NHS
National Institute for Health and Clinical Excellence

Quick reference guide

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The management of lower urinary tract symptoms in men

NICE clinical guideline 97
Developed by the National Clinical Guideline Centre: Acute and Chronic Conditions

About this booklet

This is a quick reference guide that summarises the recommendations NICE has made to the NHS in 'The management of lower urinary tract symptoms in men' (NICE clinical guideline 97).

Who should read this booklet?

This quick reference guide is for GPs, urologists, specialist nurses and other staff who care for men with lower urinary tract symptoms.

Who wrote the guideline?

The guideline was developed by the National Clinical Guideline Centre: Acute and Chronic Conditions. The Collaborating Centre worked with a group of healthcare professionals (including consultants, GPs and nurses), patients and carers, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

For more information on how NICE clinical guidelines are developed, go to **www.nice.org.uk**

Where can I get more information about the guideline?

The NICE website has the recommendations in full, reviews of the evidence they are based on, a summary of the guideline for patients and carers, and tools to support implementation (see page 14 for more details).

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

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 that would be inconsistent with compliance with those duties.

Contents

Patient-centred care

Treatment and care should take into account men's individual needs and preferences. Good communication is essential, supported by evidence-based information, to allow men to reach informed decisions about their care. Follow Department of Health advice on seeking consent if needed. Men with lower urinary tract symptoms (LUTS) should have access to care that can help with their emotional and physical conditions, and with relevant physical, psychological, sexual and social issues. If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care and be able to give feedback on treatments.

Introduction

Lower urinary tract symptoms (LUTS) are storage, voiding and post-micturition symptoms affecting the lower urinary tract. LUTS can significantly reduce men's quality of life, and may point to serious pathology of the urogenital tract. Bothersome LUTS can occur in up to 30% of men older than 65 years. Uncertainty and variation exist in clinical practice, so this guideline gives clear recommendations on assessing, monitoring and treating LUTS.

Key to terms

Initial assessment: assessment in any setting by a healthcare professional without specific training in managing LUTS in men.
Specialist assessment: assessment carried out in any setting by a healthcare professional with specific training in managing LUTS in men.
Mild LUTS: an International Prostate Symptom Score (IPSS) of 0–7.
Moderate LUTS: an IPSS of 8–19.
Severe LUTS: an IPSS of 20–35.

Key priorities for implementation

Initial assessment

- At initial assessment, offer men with LUTS an assessment of their general medical history to identify possible causes of LUTS, and associated comorbidities. Review current medication, including herbal and over-the-counter medicines, to identify drugs that may be contributing to the problem.
- At initial assessment, offer men with LUTS a physical examination guided by urological symptoms and other medical conditions, an examination of the abdomen and external genitalia, and a digital rectal examination (DRE).
- At initial assessment, ask men with bothersome LUTS to complete a urinary frequency volume chart.
- Refer men for specialist assessment if they have LUTS complicated by recurrent or persistent urinary tract infection, retention, renal impairment that is suspected to be caused by lower urinary tract dysfunction, or suspected urological cancer.

Conservative management

- Offer men with storage LUTS (particularly urinary incontinence) temporary containment products (for example, pads or collecting devices) to achieve social continence until a diagnosis and management plan have been discussed.
- Offer men with storage LUTS suggestive of overactive bladder (OAB) supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products.

Surgery for voiding symptoms

- If offering surgery for managing voiding LUTS presumed secondary to benign prostate enlargement (BPE), offer monopolar or bipolar transurethral resection of the prostate (TURP), monopolar transurethral vaporisation of the prostate (TUVP) or holmium laser enucleation of the prostate (HoLEP). Perform HoLEP at a centre specialising in the technique, or with mentorship arrangements in place.
- If offering surgery for managing voiding LUTS presumed secondary to BPE, do not offer minimally invasive treatments (including transurethral needle ablation [TUNA], transurethral microwave thermotherapy [TUMT], high-intensity focused ultrasound [HIFU], transurethral ethanol ablation of the prostate [TEAP] and laser coagulation) as an alternative to TURP, TUVP or HoLEP (see above).

Providing information

- Make sure men with LUTS have access to care that can help with:
  - their emotional and physical conditions **and**
  - relevant physical, emotional, psychological, sexual and social issues.
- Provide men with storage LUTS (particularly incontinence) containment products at point of need, and advice about relevant support groups.

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 (DRE)
  - a urine dipstick test to detect blood, glucose, protein, leucocytes and nitrites.
- Ask men with bothersome LUTS to complete a urinary frequency volume chart.
- Offer a serum creatinine test (plus estimated glomerular filtration rate [eGFR] calculation) only if you suspect renal impairment.
- For men whose LUTS 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 LUTS, 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 LUTS an assessment of their baseline symptoms with a validated symptom score (for example, the IPSS).
- Offer men information, advice and time to decide if they wish to have prostate specific antigen (PSA) testing if:
  - their LUTS are suggestive of bladder outlet obstruction secondary to BPE **or**
  - their prostate feels abnormal on DRE **or**
  - they are concerned about prostate cancer[1].
- 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.

[1] Manage suspected prostate cancer in line with 'Prostate cancer: diagnosis and management' (NICE clinical guideline 58) and 'Referral guidelines for suspected cancer' (NICE clinical guideline 27).

Referral for specialist assessment

- Offer to refer men for specialist assessment if they have bothersome LUTS that have not responded to conservative management or drug treatment (see pages 8 and 9).
- Refer men for specialist assessment if they have:
  - LUTS complicated by recurrent or persistent urinary tract infection **or**
  - retention (see page 10) **or**
  - renal impairment you suspect is caused by lower urinary tract dysfunction **or**
  - suspected urological cancer **or**
  - stress urinary incontinence.

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 DRE
  - flow-rate and post void residual volume measurement.
- Ask men to complete a urinary frequency volume chart.
- Offer cystoscopy and/or imaging of the upper urinary tract only when clinically indicated, for example if there is a history of:
  - recurrent infection **or**
  - sterile pyuria **or**
  - haematuria **or**
  - profound symptoms **or**
  - pain **or**
  - chronic retention.
- Consider offering multichannel cystometry if men are considering surgery.
- Offer pad tests only if the degree of urinary incontinence needs to be measured.
- Offer men information, advice and time to decide if they wish to have PSA testing if:
  - their LUTS are suggestive of bladder outlet obstruction secondary to BPE **or**
  - their prostate feels abnormal on DRE **or**
  - they are concerned about prostate cancer[2].

[2] Manage suspected prostate cancer in line with 'Prostate cancer: diagnosis and management' (NICE clinical guideline 58) and 'Referral guidelines for suspected cancer' (NICE clinical guideline 27).

Conservative management

Storage symptoms

- If you suspect OAB, 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 LUTS (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 page 13)
  - 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 page 13) if LUTS 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.

Drug treatment

- Offer drug treatment only to men with bothersome LUTS when conservative management options have been unsuccessful or are not appropriate.
- Take into account comorbidities and current treatment when offering drug treatment for LUTS.
- Do not offer homeopathy, phytotherapy or acupuncture.

Indication	Treatment	Review*
Moderate to severe LUTS	Offer an alpha blocker (alfuzosin, doxazosin, tamsulosin or terazosin)	• At 4–6 weeks, then every 6–12 months
OAB	Offer an anticholinergic	• At 4–6 weeks until stable, then every 6–12 months
LUTS 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 LUTS, 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
Storage symptoms despite treatment with an alpha blocker alone	Consider adding an anticholinergic	• At 4–6 weeks until stable, then every 6–12 months

* Review to assess symptoms and the effect of the drugs on the man's quality of life, and to ask about any adverse effects.

- Consider offering a late afternoon loop diuretic[3] for nocturnal polyuria.
- Consider offering oral desmopressin[4] for nocturnal polyuria if other medical causes[5] have been excluded and the man has not benefited from other treatments. Measure serum sodium 3 days after the first dose. If serum sodium is reduced to below the normal range, stop desmopressin treatment.
- If LUTS 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).

[3] At the time of publication (May 2010), loop diuretics (for example, furosemide) did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.
[4] At the time of publication (May 2010), 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.
[5] Including 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 inhibitor (SSRI) antidepressants.

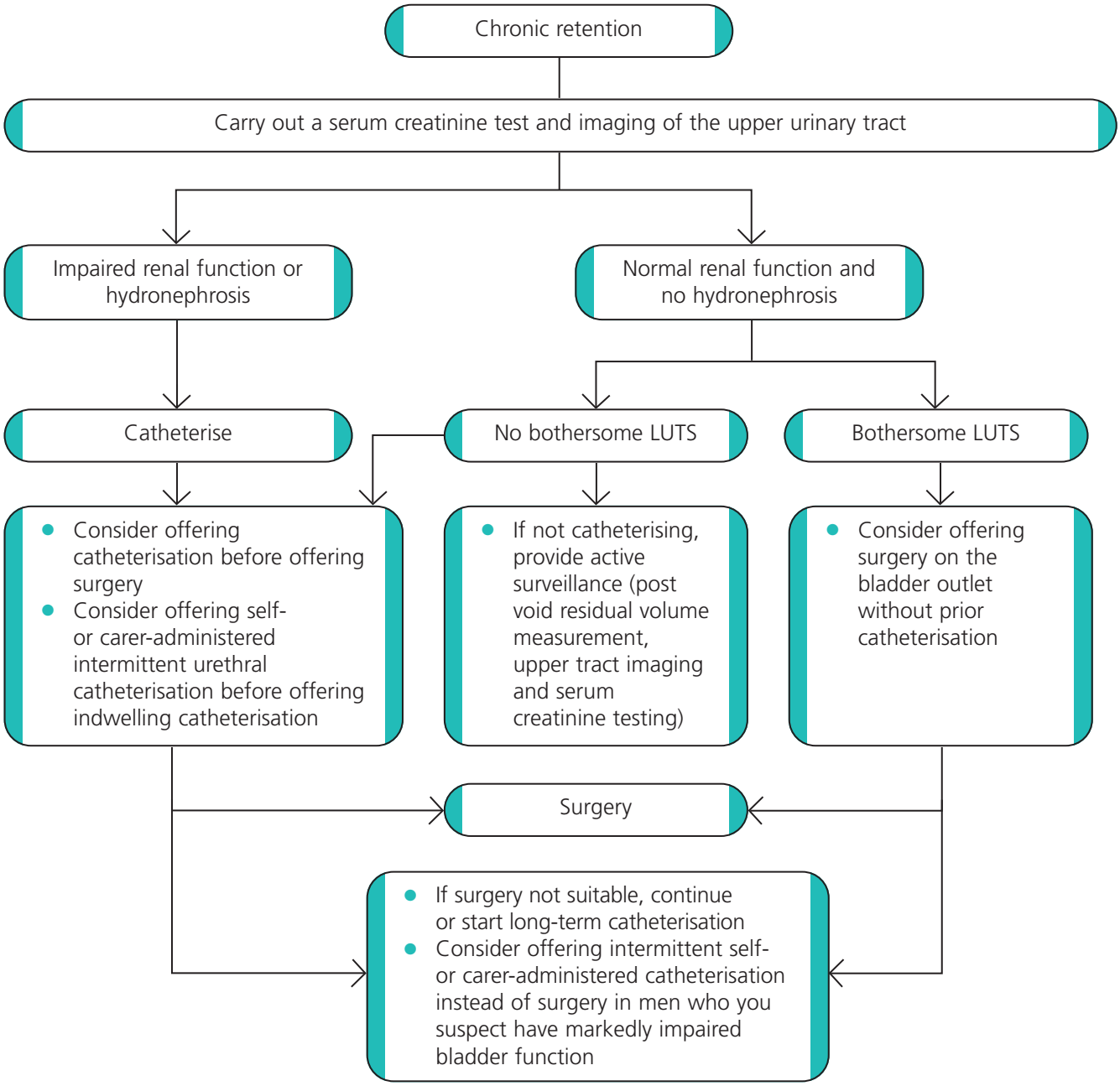
Managing retention

Acute retention

- Immediately catheterise men with acute retention.
- Offer an alpha blocker to men before removing the catheter.

Chronic retention

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



Surgery

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 LUTS presumed secondary to BPE

Prostate size	Type of surgery
All	• Monopolar or bipolar transurethral resection of the prostate (TURP), monopolar transurethral vaporisation of the prostate (TUVP) or holmium laser enucleation of the prostate (HoLEP*)
Estimated to be smaller than 30 g	• Transurethral incision of the prostate (TUIP) as an alternative to other types of surgery (see above)
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 LUTS presumed secondary to BPE, offer the following only as part of a randomised controlled trial:
  - botulinum toxin injection into the prostate
  - laser vaporisation techniques
  - bipolar TUVP
  - monopolar or bipolar transurethral vaporisation resection of the prostate (TUVRP).
- Do not offer any of the following as an alternative to TURP, TUVP or HoLEP:
  - transurethral needle ablation (TUNA)
  - transurethral microwave thermotherapy (TUMT)
  - high-intensity focused ultrasound (HIFU)
  - transurethral ethanol ablation of the prostate (TEAP)
  - laser coagulation.

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 LUTS, 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[6]. 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

[6] At the time of publication (May 2010), botulinum toxin did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

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.

Further information

Ordering information

You can download the following documents from **www.nice.org.uk/CG97**

- The NICE guideline – all the recommendations.
- A quick reference guide (this document) – a summary of the recommendations for healthcare professionals.
- 'Understanding NICE guidance' – a summary for patients and carers.
- The full guideline – all the recommendations, details of how they were developed, and reviews of the evidence they were based on.

For printed copies of the quick reference guide or 'Understanding NICE guidance', phone NICE publications on 0845 003 7783 or email publications@nice.org.uk and quote:

- N2141 (quick reference guide)
- N2142 ('Understanding NICE guidance').

Implementation tools

NICE has developed tools to help organisations implement this guidance (see **www.nice.org.uk/CG97**).

Related NICE guidance

For information about NICE guidance that has been issued or is in development, see **www.nice.org.uk**

- Suburethral synthetic sling insertion for stress urinary incontinence in men. NICE interventional procedure guidance 256 (2008). Available from **www.nice.org.uk/IPG256**
- Laparoscopic prostatectomy for benign prostatic obstruction. NICE interventional procedure guidance 275 (2008). Available from **www.nice.org.uk/IPG275**
- Prostate cancer: diagnosis and treatment. NICE clinical guideline 58 (2008). Available from **www.nice.org.uk/CG58**
- Insertion of extraurethral (non-circumferential) retropubic adjustable compression devices for stress urinary incontinence in men. NICE interventional procedure guidance 224 (2007). Available from **www.nice.org.uk/IPG224**
- Urinary incontinence: the management of urinary incontinence in women. NICE clinical guideline 40 (2006). Available from **www.nice.org.uk/CG40**
- Potassium-titanyl-phosphate (KTP) laser vaporisation of the prostate for benign prostatic obstruction. NICE interventional procedure guidance 120 (2005). Available from **www.nice.org.uk/IPG120**
- Referral guidelines for suspected cancer. NICE clinical guideline 27 (2005). Available from **www.nice.org.uk/CG27**
- Sacral nerve stimulation for urge incontinence and urgency-frequency. NICE interventional procedure 64 (2004). Available from **www.nice.org.uk/IPG64**
- Holmium laser prostatectomy. NICE interventional procedure guidance 17 (2003). Available from **www.nice.org.uk/IPG17**
- Transurethral radiofrequency needle ablation of the prostate. NICE interventional procedure guidance 15 (2003). Available from **www.nice.org.uk/IPG15**
- Transurethral electrovaporisation of the prostate. NICE interventional procedure guidance 14 (2003). Available from **www.nice.org.uk/IPG14**

Updating the guideline

This guideline will be updated as needed, and information about the progress of any update will be available at **www.nice.org.uk/CG97**

National Institute for
Health and Clinical Excellence
MidCity Place
71 High Holborn
London
WC1V 6NA

www.nice.org.uk

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