CEP | Providers

Managing Urinary Incontinence in Women

This tool is designed to support primary care providers in managing urinary incontinence (UI) in women ≥ 18 years. UI is the involuntary loss of urine and it is an underdiagnosed disorder.[1] The treatment of UI involves a step-wise approach of non-pharmacological, pharmacological and in some cases surgical interventions. Providers should work with patients to create a treatment plan that considers patients' preferences, as well as the practicality, availability and affordability of treatment options.

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SECTION A: Screening

Screening for urinary incontinence in women is important because many women live with this condition for years without bringing it to the attention of their primary care provider. The screening and diagnostic measures below will help to identify if your patient has: stress urinary incontinence (SUI), overactive bladder (OAB) or mixed urinary incontinence (MUI). Identifying your patient's type of UI will help direct their treatment plan.

Opportunities to screen for UI

Patients who are:
- Over 65 years of age
- Postmenopausal
- Presenting with urinary concerns
- Diagnosed with conditions associated with an increased risk of UI (e.g. diabetes, obesity and neurologic disease)

Scheduled for a:
- periodic health examination
- pap smear
- postpartum visit

Talking Points

"It can be embarrassing to talk about urinary incontinence, but it is a very common and treatable condition."[3]

"Many people with incontinence can regain bladder control or at least reduce the amount of leakage they have."[4]

Assessing the medical history of your patient helps identify any predisposing risk factors[5] that can help clarify patient's urinary symptoms severity and identify potential underlying causes that may be treatable or require further evaluation.[2]

Medical history

☐	When they started experiencing urinary incontinence[12]
☐	The number of vaginal deliveries[12]
☐	Ask patient if they: • Are postmenopausal[8] (last period over 1 year ago)[3] • Had urological or gynaecological surgeries[7] such as a total hysterectomy[3,8], cystocele repair[7], pelvic surgery[16] (see referral indicators), history of laparoscopic or open bladder suspension[7] • Smoke cigarettes[12] • Experience constipation[8] • Feel pain or a burning feeling when they urinate[12] • Have an occupation that requires regular lifting[7]
☐	Identify if patient is taking medication that can effect urogenital system and urine retention, such as:[5] • Medications with anticholinergic side effects such as antihistamines, antidepressants, and antipsychotics • Calcium-channel blockers • Alpha-adrenergic agonists

Notes: _____

Referral indicators

If patient has or had one or more of the following conditions, consider conducting a work-up/or refer patient to an appropriate specialist

- ☐ difficulty urinating[6]
- ☐ constant leakage of urine[16]
- ☐ unable to control bowel movements[6]
- ☐ blood in the urine[16]
- ☐ persisting bladder or urethral pain[6]
- ☐ a history of recurrent urinary tract infection (UTI)[16] (≥2 infections in six months or ≥3 infections in one year)[19]
- ☐ pelvic surgery[16]
- ☐ radiation therapy[16]
- ☐ clinically benign pelvic masses[6]
- ☐ suspected urogenital fistulae[6]
- ☐ previous continence surgery[6]
- ☐ suspected neurological disease[6]

SECTION A: Screening (Continued)

Physical examination

When examining a patient to rule out a pelvic mass or other pathology, complete the following examination and assessment to determine if prolapse is present. If there is no suspicion of prolapse following the examination, continue to Section C: Diagnosis.

☐	**Examine the perineum**
Assess estrogen levels by looking for signs of vaginal atrophy: pale, dry, thin vagina and perineal skin[7]	

☐	**Assess the pelvic floor muscles**
Ask the patient to contract the pelvic floor muscles around the examining fingers.[13] Consider that: • *normal* pelvic floor muscles can voluntarily contract and relax[13] • *overactive* pelvic floor muscles do not relax[12] • *underactive* pelvic floor muscles cannot voluntarily contract[13] • *non-functioning* pelvic floor muscles present when no pelvic floor muscle action is palpable[13]	

☐	**Is pelvic organ prolapse suspected?**
If yes, proceed to Section B: Pelvic organ prolapse (POP) If no, proceed to Section C: Diagnosis	

Screening tools

The following screening tools will help further confirm the type of UI that your patient has and identify if there are any other underlying conditions that need to be treated as well.

Urine culture/urine analysis	
Perform urinalysis as a part of the initial assessment of a patient with suspected UI.[16]	
☐	Treat confirmed UTIs with antibiotics[6]
☐	Have patient return after UTI has been treated for further assessment[16]

Assessing residual urine	
☐	Assess residual urine for patients who: • had bladder surgery • have prolapse • have a neurological condition (multiple sclerosis, strokes, spine/nerve surgeries, diabetic patients with peripheral neuropathy) • have symptoms of incomplete emptying of bladder • have symptoms of frequency and urgency
☐	Measure post-void residual volume[6] by catheterisation or ultrasound[16]/bladder scan[6]

SECTION B: Pelvic organ prolapse

Pelvic organ prolapse (POP) is the herniation of the pelvic organs to or beyond the vaginal walls. Many women with POP experience symptoms that impact daily activities, sexual function, and exercise.[14] **The degree of POP doesn't always co-relate with the degree of UI symptoms that a patient experiences.**

Screening for POP

If examination of the perineum and assessment of pelvic floor muscles leads to suspected POP, treat POP concurrently with UI and proceed with the following steps.[3]

SECTION B: Pelvic organ prolapse (Continued)

Examination

- After conducting the examination to detect signs of POP, use the Pelvic Organ Prolapse Quantitation (POP-Q) system[15] to confirm signs of prolapse[13]
  - POP-Q is an objective, site-specific system for describing and staging POP in women[13]

If a patient has symptoms of prolapse, not explained by a physical examination, consider repeating the examination at another scheduled appointment or with the woman in a standing or squatting position.[6]

If patient with POP presents with any of the following symptoms, refer them to the appropriate specialist (gastroenterologist, gynaecologist or urologist):[6,7]

- pain
- symptoms of obstructed defaecation or faecal incontinence
- symptoms not explained by examination findings

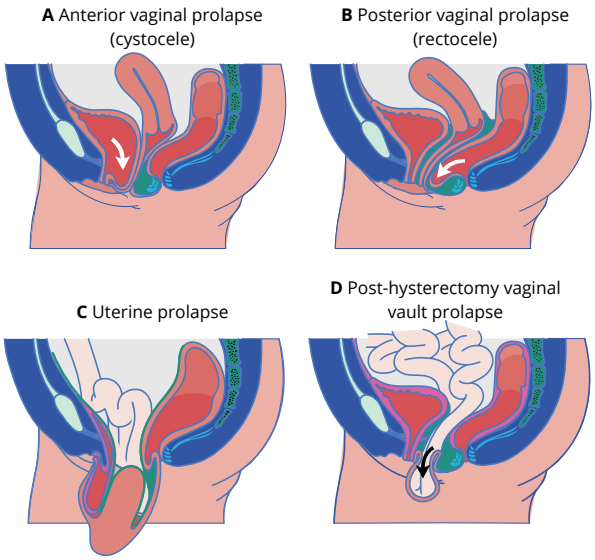

Figure 1 The stages of pelvic organ prolapse

Adapted from the 2016 British Medical Journal article by Matthew D. Barber[17]

Treatment options

Discuss management options with women who have pelvic organ prolapse, including no treatment, non-surgical treatment and surgical options, taking into account:[6]

- the patient's preferences
- site of prolapse
- lifestyle factors
- comorbidities, including cognitive or physical impairments
- age
- desire for childbearing
- previous abdominal or pelvic floor surgery
- benefits and risks of individual procedures

Non-surgical management of POP

Lifestyle interventions

- Advise patient to incorporate the lifestyle changes in Section D: Conservative management of UI into their daily routine

Pelvic floor training

Appropriate for: All patients if they can tolerate vaginal examinations[3,7]

How to: Consider referring patient to a pelvic floor physiotherapist/physiotherapist for supervised pelvic floor muscle training for at least 16 weeks as a first option for women with symptomatic POP-Q stage 1 or stage 2 pelvic organ prolapse. If the program is beneficial, advise women to continue pelvic floor muscle training afterwards[6]

Consider referring patients to Patient resources section for additional pelvic floor training support

Pessaries

Appropriate for: Patients with symptomatic pelvic organ prolapse

How to: Obtain a pessary fitting kit.[3] As wait times for pessary fitting and care may vary, providers can learn to do this either by themselves by referring to the Canadian Family Physician article on pessary fittings[48] or by shadowing an expert in this area.[3]

- If the patient has vaginal odour, bleeding, or is post-menopausal, consider a low-dose of topical estrogen in conjunction with pessary use after clinical examination[50,51]
  - Refer patients with vaginal erosion and ongoing bleeding to a specialist[3]
- Instruct the patient on pessary insertion/removal and care (cleaning and examination), as needed. Also ask about comfort and side effects.[34]

Follow-up: Every 6 months with a gynaecological examination included

Surgical management of POP

If your patient is considering surgical procedures for POP, use decision aids found in Patient resources to promote informed preference and shared decision making. Refer the patient to a specialist with an interest in incontinence if they choose elective surgery.[3,32,33]

Proceed to Section C: Diagnosis to treat UI symptoms concurrently with POP.

SECTION C: Diagnosis

After taking patient's medical history and conducting a physical examination, use a UI symptom questionnaire to assess and diagnose your patient[9]:

- The Questionnaire for Female Urinary Incontinence Diagnosis (QUID) is a validated tool that has the potential to identify the different types of UI in women.[16] Please use the QUID below to diagnose the type of UI your patient has and proceed to the sections in the tool accordingly.

QUID

Do you leak urine (even small drops), wet yourself, or wet your pads or undergarments...	None of the time (0)	Rarely (1)	Once in a while (2)	Often (3)	Most of the time (4)	All of the time (5)
1. when you cough or sneeze?	☐	☐	☐	☐	☐	☐
2. when you bend down or lift something?	☐	☐	☐	☐	☐	☐
3. when you walk quickly, jog or exercise?	☐	☐	☐	☐	☐	☐
4. while you are undressing to use the toilet?	☐	☐	☐	☐	☐	☐
5. Do you get such a strong and uncomfortable need to urinate that you leak urine (even small drops) or wet yourself before reaching the toilet?	☐	☐	☐	☐	☐	☐
6. Do you have to rush to the bathroom because you get a sudden, strong need to urinate?	☐	☐	☐	☐	☐	☐

Stress urinary incontinence (SUI)
Positive scores to questions 1, 2, 3 implies stress UI
- stress score is the total score for questions 1, 2, 3
- > 4 is clinically significant[7,21]
  - Section D: Conservative management of UI
  - Section F: Surgical management of UI

Overactive bladder (OAB)
Positive scores to questions 4, 5, 6 implies urge UI or overactive bladder (OAB), urge score = total for questions 4, 5, 6
- > 6 is clinically significant[7,21]
  - Section D: Conservative management of UI
  - Section E: Pharmacological management of UI
  - Section F: Surgical management of UI

Mixed urinary incontinence (MUI)
Mixed UI includes both urge and stress scores[7]
Treat the most bothersome symptom first in patients with MUI.[16]
- Section D: Conservative management of UI
- Section E: Pharmacological management of UI
- Section F: Surgical management of UI

SECTION D: Conservative management of UI

If the patient has minor UI or presents concerns of UI symptoms, the first-line treatments are conservative therapies. These treatments usually carry the least risk of harm.[16]

Lifestyle interventions

Advise your patient to incorporate the following into their daily lifestyle routine:

☐	Recommend a trial of caffeine reduction to women with overactive bladder[6]
☐	Recommend eating more fiber (this can also prevent constipation which can be a cause of UI)[8]
☐	Provide smoking cessation strategies to patients who smoke[16]
☐	Review type and amount of fluid intake in patients with UI[16]
☐	Advise a light reduction in the amount of liquid that the patient drinks[4]
☐	Advise patient to cut back on alcohol consumption[3]
☐	Advise patients who have a BMI greater than 30 kg/m^2 to lose weight[6]

Talking Points

"Have you considered cutting down on any foods or drinks that make your symptoms worse?"[4]

"When taking diuretics, aka "water pills", make sure to take them when you will be near a bathroom for a few hours. This medicine can increase your need to urinate."[4]

Patients with diabetes
"Keep your blood sugars as close to normal as possible, this may help some of your symptoms"[4]

SECTION D: Conservative management of UI (Continued)

Physical therapies

All patients are eligible for pelvic floor therapy if they can tolerate vaginal examinations.[3,7]

Consider referring your patient to a pelvic floor physiotherapist/physiotherapist for supervised pelvic floor muscle training.[6]

☐	Consider training for at least 3 months' duration[6]
☐	Pelvic floor muscle training program should comprise of at least 8 contractions holding for a minimum of 10 seconds, performed 3 times per day[6]
☐	Continue an exercise program if pelvic floor muscle training is beneficial[6]
	☐ Consider referring patients to Patient resources for additional pelvic floor training support

Absorbent containment products, urinals and toileting aids

Only offer absorbent containment products, hand-held urinals or toileting aids to treat UI after other treatments have been tried: [6]

- as a coping strategy pending definitive treatment
- as an adjunct to ongoing therapy
- as long-term management options only after exploring other treatments

- Conduct a review (at least once a year) for women who use absorbent containment products for the long-term management of UI

SECTION E: Pharmacological management of UI

Conservative management of OAB and MUI is the first choice of treatment. Pharmacological interventions are the second choice of treatment[3] when conservative treatment is not successful.[16]

Talking Points

"You may not see a lot of benefits until you've been taking the medicine for at least 4 weeks and your symptoms may continue to improve over time"[6]

Considerations before prescribing pharmacological treatment

- For anticholinergic medication, side effects can include dry mouth, constipation as well as a reduction of incontinence.[7]
- The adverse effects of blurred vision and cognitive impairment indicate that the medication is to be discontinued. Reassess for a new medication to try.[7]

- Do not start medication if there is clinical evidence of acute angle glaucoma or cognitive impairments[7]
- Exercise caution with older patients especially those who are at risk of, or have, cognitive dysfunction[16]

Pharmacological options

- Offer intravaginal estrogens to treat overactive bladder symptoms in postmenopausal women with vaginal atrophy[6]
- Offer antimuscarinic (anticholinergic) medicine to treat overactive bladder or mixed urinary incontinence in women[6]
  - Immediate release (IR) formulation of oxybutynin is the archetype medication in the treatment of OAB[16]
- If the first medicine for OAB or MUI is not effective or well-tolerated, offer another medicine[6] while considering cost and Ontario Drug Benefit (ODB) coverage
  - Mirabegron, a beta-3 adrenoceptor agonist, is recommended as an option for treating the symptoms of overactive bladder only for people who have unacceptable side effects or for whom anticholinergic drugs are contraindicated or clinically ineffective[27]
- To ensure that medications do not contraindicate with other medicines that your patient is taking, consider consulting each product monograph or a pharmacist

What not to do:

- Do not offer women flavoxate, propantheline or imipramine to treat urinary incontinence or overactive bladder[6]
- Do not use duloxetine as a first-line treatment for women with predominant stress urinary incontinence. Do not routinely offer duloxetine as a second-line treatment for women with stress urinary incontinence, although it may be offered as second-line therapy if women prefer pharmacological to surgical treatment or are not suitable for surgical treatment. If duloxetine is prescribed, counsel women about its adverse effects[6]
- Do not offer systemic hormone replacement therapy to treat urinary incontinence[6]

Section E: Pharmacological management of UI (Continued)

Anticholinergics	Dosage	Formulations	Adverse effects	Cost[20]*
Darifenacin, extended-release[20,23,24]	7.5 mg once daily. If response is not adequate after a minimum of 2 weeks, dosage may be increased to 15 mg once daily.[30]	Tablet[23]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$$
Fesoterodine fumarate, extended-release[20,25,26]	4 mg daily PO[20,31] May increase to 8 mg daily PO if needed[20,31] Limit dose to 4 mg daily if ClCr <30 mL/min[20,31]	Tablet[26]	Back pain, constipation, cough, dry eyes, dry mouth[20]	$$
Oxybutynin, immediate-release generics[20,52] †	5 mg 2 to 3 times daily; adjust dose as needed and tolerated in 5 mg increments every 1 to ≥2 weeks.[37] In patients with overactive bladder associated with neurodegenerative diseases, may consider initiation at 2.5 mg 2 to 3 times daily.[37] Maximum: 5 mg 4 times daily.[37] Note: 2.5 mg is not covered[52]	Tablet	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$
Oxybutynin, extended-release[20,41]	5 to 10 mg once daily; adjust dose as needed and tolerated in 5 mg increments every 1 to ≥2 weeks Maximum: 30 mg once daily.[37]	Tablet[41]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$$$$
Oxybutynin, 10% transdermal gel[20,42]	1 g (contents of 1 sachet or 1 metered-dose pump) applied once daily to dry, intact skin on the abdomen, thighs or upper arms/shoulders[20]	Gel[42]	Application site pruritus, dizziness, dry mouth[20]	$$$
Oxybutynin, transdermal patch[20,43]	1 patch applied to skin twice weekly (alternating sites); delivers 3.9 mg/day[20]	Patch[43]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia). Application site reactions[20]	$$
Solifenacin[20,35,36]	5 mg daily PO[20] May increase to 10 mg daily PO if tolerated[20,40]	Tablet[36]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$
Tolterodine, immediate-release[20,38,44]**	2 mg twice daily; the dose may be lowered to 1 mg twice daily based on individual response and tolerability[45]	Tablet[44]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$
Tolterodine, extended-release[20,38,46]**	4 mg once daily; dose may be lowered to 2 mg once daily based on individual response and tolerability[45]	Capsule[46]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$
Trospium[20,39,47]**	20 mg BID on an empty stomach[20] In older patients or those with severe renal impairment, do not exceed 20 mg QHS[20]	Tablet[47]	Primarily anticholinergic effects (dry mouth, constipation, tachycardia)[20]	$$

Beta3-adrenergic agonists	Dosage	Formulations	Adverse effects	Cost[20]*
Mirabegron, extended-release[20,28,29]	25–50 mg once daily PO20	Tablet[29]	Hypertension, nasopharyngitis, urinary tract infection, tachycardia[20]	$$

Bold: ODB covered
Cost of 30 day supply: $<$30 $$=$30–60 $$$=$60–90 $$$$=$90–120;
* Please note that dispensing fees have not been included
**Partially covered by ODB

† Do not offer oxybutynin (immediate release) to older women who may be at higher risk of a sudden deterioration in their physical or mental health.[6]

SECTION F: Surgical management of UI

Discuss the benefits and risks of surgical treatment options for stress urinary incontinence.[6] Refer the patient to a specialist with an interest in incontinence (i.e. gynaecologist or urologist) to discuss all surgical options.[3,7]

For women with overactive bladder that have not responded to non-surgical management or pharmacological treatment and who wish to discuss further treatment options[6] refer patient to a specialist with an interest in incontinence (i.e. gynaecologist or urologist).[3, 7]

SECTION G: Follow-up and maintenance

Review and follow-up for conservative management

- Follow-up with patients depending on the severity of their condition (e.g. at 3 months, 6 months or at a year) after starting conservative treatment options
  - If patients symptoms have worsened, consider using pharmacological management options

Review of medications and follow-up for OAB

- Offer a face-to-face, telephone or virtual review 4 weeks after starting a new medication. Ask the patient if they are satisfied with the treatment, and: [6]
  - if the improvement is optimal, continue treatment
  - if there is no or suboptimal improvement, or intolerable adverse effects, then increase the dose or try an alternative medication, and review again 4 weeks later
- Review before 4 weeks if the adverse events of a medication are intolerable
- Refer women who have tried taking medication, but for whom it has not been successful or tolerated, to secondary care to consider further treatment[6]
- If a medication stops working after an initial successful 4-week review
- Offer a review in primary care to women who remain on long-term medication every 12 months, or every 6 months if they are aged over 75

Resources

Provider resources

[I] BMI calculator: https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

[II] International Urogynecological Association: https://www.iuga.org/

[III] Pessary fitting kit: https://www.coopersurgical.com/medical-devices/detail/milex-pessary-fitting-kit

[IV] Pessary insertion: https://www.cfp.ca/content/53/3/424

[V] OTN eConsult: https://otn.ca/providers/

[VI] POP-Q interactive assessment tool: https://www.augs.org/patient-services/pop-q-tool/

[VII] Canadian Continence Foundation: https://www.canadiancontinence.ca/EN/health-care-professionals.php

Patient resources

[VIII] What can I do about urinary incontinence: https://rnao.ca/sites/rnao-ca/files/Uninary-Incontinence-Decision-Aid_0_0.pdf

[IX] Your guide to better bladder control: https://www.canadiancontinence.ca/pdfs/The-Source.pdf

[X] National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) bladder diary: https://www.niddk.nih.gov/health-information/urologic-diseases/bladder-control-problems/diagnosis

[XI] National Institute for Health and Care Excellence (NICE) surgery for stress urinary incontinence patient decision aid: https://www.nice.org.uk/guidance/ng123/resources/surgery-for-stress-urinaryincontinence-patient-decision-aid-pdf-6725286110

[XII] NICE surgery for uterine prolapse patient decision aid: https://www.nice.org.uk/guidance/ng123/resources/surgery-for-uterine-prolapse-patient-decisionaid-pdf-6725286112

[XIII] NICE surgery for vaginal vault prolapse patient decision aid: https://www.nice.org.uk/guidance/ng123/resources/surgery-for-vaginal-vault-prolapsepatient-decision-aid-pdf-6725286114

[XIV] Pelvic floor exercises

- NIDDK Kegel exercises: https://www.niddk.nih.gov/health-information/urologic-diseases/kegel-exercises
- Pelvic floor exercise apps: https://www.yourpelvicfloor.org/media/PFE-Apps-Rev201804-1.pdf
- Pelvic floor safe core exercises: https://www.youtube.com/watch?v=gidN1N8nSRU
- Pelvic floor workout: https://www.youtube.com/watch?v=ZXwZFX9R3PI
- University Health Network (UHN) Pelvic floor "Kegel" exercises: https://www.uhn.ca/PatientsFamilies/Health_Information/Health_Topics/Documents/Pelvic_Floor_Kegel_Exercises_for_women.pdf

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