Urologist or Urogynecology or place a call to Specialist Link for advice.
- Patients with gross or microscopic hematuria can be referred to Urology Central Intake for further assessment.
  - To access Urology Central Intake information on Specialist LINK: https://www.specialistlink.ca/files/Urology_Access_Pathway.pdf
  - Referral form: https://www.albertahealthservices.ca/frm-21349.pdf
  - **Note**: there is a pathway to manage hematuria under development.
  - For more information on microscopic hematuria management, refer to the American College of Obstetricians and Gynecologists (ACOG) Committee opinion No. 703.
    - Committee on Gynecologic Practice, American Urological Society. Committee opinion No. 703 summary: asymptomatic microscopic hematuria in women. Obstet Gynecol. 2017;129(6):1153-1154. doi:10.1097/AOG.0000000000002110.

4. Investigations

Urinalysis

A routine microscopic urinalysis is recommended to rule out proteinuria, leukocytes, nitrates, and glycosuria.

- If urinalysis is positive for glycosuria, perform a screen for diabetes mellitus.
- If urinalysis is positive for leukocytes, nitrates, or hematuria, send urine for culture and treat if positive. Evaluate for resolution of UI symptoms.

If this is a recurrent UTI, treat as indicated. Recurrent UTI is defined as >3 documented infections within a year, or 2 UTIs within 6 months.

Current guidelines advise AGAINST treatment of asymptomatic bacteriuria in non-pregnant women.[9]

Collect a urine C and S as indicated.

Bladder Diary

A bladder diary completed by the patient is very helpful to confirm the type of UI. A record of 3 days to get a picture of symptoms of daily life (at work and at home).

- My Health Alberta bladder and bowel diary: https://myhealth.alberta.ca/Alberta/Pages/bladder-bowel-diary.aspx

Measuring Post Void Residual (PVR)

If concerned about voiding dysfunction or poor emptying, physicians can measure PVR using a pelvic ultrasound. There is no consensus on a cut-off for an abnormal PVR. We recommend using 200 ml as a cut-off. Results should be interpreted with caution. A post void residual can be measured by a bladder scanner or by in and out catherization, but these tools are not readily available in most primary care offices.

- **Note:** Pelvic ultrasound to measure PVR. Often patients are told to report for the ultrasound with a “full bladder” and then the overdistended bladder results in poor emptying.
- **Consider** a referral if there are concerns about the results of PVR ultrasound.
  - If urinary retention > 200 ml, refer to Urology Central Intake or Urogynecology.

Further need for investigations such as cystoscopy, uroflowmetry, and urodynamic testing will be determined by the Urogynecologist or Urologist.

5. Conservative Management Therapies

Proceed with conservative management for all types of UI. Strategies should be trialed for at least 3 months to assess efficacy. If surgical intervention is indicated, offering conservative management as first line will reduce the wait once referred.

Strategies for self-management and primary care support:

- Patient education on pelvic floor health and UI*
- Scheduled voiding
- Fluid management
- Smoking cessation and avoidance of caffeine
- Weight loss (if warranted)
- Treatment of constipation
- Urge suppression techniques
- Kegel exercises
- Pelvic floor muscle training (self-referral to private physical therapy or AHS Rehab Line**)
- Offering various incontinence pad products
- Continence pessary for stress incontinence, or a pessary for bothersome prolapse which MAY have benefit for urge symptoms

Patient Education on Pelvic Floor Health*

- The Pelvic Floor Clinic (Calgary Zone) has patient self-management resources available on their website: https://www.albertahealthservices.ca/info/Page10693.aspx (see Patient Resources for descriptions of these resources).
- My Health Alberta has patient resources and tools for self-management of incontinence: https://myhealth.alberta.ca/health/pages/conditions.aspx?Hwid=hw220313. Information available in Chinese, Punjabi and Arabic.

Pelvic Floor Therapy Services**

Patients can refer themselves to pelvic floor physical therapy either privately or through the AHS Rehabilitation Advice Line.

Find contact information for trained pelvic floor therapists with the College of Physiotherapy of Alberta:

https://www.physiotherapyalberta.ca/physiotherapists/physiotherapist_listings.

AHS Rehabilitation Advice Line: 1-833-379-0563

The Rehabilitation Advice Line is open Monday to Friday. The service provides free rehabilitation advice and general health information for Albertans. There is financial assistance for those who qualify.

The service provides information on:

- Activities and exercises that help with physical concerns
- Strategies to manage the day-to-day activities affected by these concerns
- Rehabilitation services that are open for in-person and/or virtual visits
- Community-based organizations

6. Medication Management

Vaginal Estrogen for Conservative Management/Pessary Use

In the presence of genitourinary syndrome of menopause, vaginal estrogen can provide benefit for urge symptoms and comfort for pessary use.

- Premarin pv cream 0.5 – 1 gm pv qhs x 2 weeks, then 2-3 x / week
- Vagifem 10 mcg pv qhs x 2 weeks, then 2-3 x / week
- Estragyne 10 mcg pv qhs x 2 weeks, then 2-3x / week
- Estring, 1 ring pv q3 months

Additional information for patients on vaginal estrogen therapies from Your Pelvic Floor (International Urogynecological Association) website

- Low-Dose Vaginal Estrogen Therapy https://www.yourpelvicfloor.org/conditions/low-dose-vaginal-estrogen-therapy/

Antimuscarinics for Urge/ Overactive Bladder (OAB)

Antimuscarinics are considered first-line for the treatment of Urge incontinence and OAB. There is good evidence demonstrating superiority to placebo[10] and, overall, antimuscarinics have similar efficacy to each other.[11]

Higher doses may have higher side effect profiles.

Rule out contraindications for antimuscarinics:

  - Closed angle glaucoma
  - Myasthenia gravis
  - Severe uncontrolled hypertension
  - CYP2D6 metabolization of medications (e.g. tamoxifen)
  - Relative contraindications: history of urinary retention
- Tolterodine LA 4 mg po daily. Can increase to 8 mg po daily if well tolerated and suboptimal efficacy after 1 month. This is a first-line anticholinergic and is covered by Alberta Blue Cross.
- Solifenacin 5 mg po daily. Can increase to 10 mg po daily if well tolerated and suboptimal efficacy after 1 month. This is a first-line anticholinergic and is covered by Alberta Blue Cross.
- Fesoterodine 4 mg po daily. Can increase to 8 mg po daily if well tolerated and suboptimal efficacy after 1 month. SOGC reports lower rate of antimuscarinic adverse effects in the elderly.
  - Monitor for side effects:
    - Dry eyes
    - Dry mouth
    - Constipation
    - Headache
    - Blurred vision
    - Dizziness
  - Recommend early review of medication efficacy and adverse effects with bowel management, fluid management, dose modification, or alternative antimuscarinic before abandoning effective antimuscarinic therapy (AUA / SUFU).

Beta 3 agonist for Urge Incontinence/Overactive Bladder (OAB)

Start Mirabegron at 25 – 50 mg po daily for a duration of 8-12 weeks. Requires at least 4 weeks to determine efficacy. This medication has a lower side effect profile and is a second-line medication covered by Alberta Blue Cross.

- Monitor for side effects:
  - New onset urinary retention
  - Monitor BP if there is history of severe uncontrolled hypertension and discontinue if elevation > 10 mmHg systolic blood pressure (sBP)
  - Tachycardia or rhythm changes
  - CYP2D6

7. Referral Information

Information to Include with Your Referral

- Detailed patient history of UI symptoms, past surgeries, medications prescribed to manage UI
- Results of all exams and investigations
- Patient bladder diary
- When referring to the Pelvic Floor Clinic, please specify if your patient has a preference for pessary fitting or surgical intervention.
    - Patients can learn about their options and make a selection after viewing this tool created by the Pelvic Floor Clinic: "The Next Step"

Urogynecology and Urology Referrals (Calgary Zone)

Clinic Name	Contact Information	Referral Information
AHS Clinics		
Pelvic Floor Clinic, Women's Health Ambulatory Care, Foothills Medical Centre	Tel: 403-944-4000 Fax: 403 944-2154 https://www.albertahealthservices.ca/findhealth/Service.aspx?id=1008362&serviceAtFacilityID=1046427#contentStart	Please access the Pelvic Floor Clinic Referral form https://albertareferraldirectory.ca/PublicSearchController?direct=displayViewServiceAtFacility&serviceAtFacilityId=1046427&pageNumberToDisplay=1&publicSearch=true to begin the referral process. Indicate reason for referral and any confirmed diagnosis to assist in directing your referral. Referrals will be triaged to follow within one to two weeks. For URGENT Gynecology advice or referral, call RAAPID at 403-944-4486.
Dr. Eider Ruiz-Mirazo, Women's Health Ambulatory Care, South Health Campus	Tel: 403-956-2000	
Non-AHS Clinics **Note:** There may be fees for pelvic floor services and pessaries in non-AHS clinics. Fees are clinic dependent.		
Vesia, Southern Alberta Institute of Urology	Tel: 403-943-8770 Fax: 1-833-627-7023 (Calgary Zone FAST fax number)	Alberta has a central access and intake system for managing referrals called Alberta Facilitated Access to Specialized Treatment (FAST). More details. Referral form | Urology access, Calgary Zone For URGENT Urology advice or referral, call RAAPID at 403-944-4486.
Dr. Shunaha Kim-Fine	Tel: 403-692-0440 Fax: 403-692-0442	
Dr. Katherine Lo	Tel: 403-229-2273 Fax: 403-246-9688	
Dr. Magnus Murphy	Tel: 403-692-0440 Fax: 403-692-0442	

Skilled Community Physicians for Referral
Contact your local PCN for the names of physicians accepting referrals for urinary incontinence or pelvic floor conditions

Call **Specialist Link for non-urgent advice on referrals to Urogynecology, Urology, or Gynecology:
Tel: 403-910-2551
Toll Free: 1-844-962-5456 (LINK)
Website: www.specialistlink.ca

BACKGROUND

About this pathway

- The Urinary Incontinence (Women) pathway was co-developed by the Calgary Zone Pelvic Floor Clinic, Urology, Family Medicine, and the Physician Learning Program.
- The pathway is intended to provide evidence-based guidance to support primary care providers in caring for patients with uncomplicated urinary incontinence within the medical home.

Authors and conflict of interest declaration

- This pathway was developed in 2021 by a multi-disciplinary team led by family physicians, urogynecologists, and urologists. Names of participating reviewers and their conflict of interest declarations are available on request.

Pathway review process, timelines

- Primary care pathways undergo scheduled review every three years, or earlier if there is a clinically significant change in knowledge or practice. The next scheduled review is January 2023. However, we welcome feedback at any time. Please email comments to Shunaha.Kim-Fine@albertahealthservices.ca

DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of health care professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified health care professional. It is expected that all users will seek advice of other appropriately qualified and regulated health care providers with any issues transcending their specific knowledge, scope

PROVIDER RESOURCES

Tools:

How to conduct an assessment for pelvic prolapse

- Pelvic Floor Clinic Video: Pessary Training Course for Pelvic Organ Prolapse and UI: https://www.youtube.com/watch?v=myaZRrv79Y0
    - Discussion of types of prolapse, assessment, risk factors, urinary incontinence symptoms, and how to perform a cough stress test
        - For more information, please see: Barber M D. Pelvic organ prolapse *BMJ* 2016; 354:i3853. doi:10.1136/bmj.i3853. PMID: 27439423

How to perform a cough stress test

- Patient needs a full bladder. Examine urethra in dorsal lithotomy position. Ask patient to bear down or cough and observe for urine. Alternatively, place a folded paper towel in underwear and have patient stand with legs apart and cough. Inspect paper towel for urine loss.
    - Guralnick, ML et al. ICS Educational Module: Cough stress test in the evaluation of female urinary incontinence: Introducing the ICS-Uniform Cough Stress Test. *Neurourology and Urodynamics* 2018; 37(5): 1849-1855. DOI: (10.1002/nau.23519)

Clinical Practice Guidelines & Recommendations:

- **Society of Obstetricians and Gynecologists of Canada (SOGC)**
    - Geoffrion R. No. 353-Treatments for Overactive Bladder: Focus on Pharmacotherapy - An Addendum. *J Obstet Gynaecol Can*. 2017 Dec;39(12):1221-1229. doi: 10.1016/j.jogc.2017.06.032. Epub 2017 Oct 3. PMID: 28986184.
    - Robert M, and Ross S. No. 186-Conservative Management of Urinary Incontinence. *J Obstet Gynaecol Can*. 2018 Feb;40(2):e119-e125. doi: 10.1016/j.jogc.2017.11.027. PMID: 29447716.

- **Canadian Urological Association (CUA)**
    - Corcos J, Przydacz M, Campeau L, Gray G, Hickling D, Honeine C, Radomski SB, Stothers L, Wagg A, Lond F. CUA guideline on adult overactive bladder. *Can Urol Assoc J*. 2017 May;11(5):E142-E173. doi: 10.5489/cuaj.4586. Epub 2017 May 9. Erratum in: Can Urol Assoc J. 2017 May;11(5):E250. Erratum in: *Can Urol Assoc J*. 2017 Jul;11(7):E323. PMID: 28503229; PMCID: PMC5426936.

- **American Urological Association (AUA)/Society of Urodynamics (SUFU)**
    - Lightner DJ, Gomelsky A, Souter L, Vasavada SP. Diagnosis and Treatment of Overactive Bladder (Non-Neurogenic) in Adults: AUA/SUFU Guideline Amendment 2019. *J Urol*. 2019 Sep;202(3):558-563. doi: 10.1097/JU.0000000000000309. Epub 2019 Aug 8. PMID: 31039103.

- **American College of Obstetricians and Gynecologists (ACOG)**
    - ACOG Practice Bulletin No. 155: Urinary Incontinence in Women. *Obstet Gynecol*.2015;126(5):e66-e81. doi: 10.1097/AOG.0000000000001148. PMID: 26488524
    - Committee on Gynecologic Practice, American Urological Society. Committee opinion No. 703 summary: asymptomatic microscopic hematuria in women. *Obstet Gynecol*. 2017;129(6):1153-1154. doi:10.1097/AOG.0000000000002110.

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2. Minassian VA, Yan X, Lichtenfeld MJ, Sun H, Stewart WF. The iceberg of health care utilization in women with urinary incontinence. *Int Urogynecol J.* 2012;23(8):1087-1093.

3. Harris SS, Link CL, Tennstedt SL, Kusek JW, McKinlay JB. Care seeking and treatment for urinaryincontinence in a diverse population. *The Journal of urology.* 2007;177(2):680-684.

4. Nygaard I, Barber MD, Burgio KL, et al. Prevalence of symptomatic pelvic floor disorders in USwomen. *JAMA.* 2008;300(11):1311-1316.

5. Irwin DE, Milsom I, Hunskaar S, et al. Population-based survey of urinary incontinence, overactive bladder, and other lower urinary tract symptoms in five countries: results of the EPICstudy. *Eur Urol.* 2006;50(6):1306-1314; discussion 1314-1305.

6. ACOG Practice Bulletin No. 155: Urinary Incontinence in Women. *Obstet Gynecol.* 2015;126(5):e66-e81.

7. Robert M, Ross S. No. 186-Conservative Management of Urinary Incontinence. *J Obstet Gynaecol Can*. 2018;40(2):e119-e125.

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9. Nicolle LE, Gupta K, Bradley SF, et al. Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America. *ClinInfect Dis.* 2019;68(10):1611-1615.

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11. Sussman RD, Syan R, Brucker BM. Guideline of guidelines: urinary incontinence in women. *BJUInt.* 2020;125(5):638-655.

12. Khandelwal C, Kistler C. Diagnosis of Urinary Incontinence. Am Fam Physician. 2013;87(8):543-550.

13. Resnick NM, Yalla SV. Management of urinary incontinence in the elderly. N Engl J Med.1985;313(13):801.

PATIENT RESOURCES

Resource Information	Where to find
Pelvic Floor Clinic (Calgary Zone) Patient-facing video modules on: 1. Introduction to the Pelvic Floor 2. Pelvic Organ Prolapse 3. Urinary Incontinence 4. Bowel Management 5. The Next Step	www.ahs.ca/pelvicfloorhealth Helping Patients Choose Pelvic Floor Treatments is part of the online education video series and is covered in The Next Step video. Videos: Found in the Patient Education Section (bottom of page)
My Health Alberta Health topic: Urinary Incontinence in Women – a comprehensive overview of causes, symptoms, treatments, and self-care options.	https://myhealth.alberta.ca • **Urinary Incontinence in Women:** https://myhealth.alberta.ca/health/pages/conditions.aspx?Hwid=hw220313 • **Bladder Diary:** https://myhealth.alberta.ca/Alberta/Pages/bladder-bowel-diary.aspx • **Stress Incontinence in Women: Should I have Surgery?** Patient decision-making tool. https://myhealth.alberta.ca/health/pages/conditions.aspx?hwid=aa137467&lang=en-ca#av2408 • **Kegel Exercises:** https://myhealth.alberta.ca/health/pages/conditions.aspx?hwid=hw220056&lang=en-ca#hw220059
Pelvic Floor Therapy How to find a pelvic floor therapist	**College of Physiotherapy of Alberta:** https://www.physiotherapyalberta.ca/physiotherapists/physiotherapist_listings **AHS Rehabilitation Advice Line**: 1-833-379-0563 Monday to Friday
Your Pelvic Floor Additional information for patients on vaginal estrogen therapies. International Urogynecological Association	https://www.yourpelvicfloor.org/ • **Low-Dose Vaginal Estrogen Therapy**: https://www.yourpelvicfloor.org/conditions/low-dose-vaginal-estrogen-therapy/
Voices for Pelvic Floor Disorders Supported by the American Urogynecologic Society. Many patient-oriented resources that explain pelvic floor conditions.	www.Voicesforpfd.org • **Patient brochures on a range of topics**: Pelvic Floor Muscle Exercises and Bladder Training, Overactive Bladder, Pelvic Organ Prolapse, Stress Urinary Incontinence, Surgery: What to Expect, Vaginal Pessaries • **Other handouts:** Voiding diaries, kegel exercise instruction sheet
Canadian Continence Foundation Comprehensive overview of many bladder health conditions for female and male.	https://www.canadiancontinence.ca/EN/ • Overview of UI and types: https://www.canadiancontinence.ca/EN/what-is-urinary- incontinence.php • Interactive Learning modules for patients (OAB, Pelvic Organ Prolapse, Stress Urinary Incontinence): https://www.canadiancontinence.ca/EN/interactive-learning.php • Tips for Bladder Control: https://www.canadiancontinence.ca/EN/tips-for-bladder-leakage-control-problems.php
Pelvic Floor First Continence Foundation of Australia	http://www.pelvicfloorfirst.org.au/ Patient-focused guides to learning about the pelvic floor and how to engage in "pelvic friendly" exercises. Examples of topics: "How to exercise without wetting yourself"