NICE National Institute for Health and Care Excellence

Lower urinary tract symptoms in men overview

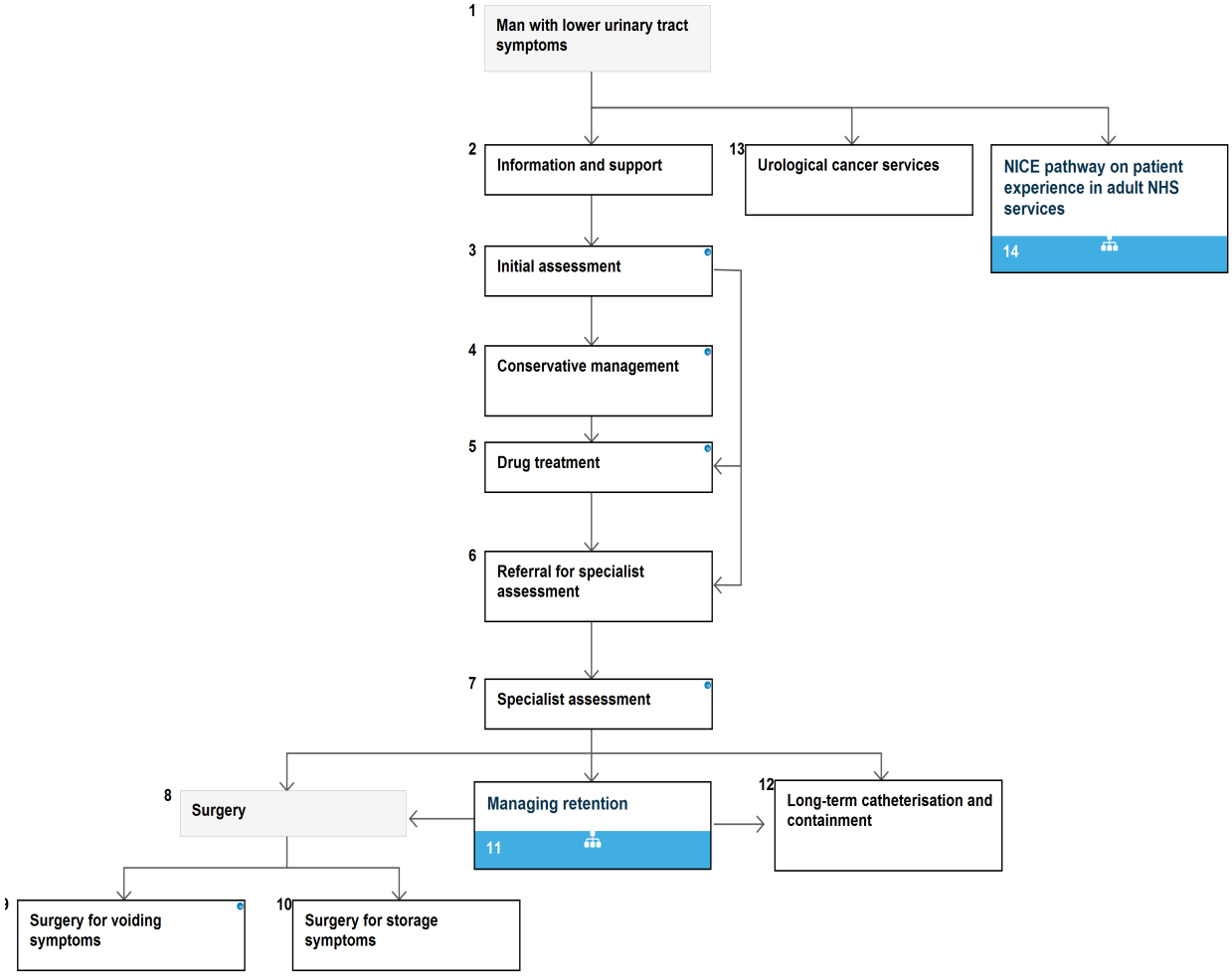
A NICE pathway brings together all NICE guidance, quality standards and materials to support implementation on a specific topic area. The pathways are interactive and designed to be used online. This pdf version gives you a single pathway diagram and uses numbering to link the boxes in the diagram to the associated recommendations.

To view the online version of this pathway visit:

http://pathways.nice.org.uk/pathways/lower-urinary-tract-symptoms-in-men

Pathway last updated: 02 June 2015. To see details of any updates to this pathway since its launch, visit: About this Pathway. For information on the NICE guidance used to create this path, see: Sources.

NICE *Pathways*



1 Man with lower urinary tract symptoms

No additional information

2 Information and support

Make sure men with lower urinary tract symptoms have access to care that can help with:

- their emotional and physical conditions **and**
- relevant physical, emotional, psychological, sexual and social issues.

Ensure that, if appropriate, men's carers are informed and involved in managing their lower urinary tract symptoms and can give feedback on treatments.

NICE has produced information for the public explaining this guidance.

NICE has produced information for the public explaining the guidance on referral guidelines for suspected cancer.

3 Initial assessment

Offer:

- an assessment of general medical history to identify possible causes and comorbidities, including a review of all current medication (including herbal and over-the-counter medication) that may be contributing to the problem
- a physical examination guided by symptoms and other medical conditions, an examination of the abdomen and external genitalia, and a digital rectal examination
- a urine dipstick test to detect blood, glucose, protein, leucocytes and nitrites.

Ask men with bothersome lower urinary tract symptoms to complete a urinary frequency volume chart.

Offer a serum creatinine test (plus estimated glomerular filtration rate calculation) only if you suspect renal impairment (for example, the man has a palpable bladder, nocturnal enuresis, recurrent urinary tract infections or a history of renal stones).

For men whose lower urinary tract symptoms are not bothersome or complicated, give reassurance, offer advice on lifestyle interventions (for example, fluid intake) and information on their condition. Offer review if symptoms change.

For men with mild or moderate bothersome lower urinary tract symptoms, discuss active surveillance (reassurance and lifestyle advice without immediate treatment and with regular follow-up) or active intervention (conservative management, drug treatment or surgery).

Offer men considering treatment for lower urinary tract symptoms an assessment of their baseline symptoms with a validated symptom score (for example, the International Prostate Symptom Score).

PSA testing

Offer men information, advice and time to decide if they wish to have PSA testing if:

- their lower urinary tract symptoms are suggestive of bladder outlet obstruction secondary to benign prostate enlargement **or**
- their prostate feels abnormal on digital rectal examination **or**
- they are concerned about prostate cancer (manage suspected prostate cancer in line with the pathway on prostate cancer and referral guidelines for suspected cancer).

Tests that should not be offered routinely

Do not routinely offer:

- cystoscopy to men with no evidence of bladder abnormality
- imaging of the upper urinary tract to men with no evidence of bladder abnormality
- flow-rate measurement
- post void residual volume measurement.

Quality standards

The following quality statements are relevant to this part of the pathway.

1. Initial assessment – physical examination

2. Initial assessment – urinary frequency and volume chart

3. Initial assessment – advice on lifestyle interventions

4 Conservative management

Storage symptoms

If you suspect overactive bladder, offer supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products.

Offer supervised pelvic floor muscle training to men with stress urinary incontinence caused by prostatectomy. Advise men to continue the exercises for at least 3 months before considering other options.

Do not offer penile clamps.

Containment products

For men with storage lower urinary tract symptoms (particularly urinary incontinence):

- offer temporary containment products (for example, pads or collecting devices) to achieve social continence until a diagnosis and management plan have been discussed
- offer a choice of containment products based on individual circumstances and in consultation with the man
- offer external collecting devices (sheath appliances, pubic pressure urinals) before considering indwelling catheterisation (see long-term catheterisation and containment [See page 15] in this pathway).
- provide containment products at point of need, and advice about relevant support groups.

Voiding symptoms

Offer intermittent bladder catheterisation before indwelling urethral or suprapubic catheterisation (see long-term catheterisation and containment [See page 15] in this pathway) if lower urinary tract symptoms cannot be corrected by less invasive measures.

Tell men with proven bladder outlet obstruction that bladder training is less effective than surgery.

Explain to men with post micturition dribble how to perform urethral milking.

Quality standards

The following quality statements are relevant to this part of the pathway.

4. Conservative management – temporary containment products

5. Conservative management – urethral milking

5 Drug treatment

Offer drug treatment only to men with bothersome lower urinary tract symptoms when conservative management options have been unsuccessful or are not appropriate.

Take into account comorbidities and current treatment when offering drug treatment for lower urinary tract symptoms.

<table>
<tr><th>Indication</th><th>Treatment</th><th>Review (assess symptoms and effect of the drugs on quality of life, and ask about any adverse effects)</th></tr>
<tr><td>Moderate to severe lower urinary tract symptoms</td><td>Offer an alpha blocker (alfuzosin, doxazosin, tamsulosin or terazosin)</td><td>At 4–6 weeks, then every 6–12 months</td></tr>
<tr><td rowspan="2">Overactive bladder</td><td>Offer an anticholinergic</td><td>At 4–6 weeks until stable, then every 6–12 months</td></tr>
<tr><td colspan="2">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[a].

People currently receiving mirabegron that is not recommended for them above should be able to continue treatment until they and their clinician consider it appropriate to stop[a].</td></tr>
</table>

Lower urinary tract symptoms and a prostate estimated to be larger than 30 g or PSA greater than 1.4 ng/ml, and high risk of progression	Offer a 5-alpha reductase inhibitor	At 3–6 months, then every 6–12 months
Bothersome moderate to severe lower urinary tract symptoms, and a prostate estimated to be larger than 30 g or PSA greater than 1.4 ng/ml	Consider an alpha blocker plus a 5-alpha reductase inhibitor	At 4–6 weeks, then every 6–12 months for the alpha blocker At 3–6 months, then every 6–12 months for the 5-alpha reductase inhibitor
[a]These recommendations are from Mirabegron for treating symptoms of overactive bladder (NICE technology appraisal guidance 290). NICE has written information for the public explaining its guidance on mirabegron.		

Consider offering an anticholinergic as well as an alpha blocker to men who still have storage symptoms after treatment with an alpha blocker alone.

Consider offering a late afternoon loop diuretic[1] for nocturnal polyuria.

Consider offering oral desmopressin[2] for nocturnal polyuria if other medical causes have been excluded and the man has not benefited from other treatments. (Other medical causes include diabetes mellitus, diabetes insipidus, adrenal insufficiency, hypercalcaemia, liver failure, polyuric renal failure, chronic heart failure, obstructive apnoea, dependent oedema, pyelonephritis, chronic venous stasis, sickle cell anaemia, calcium channel blockers, diuretics, and selective serotonin reuptake inhibitors.) Measure serum sodium 3 days after the first dose. If serum sodium is reduced to below the normal range, stop desmopressin treatment.

Do not offer phosphodiesterase-5-inhibitors solely for the purpose of treating lower urinary tract symptoms in men, except as part of a randomised controlled trial.

Do not offer homeopathy, phytotherapy or acupuncture.

[1] At the time this pathway was created (October 2012), loop diuretics (for example, furosemide) did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

[2] At the time this pathway was created (October 2012), desmopressin did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented. Consult the summary of product characteristics for the contraindications and precautions.

Tadalafil for the treatment of symptoms associated with benign prostatic hyperplasia (terminated appraisal)

The appraisal of tadalafil for the treatment of symptoms associated with benign prostatic hyperplasia (NICE technology appraisal 273) was terminated because no evidence submission was received from the manufacturer or sponsor of the technology. Therefore NICE is **unable to make a recommendation** about the use in the NHS of tadalafil for symptoms associated with benign prostatic hyperplasia.

If lower urinary tract symptoms do not respond to drug treatment

If lower urinary tract symptoms do not respond to drug treatment, discuss active surveillance (reassurance and lifestyle advice without immediate treatment and with regular follow-up) or active intervention (conservative management or surgery).

Quality standards

The following quality statement is relevant to this part of the pathway.

6. Medication review

Resources

The following implementation tool is relevant to this part of the pathway.

Overactive bladder - mirabegron: costing template

6 Referral for specialist assessment

Refer men for specialist assessment if they have:

- lower urinary tract symptoms complicated by recurrent or persistent urinary tract infection **or**
- retention (see managing retention in this pathway) **or**
- renal impairment you suspect is caused by lower urinary tract dysfunction **or**
- suspected urological cancer **or**
- stress urinary incontinence.

Offer to refer men for specialist assessment if they have bothersome lower urinary tract symptoms that have not responded to conservative management or drug treatment.

7 Specialist assessment

Offer:

- an assessment of general medical history to identify possible causes and comorbidities, including a review of all current medication (including herbal and over-the counter medication) that may be contributing to the problem
- a physical examination guided by symptoms and other medical conditions, an examination of the abdomen and external genitalia, and a digital rectal examination
- flow-rate and post void residual volume measurement.

Ask men to complete a urinary frequency volume chart.

When to offer further tests or procedures

Offer cystoscopy to men with lower urinary tract symptoms having specialist assessment only when clinically indicated, for example if there is a history of any of the following:

- recurrent infection **or**
- sterile pyuria **or**
- haematuria **or**
- profound symptoms **or**
- pain.

Offer imaging of the upper urinary tract to men with lower urinary tract symptoms having specialist assessment only when clinically indicated, for example if there is a history of any of the following:

- chronic retention **or**
- haematuria **or**
- recurrent infection **or**
- sterile pyuria **or**
- profound symptoms **or**
- pain.

Consider offering multichannel cystometry if men are considering surgery.

Offer pad tests only if the degree of urinary incontinence needs to be measured.

PSA testing

Offer men information, advice and time to decide if they wish to have PSA testing if:

- their lower urinary tract symptoms are suggestive of bladder outlet obstruction secondary to benign prostate enlargement **or**
- their prostate feels abnormal on digital rectal examination **or**
- they are concerned about prostate cancer (manage suspected prostate cancer in line with the pathway on prostate cancer and referral guidelines for suspected cancer).

Quality standards

The following quality statement is relevant to this part of the pathway.

7. Specialist assessment – flow rate and post-void residual volume

8 Surgery

No additional information

9 Surgery for voiding symptoms

Offer surgery only if voiding symptoms are severe or if drug treatment and conservative management options have been unsuccessful or are not appropriate. Discuss the alternatives to and outcomes from surgery.

Surgery for voiding lower urinary tract symptoms presumed secondary to benign prostate enlargement

Prostate size	Type of surgery
All	Monopolar or bipolar TURP, monopolar TUVP or HoLEP. Perform HoLEP at a centre specialising in the technique, or with mentorship arrangements in place

Estimated to be smaller than 30 g	TUIP as an alternative to other types of surgery (TURP, monopolar TUVP or HoLEP)
Estimated to be larger than 80 g	TURP, TUVP or HoLEP, or open prostatectomy as an alternative. Perform HoLEP at a centre specialising in the technique, or with mentorship arrangements in place

If offering surgery to manage voiding lower urinary tract symptoms presumed secondary to benign prostate enlargement, offer botulinum toxin injection into the prostate only as part of a randomised controlled trial.

If offering surgery to manage voiding lower urinary tract symptoms presumed secondary to benign prostate enlargement, offer the following only as part of a randomised controlled trial that compares these techniques with TURP:

- laser vaporisation techniques
- bipolar TUVP
- monopolar or bipolar TUVRP.

Do not offer any of the following as an alternative to TURP, TUVP or HoLEP:

- TUNA
- TUMT
- HIFU
- TEAP
- laser coagulation.

Interventional procedures

NICE has published interventional procedures guidance on the use of the following procedures with **normal arrangements** for clinical governance, consent and audit:

- insertion of prostatic urethral lift implants to treat lower urinary tract symptoms secondary to benign prostatic hyperplasia
- holmium laser prostatectomy
- transurethral electrovaporisation of the prostate

NICE has published interventional procedures guidance on the use of the following procedure with **special arrangements** for clinical governance, consent and audit or research:

- laparoscopic prostatectomy for benign prostatic obstruction

NICE has published interventional procedures guidance on the use of the following procedure which should be used **only in the context of research**

- prostate artery embolisation for benign prostatic hyperplasia

Medical technologies

NICE medical technologies guidance addresses specific technologies notified to NICE by companies. The 'case for adoption' is based on the claimed advantages of introducing the specific technology compared with current management of the condition. This case is reviewed against the evidence submitted and expert advice. If the case for adopting the technology is supported, then the technology has been found to offer advantages to patients and the NHS. The specific recommendations on individual technologies are not intended to limit use of other relevant technologies which may offer similar advantages.

The TURis system for transurethral resection of the prostate

The following recommendations are from NICE medical technologies guidance on the TURis system for transurethral resection of the prostate.

The case for adopting the transurethral resection in saline (TURis) system for resection of the prostate is supported by the evidence. Using bipolar diathermy with TURis instead of a monopolar system avoids the risk of transurethral resection syndrome and reduces the need for blood transfusion. It may also reduce the length of hospital stay and hospital readmissions.

Using the transurethral resection in saline (TURis) system instead of monopolar transurethral resection of the prostate (TURP) results in an estimated saving of £71 per patient for hospitals that already use an Olympus monopolar system and an estimated additional cost of £20 per patient for other hospitals. However, there is some evidence of a reduction in readmissions with the TURis system compared with monopolar TURP. If this evidence is included, using the TURis system results in an estimated saving of £375 per patient for hospitals that already use an Olympus monopolar system and an estimated saving of £285 per patient for other hospitals.

Quality standards

The following quality statement is relevant to this part of the pathway.

8. Surgery for voiding symptoms

Resources

The following implementation tool is relevant to this part of the pathway.

The TURis system for transurethral resection of the prostate: costing statement

10 Surgery for storage symptoms

If offering surgery for storage symptoms, consider offering only to men whose storage symptoms have not responded to conservative management and drug treatment. Discuss the alternatives of containment or surgery. Inform men that effectiveness, side effects and long-term risks of surgery are uncertain.

If considering offering surgery for storage lower urinary tract symptoms, refer men to a urologist to discuss:

- the surgical and non-surgical options appropriate for their circumstances **and**
- the potential benefits and limitations of each option, particularly long-term results.

Do not offer myectomy to manage detrusor overactivity.

Indication	Type of surgery
Detrusor overactivity	Consider offering: • Cystoplasty. Before offering, discuss serious complications (that is, bowel disturbance, metabolic acidosis, mucus production and/or mucus retention in the bladder, urinary tract infection and urinary retention). The man needs to be willing and able to self-catheterise • Bladder wall injection with botulinum toxin. (At the time of publication [February 2012], botulinum toxin A and botulinum toxin B did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.) The man needs to be willing and able to self-catheterise • Implanted sacral nerve stimulation

Stress urinary incontinence	Consider offering: • implantation of an artificial sphincter • intramural injectables, implanted adjustable compression devices and male slings only as part of a randomised controlled trial
Intractable urinary tract symptoms if cystoplasty or sacral nerve stimulation are not clinically appropriate or are unacceptable to the man	Consider offering urinary diversion

Interventional procedures

NICE has published interventional procedures guidance on the use of the following procedures with **normal arrangements** for clinical governance, consent and audit:

- percutaneous posterior tibial nerve stimulation for overactive bladder syndrome
- laparoscopic augmentation cystoplasty (including clam cystoplasty)
- sacral nerve stimulation for urge incontinence and urgency-frequency

11 Managing retention

See Lower urinary tract symptoms in men / Managing retention in men with lower urinary tract symptoms

12 Long-term catheterisation and containment

Consider offering long-term indwelling urethral catheterisation if medical management has failed and surgery is not appropriate, and the man:

- is unable to manage intermittent self-catheterisation **or**
- has skin wounds, pressure ulcers or irritation that are being contaminated by urine **or**
- is distressed by bed and clothing changes.

Discuss the practicalities, benefits and risks of long-term indwelling catheterisation with the man and, if appropriate, his carer.

Explain that indwelling catheters for urgency incontinence may not result in continence or the relief of recurrent infections.

Consider permanent use of containment products only after assessment and excluding other methods of management.

NICE has produced guidance on preventing infections relating to catheterisation. See the NICE pathway Long-term urinary catheters: prevention and control of healthcare-associated infections in primary and community care.

13 Urological cancer services

NICE has published cancer service guidance on improving outcomes in urological cancers.

14 NICE pathway on patient experience in adult NHS services

See Patient experience in adult NHS services

Glossary

Acute retention

A painful inability to pass urine and the presence of a distended, tender palpable bladder.

Bothersome lower urinary tract symptoms

Symptoms that that are worrying, troublesome or have an impact on quality of life from the patient's perspective.

Chronic urinary retention

For the purposes of this pathway, chronic urinary retention is defined as residual volume greater than 1 litre or presence of a palpable/percussable bladder

HIFU

High-intensity focused ultrasound

HoLEP

Holmium laser enucleation of the prostate.

Initial assessment

Assessment in any setting by a healthcare professional without specific training in managing lower urinary tract symptoms in men.

Mild

An International Prostate Symptom Score of 0–7.

Moderate

An International Prostate Symptom Score of 8–19.

PSA

Prostate specific antigen.

Severe

An International Prostate Symptom Score of 20–35.

Specialist assessment

Assessment in any setting by a healthcare professional with specific training in managing lower urinary tract symptoms in men.

Storage symptoms

Storage symptoms include daytime urinary frequency, nocturia, urgency and urinary incontinence.

TEAP

Transurethral ethanol ablation of the prostate

TUIP

Transurethral incision of the prostate.

TUMT

Transurethral microwave thermotherapy

TUNA

Transurethral needle ablation

TURP

Transurethral resection of the prostate.

TUVP

Transurethral vaporisation of the prostate.

TUVRP

Transurethral vaporisation resection of the prostate

Voiding symptoms

Voiding symptoms include slow stream, splitting or spraying, intermittency, hesitancy, straining and terminal dribble.

Sources

Lower urinary tract symptoms (2010 updated 2015) NICE guideline CG97

Mirabegron for treating symptoms of overactive bladder (2013) NICE technology appraisal guidance 290

Tadalafil for the treatment of symptoms associated with benign prostatic hyperplasia (terminated appraisal) (2013) NICE technology appraisal guidance 273

Insertion of prostatic urethral lift implants to treat lower urinary tract symptoms secondary to benign prostatic hyperplasia (2014) NICE interventional procedure guidance 475

Prostate artery embolisation for benign prostatic hyperplasia (2013) NICE interventional procedure guidance 453

Percutaneous posterior tibial nerve stimulation for overactive bladder syndrome (2010) NICE interventional procedure guidance 362

Laparoscopic augmentation cystoplasty (including clam cystoplasty) (2009) NICE interventional procedure guidance 326

Laparoscopic prostatectomy for benign prostatic obstruction (2008) NICE interventional procedure guidance 275

Sacral nerve stimulation for urge incontinence and urgency-frequency (2004) NICE interventional procedure guidance 64

Holmium laser prostatectomy (2003) NICE interventional procedure guidance 17

Transurethral electrovaporisation of the prostate (2003) NICE interventional procedure guidance 14

The TURis system for transurethral resection of the prostate (2015) NICE medical technology guidance 23

Your responsibility

The guidance in this pathway represents the view of NICE, which was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties. Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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Contact NICE

National Institute for Health and Care Excellence
Level 1A, City Tower
Piccadilly Plaza
Manchester
M1 4BT

www.nice.org.uk

nice@nice.org.uk

0845 003 7781