# The Management of Overactive Bladder Syndrome with Antimuscarinic Drugs

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<th>Author</th>
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Planned Care Board  
Medicines Management  
Prescribing GP Leads | 13.10.2014 | 2 years   |

Acknowledgement to  
Hertfordshire CCG and Herefordshire Wye Valley NHS Trust
Aim
The aim of this guidance is to reinforce NICE guidance on evidence based prescribing in the management of urge incontinence and / or increased urinary frequency and urgency in patients with overactive bladder syndrome (OAB).

Background
Prescribing in City & Hackney CCG from April 2013 - May 2014 shows that solifenacin has consistently appeared as the first anticholinergic drug of choice in the management of OAB even though it is a non-formulary drug in the locally agreed joint formulary. Solifenacin’s prescribing costs accounted for approximately 50% of all prescriptions written for OAB in primary care between April 2013 and May 2014.

Solifenacin is the more expensive of the second line anticholinergic drugs recommended by NICE. NICE states that there is no evidence to show that there are any clinical differences in efficacy between the anticholinergic drugs in the management of OAB.

The Prescribing Activity of Antimuscarinic Drugs in City & Hackney CCG between April 2013 and May 2014

<table>
<thead>
<tr>
<th>COST</th>
<th>Data from ePACT April 2013 - May 2014</th>
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<tbody>
<tr>
<td>£16,000.00</td>
<td>Duloxetine</td>
</tr>
<tr>
<td>£14,000.00</td>
<td>Solifenacin</td>
</tr>
<tr>
<td>£12,000.00</td>
<td>Darifenacin</td>
</tr>
<tr>
<td>£10,000.00</td>
<td>Fesoterodine</td>
</tr>
<tr>
<td>£8,000.00</td>
<td>Mirabegron</td>
</tr>
<tr>
<td>£6,000.00</td>
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</tr>
<tr>
<td>£2,000.00</td>
<td>Oxybutynin</td>
</tr>
<tr>
<td>£0.00</td>
<td>Tolterodine</td>
</tr>
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An audit to identify the prescribing patterns for solifenacin was conducted in August 2014 in 11 City & Hackney GP practices (total of 149 patients were reviewed as part of the audit). It was identified from the audit that:

- 38% of the solifenacin reviewed was initiated by the local acute trust, HUHFT
- Of the total solifenacin reviewed, 63% was initiated approximately as 1st line

**Prescribing Messages for the Prescribing of Anticholinergic Drugs in Patients with OAB.**

**Non-pharmacological Methods**
- Non-pharmacological methods such as lifestyle changes, pelvic floor exercises and bladder training are the first line options in the management of OAB

**Pharmacological Methods**
- Pharmacological methods should be used along with non-pharmacological methods and not in isolation.
- When non-pharmacological methods fail, **immediate release (IR) oxybutynin** should be added as the first line drug, unless the patient is a frail older woman in which case **tolterodine IR** is the locally agreed anticholinergic of 1st choice.
- Where IR oxybutynin and / or tolterodine cannot be tolerated, or ineffective, **fesoterodine MR** is the locally agreed 2nd / 3rd line choice for consideration.
- NICE CG171 (Management of Urinary Incontinence in Women) states that there is no evidence of a clinically important difference in efficacy between the anticholinergic drugs used in the management of OAB however IR oxybutynin is the most cost effective of the available options
The Management of Overactive Bladder Syndrome

Non-Pharmacological Methods

Conservative management
Fluid intake advice, lifestyle advice i.e. caffeine intake, weight reduction if BMI>30, supervised bladder training / pelvic floor exercises.

Non-surgical treatment remains the mainstay of therapy for OAB. These have been proven to be effective strategies and in motivated patients can be more effective than medication. Updated NICE Clinical Guideline CG171 retains the recommendation that bladder and pelvic floor re-training should be offered to women with urgency or mixed UI for a minimum of 3 months as first line treatment.

Pharmacological Methods
NICE states that there is no evidence of clinically important differences in efficacy between the antimuscarinic drugs in the management of OAB.

Regardless of which antimuscarinic drug is taken, 56% of patients will experience an improvement in the symptoms of OAB. A combination of behavioural therapy and drug treatment can result in up to 80% of cases improving and with excellent long-term results.

Patients should still continue with bladder training whilst taking the antimuscarinic drug.

Consider OAB drug treatment
- Discuss with patients - the likelihood of success and associated common adverse effects, the frequency and route of administration, that some adverse 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.
- Initiate treatment with the lowest recommended dose and titrate up if needed.
- Do not use flavoxate, propantheline or imipramine.
- Duloxetine should not be used in the treatment of OAB. NICE suggests place of duloxetine in therapy is for women second line for stress UI only if surgery is declined or unsuitable for surgery. Please note: Duloxetine has not been approved for stress UI in the local joint formulary.
- Review long-term drug treatment for OAB annually, (or every 6 months for patients over 75 years old)

Other prescribing points to note
Refer to NICE Guidance CG148 when prescribing for patients with neurological disease.

Offer referral to secondary care if OAB drug treatment is not successful.
**Patient Review at 4 weeks**
Review is now recommended after 4 weeks either face to face or by telephone after the start of any new treatment for OAB. If minor improvements have been seen after 4 weeks then encourage patient to continue therapy together with bladder re-training. The dose of anticholinergic can be increased at this stage. Any increases in doses should be at three to four week intervals. A further review should be offered to the patient if after initial effectiveness the response declines.

Patients started on OAB drugs in an outpatient setting will need to be advised to discuss progress with their GP to coincide with request for repeat prescription in primary care.

If adverse effects of OAB are intolerable or if patient response declines then review the patient before 4 weeks.

If the first treatment is not effective or well tolerated then consideration should be given to offering another drug with the lowest acquisition cost i.e. tolterodine IR.

Where the drug or treatment is effective, NICE recommends that the drug or dose is not changed.

**Review after 6 months of prescribing towards stopping**
Once patient’s continence habit has returned to normal then prescribing should be reviewed and stopped. Local estimates are that 50% of patients can stop anti-cholinergics at this stage but 50% of patients may need to continue therapy or change anti-cholinergic drug

**Patients on long term treatment**
Review women annually who remain on long term drug treatment for UI or OAB annually in primary care (or every 6 months for women over 75 – new in NICE 2013)

**Supporting Information**
This guidance has been formulated using the conclusions from the NICE CG171: Management of Urinary Incontinence in women. Although this CG focuses on the treatment of women, the evidence base that they reviewed in relation to drugs for OAB, is applicable to both women and men. NICE concluded that there was a lack of evidence of a difference in effectiveness between OAB drugs, and therefore, the relative cost effectiveness was determined mostly by the difference in cost between OAB drugs. NICE highlighted that the more expensive drugs do not confer sufficient additional benefit (in terms of either continuation or continence) to justify their current higher cost.

The chart below compares the cost of all the currently available drugs for the treatment of OAB.
7.4.2 Drugs for urinary frequency, enuresis and incontinence

July 2014: Drugs for urinary frequency, enuresis and incontinence - cost of 1 year's treatment

- Duloxetine (40 mg BD) - £450.48
- Solifenacin (10 mg) - £436.71
- Oxybutynin patch (Kentera®) - £353.60
- Mirabegron MR (Betmiga® 25mg/50mg OD) - £351.87
- Propiverine (15 mg TDS) - £351.00
- Propantheline 15 mg tablets (5) - £337.03
- Tolterodine MR (4 mg) - £336.14
- Fesoterodine MR (4 or 8 mg OD) - £335.14
- Solifenacin (5 mg) - £335.12
- Oxybutynin MR (10 mg) - £334.16
- Darifenacin (7.5 or 15 mg OD) - £331.24
- Propiverine MR (30mg) - £317.85
- Trospium (20 mg BD) - £304.30
- Trospium MR (Regurin® XL 80mg) - £299.65
- Trospium (Flotros® 20 mg BD) - £197.70
- Oxybutynin (3 mg BD) - £182.00
- Oxybutynin MR (5 mg) - £167.08
- Flavoxate (200 mg TDS) - £141.00
- Tolterodine (2 mg BD) - £91.13
- Oxybutynin (5 mg BD) - £86.62
- Oxybutynin (2.5 mg BD) - £23.40

Does given do not imply therapeutic equivalence

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NHS City & Hackney CCG Prescribing Guidance in Continence Management

Assessment and review of pharmacological treatment- agree holistic approach to patient management

Initiate low dose Oxybutynin IR 2.5mg to 5mg bd – tds (For cautions in use see SPC)
For frail elderly, initiate low dose Tolterodine IR 1mg bd

Undertake 4 week review (or earlier if patient not tolerating oral medication) after commencing any drug treatments. Adjust dose to optimise treatment according to response – if appropriate, increase dose to maximum Oxybutynin of 5mg qds (or Tolterodine IR 2 mg bd).

Is medication effective and being tolerated?

No

Consider use of Tolterodine IR 1mg-2mg bd, if not already prescribed (See SPC for cautions in use). Otherwise consider Fesoterodine MR 4 mg once daily, increased if necessary to max. 8 mg once daily (see SPC for cautions in use). Review patient again after 4 weeks. If effective maintain therapy and review at 6 months with a view of stopping treatment if appropriate.

Yes

Maintain current dosage and review at 6 months with a view of stopping treatment if appropriate.

If antimuscarinic drugs contraindicated

Consider Mirabegron MR once daily (see SPC for cautions in use) only for patients in whom anti-muscarinics are contra-indicated.

Review any new drug after 4 weeks. Maintain dosage of effective pharmacological therapy and review at 6 months with a view of stepping down or stopping treatment if appropriate.

NICE Guidance CG171: For patients requiring long term prescribing, review annually (or 6 monthly if the patient is over 75 years)
If oral therapy is not successful refer for specialist review for other options