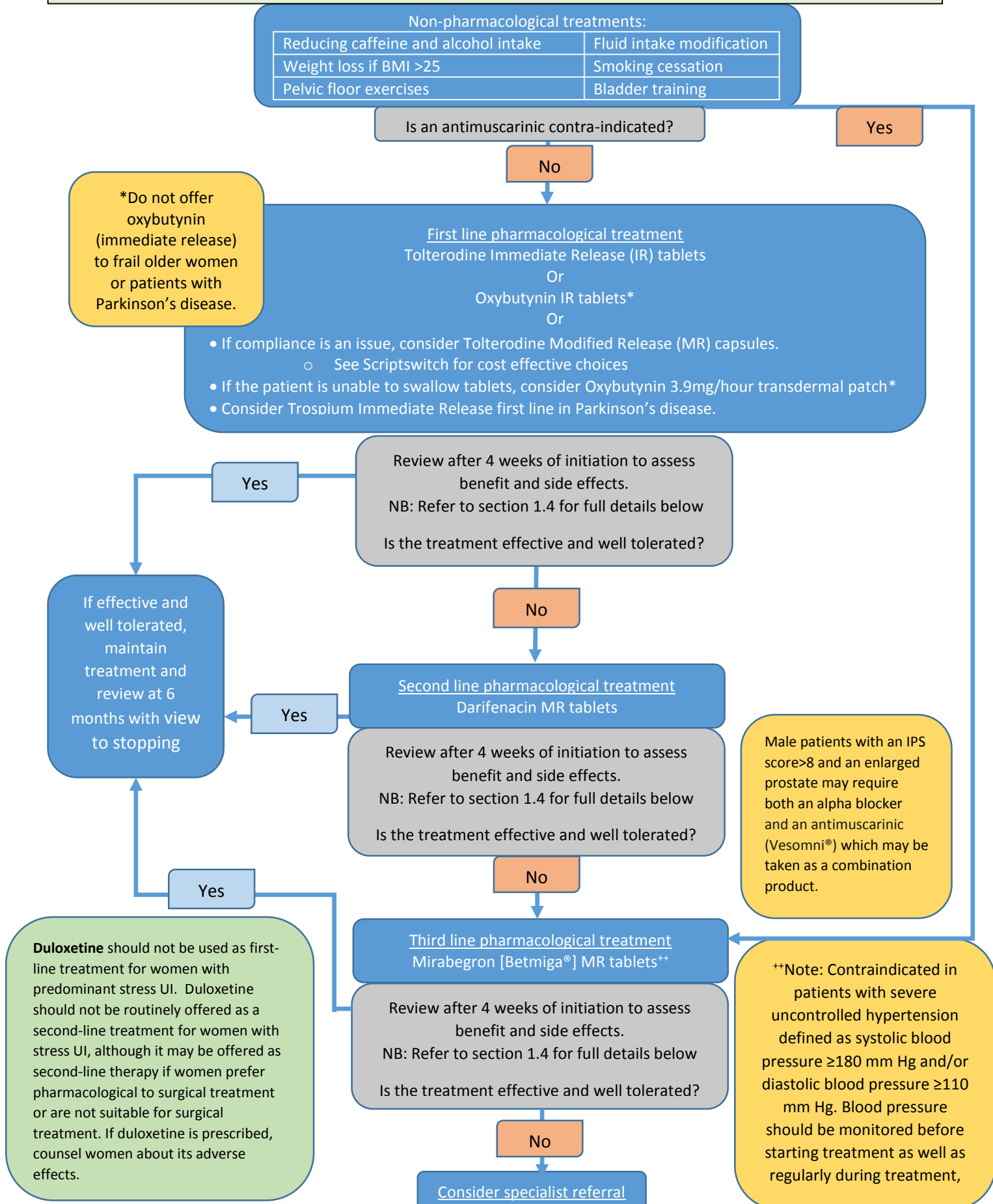


## Treatment pathway for overactive bladder and urinary incontinence in Primary Care

The mainstay of treatment for overactive bladder and urinary incontinence should remain in Primary Care until after second line treatments have been tried.



### 1.1 Management of patients with OAB and Urinary Incontinence

**Stress urinary incontinence** is defined as involuntary loss of urine on effort, physical exertion, or on sneezing or coughing.

**Urgency urinary incontinence** is defined as the involuntary loss of urine associated with urgency. Urgency incontinence is part of a larger symptom complex known as **overactive bladder syndrome**, which is defined as urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence, in the absence of urinary tract infection or other obvious disease.

People with overactive bladder syndrome-dry (without leakage) have frequency and urgency without leakage, whereas people with overactive bladder syndrome-wet (with leakage) experience overactive bladder syndrome with urgency urinary incontinence.

Women are more likely to experience urgency urinary incontinence (overactive bladder syndrome wet) than men.

Urinary incontinence (UI) can be managed initially at the primary care level in most patients.

Referral to a specialist urologist or gynaecologist with experience in treating urinary incontinence is usually indicated when conservative measures of **lifestyle measures, other non-pharmacological treatments and up to third line pharmacological treatments** fail to improve symptoms.

### 1.2 Non-pharmacological and pharmacological treatments

Lifestyle interventions (<https://www.nice.org.uk/guidance/cg171>)

Non-pharmacological treatments are recommended first line and should be tried before pharmacological options. These include:

- **Reduction of fluid intake (including caffeine and carbonated drinks)**
- Bladder training
- Pelvic floor muscle training
- Weight loss for those with a BMI >25

Drug treatments for urgency urinary incontinence and overactive bladder syndrome

- Anticholinergic agents are the main agents used for urgency urinary incontinence and overactive bladder syndrome that does not respond to lifestyle interventions.
- Before starting overactive bladder (OAB) drug treatment, discuss with the patient:
  - the likelihood of success and common side effects, and
  - that some side effects such as dry mouth and constipation may indicate that treatment is starting to have an effect, and
  - that they may not see the full benefits until they have been taking the treatment for 4 weeks
- Start with the lowest recommended dose when starting a new OAB drug treatment.
- Common side effects of antimuscarinics include: dry mouth (up to 30%), constipation, blurred vision, dry eyes, nausea, dyspepsia, flatulence, palpitations, arrhythmia, dizziness, insomnia and skin reactions (see SPC for full details).

### 1.3 Choice of Pharmacological agent (see appendix for further information)

- Do not offer oxybutynin (immediate release) to frail older women.
- Intravaginal oestrogen therapy may be used in post-menopausal women with vaginal atrophy and urgency incontinence.
- Do not use flavoxate, propantheline and imipramine.
- Solifenacin (Vesicare®) is not recommended locally and is not cost effective at the higher dose of 10mg.
- Mirabegron should be reserved as a **3rd LINE** agent when antimuscarinics are clinically ineffective, or have unacceptable side effects, or if there is a contra-indication to

## Treatment pathway for overactive bladder and urinary incontinence in Primary Care

antimuscarinic agents. Antimuscarinic drugs should not be used in patients with myasthenia gravis, significant bladder outflow obstruction or urinary retention, severe ulcerative colitis, toxic megacolon, and in GI obstruction and intestinal atony (see SPC for full details).

- Mirabegron is contraindicated in patients with severe uncontrolled hypertension defined as systolic blood pressure  $\geq 180$  mm Hg and/or diastolic blood pressure  $\geq 110$  mm Hg. Mirabegron can increase blood pressure. Blood pressure should be measured at baseline and periodically during treatment, especially in hypertensive patients.

### 1.4 Reviewing Treatment

- Review 4 weeks after the start of each new OAB drug treatment
- If there is no improvement or suboptimal improvement, or intolerable adverse effects change the dose, or try an alternative OAB drug (see pathway), and review again 4 weeks later
- If the patient is unable to swallow tablets, consider oxybutynin 3.9mg/hr transdermal patch
- Review women who remain on long-term drug treatment for UI or OAB annually in primary care (or every 6 months for women over 75)

### Treatment of drug refractory urgency urinary incontinence and overactive bladder symptoms

- If patients do not respond to an adequate trial of two different anticholinergic drugs after four weeks each, minimally invasive treatment options are available.
- Patients should be made aware that overactive bladder syndrome and urgency urinary incontinence, especially when severe, are chronic conditions that can be improved, but are unlikely to be cured. Success is more likely if patients play an active role in managing their symptoms.

## Summary

NICE clinical guideline 171 (2013) recommends the following:

- 1) **Do not** use flavoxate, propantheline and imipramine for the treatment of UI or OAB in women.
- 2) Do not offer oxybutynin (immediate release) to frail older women. [new 2013]
- 3) Offer one of the following choices first to women with OAB or mixed UI: [new 2013]
  - oxybutynin (immediate release), **or**
  - tolterodine (immediate release), **or**
  - darifenacin (once daily preparation)
- 4) Solifenacin is **NOT recommended**. NICE concluded there is a lack of evidence to show a difference in clinical effectiveness between OAB drugs.
  - There is **no strong evidence to suggest** that solifenacin, fesoterodine, trospium or oxybutynin ER have advantages in efficacy and tolerability over oxybutynin IR or tolterodine IR; however they are significantly more costly. Switching treatment to oxybutynin IR or tolterodine IR can lead to significant savings
- 5) Darifenacin is recommended as 2<sup>nd</sup> line
  - NICE recommends that if the first treatment for OAB or mixed UI is not effective or well-tolerated, offer the drug with the lowest acquisition cost. [New 2013]
- 6) Do not use duloxetine as a first-line treatment for women with predominant stress UI. Do not routinely offer duloxetine as a second-line treatment for women with stress UI, 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.

## Treatment pathway for overactive bladder and urinary incontinence in Primary Care

- 7) Offer a transdermal OAB drug to women unable to tolerate oral medication. [new 2013]
- Mirabegron for treating symptoms of overactive bladder. Mirabegron is recommended as an option for treating the symptoms of overactive bladder **only for people in whom antimuscarinic drugs are contraindicated** or clinically ineffective, or have unacceptable side effects. These recommendations are from <http://guidance.nice.org.uk/TA290>

**Table: OAB product, dosing and price comparison – Drug Tariff May 2016, MIMS May 2016**

Product and dosing	Cost per month	Recommendations
Tolterodine IR tablets, 1mg - 2mg twice daily	£2.94 - £3.07	Recommended first line product
Oxybutynin IR tablets, 2.5mg twice daily to 5mg four times daily	£1.97 - £6.34	Recommended first line product
Tolterodine MR tablets, 2mg - 4mg once daily	£11.60 - £25.78 (dependent on brand)	Recommended if there is likely non-compliance with first line oxybutynin IR or tolterodine IR
Trospium IR tablets, 20mg twice daily	£15.47	Recommended as branded Flotros® for Parkinson's patients
Oxybutynin 3.9mg/hour transdermal patches, to be applied twice weekly	£ 27.20 (8 patches)	Recommended for patients unable to swallow
Darifenacin MR tablets, 7.5mg – 15mg daily	£25.48	Recommended 2 <sup>nd</sup> line product
Mirabegron MR tablets, 25mg - 50mg once daily	£29.00	Recommended 3 <sup>rd</sup> line product, or when antimuscarinics are contra-indicated
Oxybutynin MR tablets, 5mg - 10mg once daily	£12.85 - £25.54	Not recommended
Trospium MR capsules, 60mg once daily	£23.05	Not recommended
Fesoterodine MR tablets, 4mg - 8mg once daily	£25.78	Not recommended
Solifenacin tablets, 5mg-10mg once daily	£27.62 - £35.91	Not recommended
Oxybutynin oral solution 2.5mg/5ml and 5mg/5ml, 5ml twice daily to four times daily	£99.00 - £796.80	Not recommended

# Treatment pathway for overactive bladder and urinary incontinence

## Appendix - Supporting Information

### **Evaluation of urinary incontinence (in women)**

#### History:

- Urinary symptoms (frequency, urgency, haematuria, urinary tract infections, nocturia)
- Pad usage.
- Daily fluid intake
- Presence of a vaginal bulge

Categorise into stress, urge or mixed incontinence. Ask patient to keep a urinary diary for 72 hours to objectively assess symptoms. (<http://www.bladdermatters.co.uk/downloads/85923fchart.pdf>)

#### Examination:

- Pelvic examination: assess for atrophy, prolapse, ability to perform pelvic floor exercises
  - Stress test for stress urinary incontinence
  - Presence of oedema in the lower extremities (suggestive of pelvic mass)
  - Cognitive status
  - Neurologic examination
  - Dipstick urine for blood, glucose and infection
  - Ultrasound measurement of residual volume will exclude bladder outflow obstruction
  - Cystometry
- Patients with uncomplicated stress or urgency urinary incontinence generally do not require referral for cystometry before starting conservative treatment, including drugs, unless they have microhaematuria or other complicating factors, such as previous incontinence surgery or recurrent urinary tract infections.
  - Urodynamics should not routinely be performed in women with untreated symptoms or urgency incontinence who have no evidence of neurologic disease or voiding dysfunction.
  - Refer urgently if red flags, or less urgently if history and exam suggest underlying causes

### **Lifestyle interventions**

#### **Decrease fluid intake:**

Women with all types of urinary incontinence can be advised to decrease their intake of fluids, caffeine, and carbonated drinks.

The daily recommendation by the media and medical establishment of six to eight glasses (240 mL each) of water a day includes the water present in food, which contributes substantially to overall total fluid intake. Hence, re-education is appropriate for women with symptoms of overactive bladder syndrome who admit to excessive fluid intake, unless otherwise medically indicated.

#### **Bladder training:**

AUA/SUFU and NICE recommend bladder training as a first line treatment for women with urgency or mixed urinary incontinence. This includes timed voiding, with a goal of reducing voiding frequency to every two to three hours. Women who are unable to wait this long begin by voiding at a set interval (such as an hour) and then increase the time interval by 15-30 minutes each week until the desired interval is reached.

**Constipation** should be managed and avoided because this contributes to urinary incontinence and voiding dysfunction.

**Weight.** Women with a body mass index greater than 25 should be advised to lose weight if they present with new or worsening symptoms because weight loss significantly reduces symptoms of urinary incontinence.

#### **Pelvic floor muscle training**

This consists of strengthening the muscles of the pelvic floor (to reduce stress urinary incontinence) and contracting them in isolation to inhibit detrusor contractions (and reduce urgency urinary incontinence). More commonly known as Kegel exercises, these should be done several times a day and need to be performed consistently over time for benefit to be sustained. NICE recommend offering a 3 month trial of 8 contractions to be performed 3 times per day as first line treatment for women with both stress and mixed urinary incontinence.

## Treatment pathway for overactive bladder and urinary incontinence

AUA/SUFU guidelines recommend pelvic floor muscle training as a first line treatment for overactive bladder syndrome. A systematic review of patients with urgency, stress, and mixed incontinence found that pelvic floor muscle training was more effective than placebo or no treatment at all and should be included as first line management for urinary incontinence. When properly performed, these exercises may be more effective than pharmacologic management.

Women who require training can be referred to physiotherapy for this.

### **Choice of pharmacological treatment**

The AUA/SUFU guidelines recommend exercising caution in prescribing anticholinergics to frail patients because these drugs can cause cognitive changes. Specifically, NICE guidelines state that immediate release oxybutynin should not be offered to frail older women, defined as women with multiple medical comorbidities, functional impairments in activities of daily living, or any cognitive impairment. These changes are more likely with tertiary amines, such as oxybutynin, and less likely with trospium, a quaternary ammonium compound that is potentially less likely than oxybutynin to cross the blood-brain barrier and cause central nervous system side effects.

Intravaginal oestrogen therapy may be beneficial in post-menopausal women with vaginal atrophy and urgency incontinence. However note that systemic HRT is associated with a worsening of symptoms (see Cochrane review article).

### **Evaluation of urinary tract symptoms (LUTS) in men**

History - Predominant symptoms:

- Storage (irritable bladder): frequency urgency nocturia, dysuria
- Voiding (outflow obstruction): straining, hesitance, poor stream
- Post-micturition (chronic retention): terminal dribble, incomplete emptying

Examination:

- Abdomen and digital rectal exam (DRE)
- Investigations:
  - o Urine dipstick
  - o U&E if suspect obstruction or renal impairment
  - o PSA: NICE and Scottish cancer referral guidelines recommend evaluation of all men with LUTS for prostate cancer by considering DRE and PSA based on clinical judgement and patient preference. (NICE NG 12). Wait 1 week after DRE; avoid ejaculation and vigorous exercise for 48 hours before doing PSA test. Wait 1 month after a treated UTI.
- Ask the patient to keep a symptom diary and complete the IPPS score to help differentiate symptoms and assess severity.

Management should include:

•Exclude or manage causes of voiding symptoms, if possible and then a choice of first-line management options, including:

- Active surveillance — reassurance and lifestyle advice without immediate treatment, with regular follow up.
- Conservative management — pelvic floor muscle training, bladder training, prudent fluid intake, maintaining a healthy lifestyle, and containment products (such as pads, waterproof pants, external sheath, and catheters). Consider referring the man to, or obtaining advice from, a continence nurse, continence physiotherapist, or urologist.

Pharmacological management:

## Treatment pathway for overactive bladder and urinary incontinence

- If moderate-to-severe voiding symptoms are present corresponding to an International Prostate Symptom Score of 8 or more, offer an alpha-blocker (alfuzosin, doxazosin, tamsulosin). Review the man at 4–6 weeks, and then every 6–12 months. Assess symptoms, quality of life, and adverse effects.
- If the man has an enlarged prostate and is considered to be at high risk of progression, offer a 5-alpha reductase inhibitor (finasteride).
  - The risk of progression of symptoms from benign prostatic enlargement is higher in older men and in men with poorer urine flow, higher symptom scores, evidence of bladder decompensation (such as chronic urinary retention), larger prostates, or higher prostate specific antigen (PSA) levels.
  - Review the man's symptoms, quality of life, and adverse effects at 3–6 months, and then every 6–12 months.
- If the man has bothersome moderate-to-severe voiding symptoms and prostatic enlargement, consider offering a combination of an alpha-blocker and a 5-alpha reductase inhibitor.
- If the man has a mixed picture with storage symptoms (irritable bladder) and voiding symptoms which persist after treatment with an alpha-blocker alone, consider adding an antimuscarinic (anticholinergic) drug as per the pathway.
  - If the first-line drug treatment is not effective or tolerated, offer an alternative drug.
- Assess response with IPPS score and if treatment fails to adequately relieve symptoms, consider offering referral to a urologist for assessment and further management.
- Also refer to a urologist if Abnormal DRE or raised PSA
  - Acute or chronic retention
  - Haematuria
  - Recurrent UTI

### References:

1. NICE CG171, Urinary Incontinence in Women: Management (accessed online 08/05/2017) <https://www.nice.org.uk/guidance/cg171>
2. PrescQIPP, Drugs for urinary frequency, enuresis and incontinence – Bulletin 58, April 2014 (accessed online 08/05/2017) <https://www.prescqipp.info/urinary-incontinence/send/99-urinary-incontinence/1280-bulletin-58-urinary-incontinence>
3. Drug Tariff, May 2017 (accessed online 08/05/2017)
4. MIMS, May 2017 (accessed online 08/05/2017)