Management of Overactive Bladder (OAB) in Primary Care

Contents

Non-pharmacological treatments remain the mainstay for patients with OAB. All patients should have conservative treatment prior to commencement of medication or referral to secondary care.

Medications for Overactive Bladder (OAB) in Primary Care

Before starting OAB drugs, you should discuss:

- Coexisting conditions (e.g. poor bladder emptying, cognitive impairment or dementia, BPH, constipation, glaucoma).
- Anticholinergic burden - use of other existing medications affecting the total antimuscarinic load. Consider calculating the anticholinergic burden score using the ACB calculator.
- Risk of adverse effects including cognitive decline and risk of falls.
- The likelihood of the medicine being successful and the common adverse effects.
- The frequency and route of administration and that some adverse effects of anticholinergic medicines, such as dry mouth and constipation, may indicate that the medicine is starting to have an effect.
- The patient may not see the full benefit until they have been taking the treatment for 4 weeks and symptoms may continue to improve over time.
- That the long-term effects of anticholinergic medicines for OAB on cognitive function are uncertain.

Absorbent products, hand-held urinals, and toileting aids

NICE (2019) makes it clear to not offer any absorbent containment products, hand-held urinals, or toileting aids for the **treatment** of urinary incontinence. Offer only as a coping strategy while waiting for treatment,

or to be used as an adjunct to continue therapy, or for long-term management of urinary incontinence after treatment options have been explored.

When to offer absorbent products, hand-held urinals, and toileting aids

- Absorbent containment products, hand-held urinals, and toileting aids should only be considered in the following circumstances:
    - To cope with urinary leakage whilst awaiting assessment and treatment.
    - To contain leakage whilst awaiting response to ongoing treatment.
    - For long-term management only after treatment options have been explored — review at least once a year and assess continence, skin integrity, efficacy of the absorbent containment product, and suitability of other available treatments.
- Review should be conducted or overseen by a healthcare professional trained in assessing continence and referring to specialist services.

Refer to Bladder and Bowel service to assess need as not available on prescription.

Advice and support available from your local Bladder and Bowel Specialist nurse:

- Peterborough: 0330 726 0077
- Cambridge, Ely, Fenland, Huntingdon and Wisbech: 0330 726 0077

Assessment of Urinary Incontinence

Initial Assessment

- **Full history:** Full urology/gynaecology history, review potential drug and neurological causes. Check symptoms for RED flags, fluid intake and look for cognitive impairment and systemic disease.
- **Frequency/volume chart:** encourage the patient to keep a three-day bladder diary.
- **Measurement of post-void residue:** consider if there are symptoms of voiding dysfunction and recurrent UTI.
- **Urinalysis** Urine dipstick for blood, glucose, protein, leucocytes, and nitrites. If patient has symptoms of UTI, request a MSU and analysis of antibiotic sensitivities prescribing an appropriate antibiotic pending culture results.
- **Biochemistry:** Serum creatinine and eGFR if indicated, PSA in male patients and referral to prostate assessment clinic if indicated.
- **Physical examination:**
  - **Male Patients** - May include PR examination and flow rate measurement.
  - **Female Patients** - Assessment of pelvic floor. Examine for vaginal atrophy and prolapse.

Conservative management – non-pharmacological treatments remain the mainstay for patients with OAB.

- All patients should have conservative treatment prior to commencement of medication or referral to secondary care.
- Patients can be referred to Bladder and Bowel service for assessment and conservative treatment.
- Should include patient education, lifestyle advice, bladder training and pelvic floor exercises.

Red Flags – refer urgently within 2 weeks:

- Visible Haematuria in those ≥45 that is.
  - **unexplained and without UTI**
  - **that is** persistent or recurrent after successful treatment of UTI.
- ≥60 with unexplained non-visible haematuria + dysuria or raised WBC.
- Suspected urological cancer.

Review at 3 months

Improved

Continue

*Referral to Bladder and Bowel service will be needed as not available on FP10

Post-menopausal patients:

Intravaginal oestrogens are recommended for post-menopausal patients with vaginal atrophy/OAB symptoms e.g., Intravaginal oestrogens as per local formulary:

Male patients Offer:

- Temporary containment products *(see page 2)*

Both male and female Patients:

Pelvic Floor Exercise

- Taught using vaginal or rectal examination (at least 3 months)

Bladder retraining

- Minimum of 6 weeks (NICE 2006)

Lifestyle Advice

- Modify high or low fluid intake.
- Avoid caffeine.
- Smoking cessation, weight loss, exercise
- Constipation advice, healthy eating
- Offer pads or other containment device if needed. *

Refer to appropriate specialist using clinical judgement for urgency.

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- Persistent bladder/urethral pain – refer urgently if cancer suspected.
- Associated faecal incontinence.
- Clinically benign pelvic masses
- Symptoms of voiding difficulty
- Suspected urogenital fistulae.
- Recurrent UTI
- Suspected neurological disease.
- Previous history of incontinence surgery, pelvic cancer surgery or radiation therapy

Primary Care Pharmacological Management of Overactive Bladder

Are Anticholinergics Contraindicated?
e.g. Myasthenia Gravis, narrow angle glaucoma, Sjogren-syndrome, cognitive impairment

Yes → Consider beta-3 adrenergic agonist.

First Line: Vibegron (monotherapy) NICE TA999

Second Line: Mirabegron (monotherapy) NICE TA290. See MHRA safety alert

No

Consider calculating the anticholinergic burden using the ACB calculator. These medicines can potentially increase the falls risk. See Polypharmacy in older people.

First Line Agent:
Solifenacin 5mg once daily titrating to 10mg once daily
Or
Alternative First Line Agent:
Oxybutynin 2.5mg or 5mg twice daily

Patients unable to tolerate oral medication: Transdermal oxybutynin 36mg (releasing 3.9mg/24 hours) twice weekly.

Review after 4-6 weeks

Treatment tolerated & successful?

Yes → Review annually or every 6 months if >75 years. Continue treatment alongside lifestyle modifications. Consider drug 'holidays' every 6 to 12 months.

No

Each agent should be tried for a period of 28 days if clinically appropriate before moving to alternate medication.
Adverse effects can be reduced by using a small starting dose and titration slowly. A modified relates preparation can be considered if there are troublesome side effects.

Change to Alternate Medication: This list in not in order of suggested use. Clinicians should consider possible advantages of specific agents and cost. Constipation and dry mouth should be managed before abandoning effective antimuscarinic treatment.

Drug	Notes
Tolterodine 2mg – twice daily	
Tolterodine MR 4mg – ONCE daily	
Tropism 20mg – twice daily	May have fewer CNS side-effects especially in elderly
Oxybutynin MR 5-10mg – ONCE daily	For those experiencing troublesome side-effects with standard release preparation
Vibegron 75mg – ONCE daily	Minimises anticholinergic side effects
Mirabegron 25-50mg – ONCE daily	Minimises anticholinergic side effects C/I in severe uncontrolled hypertension

If Unable to tolerate oral medication:

Oxybutynin 36mg (3.9mg/24 hours transdermal patch	Apply twice a WEEK

If treatment not successful, consider referral to Urology/Urogynaecology

Licensed Doses of Antimuscarinic Drugs

Antimuscarinic adverse effects can limit treatment success.

Adverse effects can be reduced by starting at a low dose and gradually increasing until a satisfactory clinical response is achieved.

Drug	**Dose** (Max dose)	**28-day costs** (Max dose)	**Comments**	**Side effects**
Solifenacin	5mg Once daily (10mg once daily)	£1.25 (£1.43)	**First line choice** Treat patients with severe renal impairment (creatinine clearance ≤ 30 ml/min) and moderate hepatic impairment with a maximum daily dose **5mg once daily.**	Common side effects include dry mouth blurred vision, constipation, nausea, dyspepsia and abdominal pain.
Oxybutynin IR (Immediate Release)	2.5-5mg twice daily (5mg four times a day)	£1.00 - £1.18 (£2.36)	**First line choice** Adjust according to response	The most common adverse reactions reported during clinical trials by > 5% of patients were dry mouth, constipation, diarrhoea, headache, somnolence, and dizziness
Tolterodine IR (Immediate Release)	2mg twice daily	£2.66	**Second line choice** For people with impaired liver function or severe renal impairment (eGFR ≤30mL/min) or to minimise side effects Prescribe: **1mg twice daily**	Generally, better tolerated than oxybutynin and does not require dose titration
Tolterodine M R (Slow release)	4mg once daily	£12.89	Reduce dose to 2mg once daily if impaired liver function or severely impaired renal function (GFR ≤ 30 ml/min) is present.	The use of M R (Slow release) preparations may offer a lower incidence of dry mouth and may be suitable for patients who require a once daily preparation
Trospium IR (Immediate Release)	20mg twice daily	£10.82	Reduce dose to 20mg once daily. or 20mg on alternate days if eGFR is ≤ 10-30mL/min. Not recommended in severe hepatic impairment.	May have reduced CNS adverse effects especially in elderly. Hallucination, confusion, agitation occur mostly in the elderly

Oxybutynin M R (Slow release)	5mg once daily (Usually 10mg once daily)	£19.02 (£39.09)	Modified release tablets are significantly more expensive than IR but may be beneficial in the frail elderly. There should be an interval of at least 7 days, between any dose changes	The most common adverse reactions reported during clinical trials by > 5% of patients were dry mouth, constipation, diarrhoea, headache, somnolence, and dizziness
Vibegron	75mg once daily	£24.90	No dose adjustment is recommended for patients with mild, moderate, or severe renal impairment (15 mL/min < GFR < 90 mL/min and not requiring dialysis). No dose adjustment is recommended for patients with mild to moderate hepatic impairment (Child-Pugh A and B).	Beta-3 agonist. Minimises anticholinergic side effects
Mirabegron M R (Slow release)	50mg once daily	£27.07	**Second line choice** Avoid - if eGFR<15ml/min/1.73m^2 Reduce to **25mg once daily -** If eGFR 15-29ml/min/1.73m^2 Reduce to **25mg once daily -** In moderate hepatic impairment. Not to be given to patients with **severe hepatic impairment**	Beta-3 agonist. Minimises anticholinergic side effects
Oxybutynin patches 3.9mg/24 hr	Apply ONE patch twice weekly	£27.20	Option in patients unable to tolerate oral oxybutynin. Apply to clean, dry unbroken skin on the abdomen, hip, or buttock	Adverse effects associated with transdermal oxybutynin are fewer than with oral oxybutynin.

Price based on Drug Tariff October 2024

Polypharmacy in older people

Prescribing in elderly people and people diagnosed with dementia.

Antimuscarinic drugs may affect cognitive function in elderly people and those with dementia, hence when prescribing this group of drugs in elderly patients the following should be considered:

- In older people being treated for urinary incontinence, every effort should be made to employ non-pharmacological treatments first.
- Use antimuscarinic drugs with caution in elderly patients who are at risk of, or have, cognitive dysfunction.

- In older people who are being prescribed antimuscarinic drugs for control of urinary incontinence, consider the anticholinergic burden including other existing medications. Modifications to medications to help reduce CNS or GI adverse effects may be considered.
- Check mental function in patients on antimuscarinic medication if they are at risk of cognitive dysfunction.

Do not offer oxybutynin immediate release to frail older patients who may be at higher risk of a sudden deterioration in their physical or mental health (NICE NG123; CKS LUTS in men).

Choice of Anticholinergic Agent for OAB

- All medicines for OAB have similar dose-related efficacy. Patients may need to trial more than one agent due to different side effect profiles. Each medication should be trialled for at least 28 days.
- NICE recommends the most cost-effective agent is used:
    - Solifenacin 5mg once daily.
    - Titrating up to 10mg daily after 4 - 6 weeks.
    - Review patient for side effects.
- If the first medicine is not effective or tolerated, offer alternative first line oxybutynin immediate release (IR). Initial dose is up to 5mg twice daily (start elderly at 2.5mg twice daily). Patients should be reviewed for side-effects. **Do not offer oxybutynin immediate release to frail older patients who may be at higher risk of a sudden deterioration in their physical or mental health** (NICE NG123)
- When dosage forms of OAB drugs are compared (immediate release and slow-release), the immediate release formulations are generally associated with more anti-cholinergic side effects than the slow-release formulations which can increase compliance but are significantly more expensive.
- If the patient has unmanageable side-effects or there is lack of efficacy with the first- or second-line agents, consider alternate medication considering possible advantages of specific agents and cost, e.g., trospium in elderly patients for its reduced CNS side effects.
- Patients not responding to medical treatment (refractory OAB) should be referred to Urology/urogynaecology department for further investigations and management.

Always prescribe the lowest recommended dose when starting a new OAB drug to reduce the likelihood of side-effects.

Primary Care Management of Overactive Bladder

At initial consultation, categorise urinary incontinence (UI) as:

- **stress urinary incontinence** (SUI) - is involuntary loss of urine on effort, physical exertion, or on sneezing or coughing.
- **urgency urinary incontinence** (UUI) - is involuntary leakage of urine accompanied, or immediately preceded, by urgency (a sudden compelling desire to pass urine that is difficult to defer).
- **overactive bladder** (OAB) - OAB is urgency with or without urgency urinary incontinence and typically accompanied by frequency and nocturia.
- **mixed urinary incontinence** - is involuntary leakage of urine associated with both urgency and physical stress (exertion, sneezing or coughing).

Start initial treatment on this basis.

Management of Stress Incontinence

If referral is not indicated, initial management consists of:

- Manage any reversible **causes or contributing factors** of stress urinary incontinence
- Pelvic floor muscle training
- Lifestyle changes and patient education.

If the above conservative treatments fail or if the patient wants further management, consider referring to a urogynaecologist, gynaecologist, or urologist for assessment and further surgical management.

- Treatment options in secondary care include colposuspension, autologous rectus fascial sling, and retropubic mid-urethral mesh sling, intramural urethral bulking agents.
- Offering duloxetine as a second-line treatment, but only if the patient prefers drug to surgical treatment or is not suitable for surgical treatment and is counselled about its adverse effects. Duloxetine can be prescribed in primary care on recommendation of Stress Incontinence Team only. See NetFormulary for more information.

Treatment Review

If treatment is effective and well-tolerated, do not change the dose or drug.

- Offer face-to-face or telephone review 4 weeks after the start of each new OAB drug treatment.
- Offer review before 4 weeks if the adverse events of OAB drug treatment are intolerable.
- Offer referral to secondary care if patient does not want to try another drug but would like to consider further treatment.
- Review patients every 6 months to assess whether treatment is still needed and only continue treatment for as long as benefit is maintained.
- For all patients who have been taking an antimuscarinic drug for at least 6 months OFFER a trial without treatment for a maximum of 4 weeks (exclusions include patients with neurological conditions such as multiple sclerosis or difficult social circumstances). The improvement of symptoms may continue after treatment withdrawal.
- For patients who are already established on a combination of Mirabegron and an anticholinergic who are not under the care of a specialist, treatment should be reviewed every 6 to 12 months and advice and guidance sought from the bladder and bowel service on further management of the patient.

Prescribing note: Mirabegron NICE TA290 (June 2013).

NICE Guidance on mirabegron for treating symptoms of overactive bladder recommends that this is considered 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. Patients currently receiving mirabegron that is not recommended for them as above should be able to continue treatment until they and their clinician consider it appropriate to stop.

The MHRA issued a safety alert for mirabegron in October 2015 and advised the following safety measures:

- Mirabegron is contraindicated in patients with severe uncontrolled hypertension (systolic blood pressure ≥180 mm Hg or diastolic blood pressure ≥110 mm Hg, or both).
- Blood pressure should be measured before starting treatment and monitored regularly during treatment, especially in patients with hypertension.
- Please report suspected side effects to mirabegron on a Yellow Card.

Prescribing note: Vibegron NICE TA999 (September 2024).

NICE Guidance on vibegron for treating symptoms of overactive bladder syndrome recommends vibegron as an option for treating the symptoms of overactive bladder syndrome in adults. It is only recommended if antimuscarinic medicines are not suitable, do not work well enough or have unacceptable side effects.

- If people with the condition and their healthcare professional consider vibegron to be 1 of a range of suitable treatments, after discussing the advantages and disadvantages of all the options, the least expensive should be used. Administration costs, dosages, price per dose and commercial arrangements should all be considered.
- Please report suspected side effects to vibegron on a Yellow Card.

References

- NICE NG123 Urinary incontinence and pelvic organ prolapse in women: management (April 2019)
- Urinary Incontinence – NICE Clinical Guideline 40 (2006) & NICE CG 171 (Sept 2013, updated November 2015)
- NICE TA999 Vibegron for treating symptoms of overactive bladder syndrome (September 2024)
- NICE CKS Incontinence – Urinary in Women (Oct 2019).
- NICE CKS Overactive Bladder – LUTS in Men (March 2019).
- Mirabegron for the treatment of overactive bladder: a review of efficacy, safety, and tolerability with a focus on male, elderly and antimuscarinic poor-responder populations, and patients with OAB in Asia. Expert Rev Clin Pharmacology. 2017 Feb;10(2):131-151. doi: 10.1080/17512433.2017.1275570. Epub 2017 Jan 16.

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