

Lower urinary tract symptoms in men: management

Clinical guideline

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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should [assess and reduce the environmental impact of implementing NICE recommendations](#) wherever possible.

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This guideline replaces IPG256, IPG15, IPG224, IPG120 and ESNM18.

This guideline is the basis of QS45.

This guideline should be read in conjunction with IPG14 and IPG17.

Overview

This guideline covers managing lower urinary tract symptoms (LUTS) in men over 18. It aims to improve the quality of life for men with LUTS by recommending which assessments they should receive, and when conservative management, drug treatment and surgery can help.

Who is it for?

- Healthcare professionals
- Commissioners and providers
- Men with LUTS and their families or carers

Introduction

Lower urinary tract symptoms (LUTS) comprise storage, voiding and post-micturition symptoms affecting the lower urinary tract. There are many possible causes of LUTS such as abnormalities or abnormal function of the prostate, urethra, bladder or sphincters. In men, the most common cause is benign prostate enlargement (BPE), which obstructs the bladder outlet. BPE happens when the number of cells in the prostate increases, a condition called benign prostatic hyperplasia. Other conditions that can cause LUTS include detrusor muscle weakness or overactivity, prostate inflammation (prostatitis), urinary tract infection, prostate cancer and neurological disease. This guideline will advise on the effective evidence-based management of LUTS in men.

LUTS in men are best categorised into voiding, storage or post-micturition symptoms to help define the source of the problem. Voiding symptoms include weak or intermittent urinary stream, straining, hesitancy, terminal dribbling and incomplete emptying. Storage symptoms include urgency, frequency, urgency incontinence and nocturia. The major post-micturition symptom is post-micturition dribbling, which is common and bothersome. Although LUTS do not usually cause severe illness, they can considerably reduce men's quality of life, and may point to serious pathology of the urogenital tract.

LUTS are a major burden for the ageing male population. Age is an important risk factor for LUTS and the prevalence of LUTS increases as men get older. Bothersome LUTS can occur in up to 30% of men older than 65 years. This is a large group potentially requiring treatment.

Because uncertainty and variation exist in clinical practice, this guideline gives clear recommendations on diagnosing, monitoring and treating LUTS.

The guideline will assume that prescribers will use a medicine's summary of product characteristics to inform decisions made with individual men.

Key priorities for implementation

The following recommendations were identified as priorities for implementation in the 2010 guideline and have not been changed in the 2015 update.

Initial assessment

- At initial assessment, offer men with lower urinary tract symptoms (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. **[2010]**
- 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. **[2010]**
- At initial assessment, ask men with bothersome LUTS to complete a urinary frequency volume chart. **[2010]**
- 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. **[2010]**

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. **[2010]**
- Offer men with storage LUTS suggestive of overactive bladder supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products. **[2010]**

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. **[2010]**

- 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 recommendation 1.5.2). **[2010]**

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. **[2010]**
- Provide men with storage LUTS (particularly incontinence) containment products at point of need, and advice about relevant support groups. **[2010]**

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [NICE's information on making decisions about your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

The following guidance is based on the best available evidence. The [full guideline](#) gives details of the methods and the evidence used to develop the 2010 recommendations. The [guideline addendum](#) gives details of the methods and the evidence used to develop the 2015 recommendations.

In this guideline, 'mild' refers to an International Prostate Symptom Score (IPSS) of 0 to 7, 'moderate' refers to an IPSS of 8 to 19 and 'severe' refers to an IPSS of 20 to 35.

1.1 Initial assessment

Initial assessment refers to assessment carried out in any setting by a healthcare professional without specific training in managing lower urinary tract symptoms (LUTS) in men.

- 1.1.1 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. **[2010]**
- 1.1.2 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. **[2010]**

- 1.1.3 At initial assessment, ask men with bothersome LUTS to complete a urinary frequency volume chart. **[2010]**
- 1.1.4 At initial assessment, offer men with LUTS a urine dipstick test to detect blood, glucose, protein, leucocytes and nitrites. **[2010]**
- 1.1.5 At initial assessment, offer men with LUTS 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 benign prostate enlargement (BPE) **or**
 - their prostate feels abnormal on digital rectal examination **or**
 - they are concerned about prostate cancer. **[2010]**
- 1.1.6 Manage suspected prostate cancer in men with LUTS in line with the [NICE guidelines on prostate cancer](#) and [suspected cancer](#). **[2010]**
- 1.1.7 At initial assessment, offer men with LUTS a serum creatinine test (plus estimated glomerular filtration rate [eGFR] 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). **[2010]**
- 1.1.8 Do not routinely offer cystoscopy to men with uncomplicated LUTS (that is, without evidence of bladder abnormality) at initial assessment. **[2010]**
- 1.1.9 Do not routinely offer imaging of the upper urinary tract to men with uncomplicated LUTS at initial assessment. **[2010]**
- 1.1.10 Do not routinely offer flow-rate measurement to men with LUTS at initial assessment. **[2010]**
- 1.1.11 Do not routinely offer a post-void residual volume measurement to men with LUTS at initial assessment. **[2010]**
- 1.1.12 At initial assessment, give reassurance, offer advice on lifestyle interventions (for example, fluid intake) and information on their condition to men whose LUTS are

not bothersome or complicated. Offer review if symptoms change. **[2010]**

1.1.13 Offer men referral for specialist assessment if they have bothersome LUTS that have not responded to conservative management or drug treatment. **[2010]**

1.1.14 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. **[2010]**

1.1.15 Offer men considering any treatment for LUTS an assessment of their baseline symptoms with a validated symptom score (for example, the IPSS) to allow assessment of subsequent symptom change. **[2010]**

1.2 Specialist assessment

Specialist assessment refers to assessment carried out in any setting by a healthcare professional with specific training in managing LUTS in men.

1.2.1 Offer men with LUTS having specialist assessment 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. **[2010]**

1.2.2 Offer men with LUTS having specialist assessment a physical examination guided by urological symptoms and other medical conditions, an examination of the abdomen and external genitalia, and a digital rectal examination. **[2010]**

1.2.3 At specialist assessment, ask men with LUTS to complete a urinary frequency volume chart. **[2010]**

1.2.4 At specialist assessment, offer men with LUTS 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 digital rectal examination **or**
 - they are concerned about prostate cancer. **[2010]**
- 1.2.5 Offer men with LUTS who are having specialist assessment a measurement of flow rate and post-void residual volume. **[2010]**
- 1.2.6 Offer cystoscopy to men with LUTS having specialist assessment only when clinically indicated, for example if there is a history of any of the following:
- recurrent infection
 - sterile pyuria
 - haematuria
 - profound symptoms
 - pain. **[2010]**
- 1.2.7 Offer imaging of the upper urinary tract to men with LUTS having specialist assessment only when clinically indicated, for example if there is a history of any of the following:
- chronic retention
 - haematuria
 - recurrent infection
 - sterile pyuria
 - profound symptoms
 - pain. **[2010]**
- 1.2.8 Consider offering multichannel cystometry to men with LUTS having specialist assessment if they are considering surgery. **[2010]**
- 1.2.9 Offer pad tests to men with LUTS having specialist assessment only if the degree of urinary incontinence needs to be measured. **[2010]**

1.3 Conservative management

- 1.3.1 Explain to men with post-micturition dribble how to perform urethral milking. **[2010]**
- 1.3.2 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. **[2010]**
- 1.3.3 Offer a choice of containment products to manage storage LUTS (particularly urinary incontinence) based on individual circumstances and in consultation with the man. **[2010]**
- 1.3.4 Offer men with storage LUTS suggestive of overactive bladder supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products. **[2010]**
- 1.3.5 Inform men with LUTS and proven bladder outlet obstruction that bladder training is less effective than surgery. **[2010]**
- 1.3.6 Offer supervised pelvic floor muscle training to men with stress urinary incontinence caused by prostatectomy. Advise them to continue the exercises for at least 3 months before considering other options. **[2010]**
- 1.3.7 Refer for specialist assessment men with stress urinary incontinence. **[2010]**
- 1.3.8 Do not offer penile clamps to men with storage LUTS (particularly urinary incontinence). **[2010]**
- 1.3.9 Offer external collecting devices (for example, sheath appliances, pubic pressure urinals) for managing storage LUTS (particularly urinary incontinence) in men before considering indwelling catheterisation (see recommendation 1.3.11). **[2010]**
- 1.3.10 Offer intermittent bladder catheterisation before indwelling urethral or suprapubic catheterisation to men with voiding LUTS that cannot be corrected by less invasive measures. **[2010]**

- 1.3.11 Consider offering long-term indwelling urethral catheterisation to men with LUTS:
- for whom medical management has failed and surgery is not appropriate **and**
 - who are unable to manage intermittent self-catheterisation **or**
 - with skin wounds, pressure ulcers or irritation that are being contaminated by urine **or**
 - who are distressed by bed and clothing changes. **[2010]**
- 1.3.12 If offering long-term indwelling catheterisation, discuss the practicalities, benefits and risks with the man and, if appropriate, his carer. **[2010]**
- 1.3.13 Explain to men that indwelling catheters for urgency incontinence may not result in continence or the relief of recurrent infections. **[2010]**
- 1.3.14 Consider permanent use of containment products for men with storage LUTS (particularly urinary incontinence) only after assessment and exclusion of other methods of management. **[2010]**

1.4 Drug treatment

- 1.4.1 Offer drug treatment only to men with bothersome LUTS when conservative management options have been unsuccessful or are not appropriate. **[2010]**
- 1.4.2 Take into account comorbidities and current treatment when offering men drug treatment for LUTS. **[2010]**
- 1.4.3 Offer an alpha blocker (alfuzosin, doxazosin, tamsulosin or terazosin) to men with moderate to severe LUTS. **[2010]**
- 1.4.4 Offer an anticholinergic to men to manage the symptoms of overactive bladder. **[2010]**
- 1.4.5 Offer a 5-alpha reductase inhibitor to men with LUTS who have prostates estimated to be larger than 30 g or a PSA level greater than 1.4 ng/ml, and who

are considered to be at high risk of progression (for example, older men). **[2010]**

- 1.4.6 Consider offering a combination of an alpha blocker and a 5-alpha reductase inhibitor to men with bothersome moderate to severe LUTS and prostates estimated to be larger than 30 g or a PSA level greater than 1.4 ng/ml. **[2010]**
- 1.4.7 Consider offering an anticholinergic as well as an alpha blocker to men who still have storage symptoms after treatment with an alpha blocker alone. **[2010]**
- 1.4.8 Consider offering a late afternoon loop diuretic to men with nocturnal polyuria. **[2010]**

In June 2015, loop diuretics (for example, furosemide) did not have a UK marketing authorisation for this indication. See [NICE's information on prescribing medicines](#).

- 1.4.9 Consider offering oral desmopressin to men with nocturnal polyuria if other medical causes have been excluded and they have 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.

Medical conditions that can cause nocturnal polyuria symptoms 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. Medications that can cause nocturnal polyuria symptoms include calcium channel blockers, diuretics, and selective serotonin reuptake inhibitors (SSRIs). **[2010]**

In June 2015, desmopressin did not have a UK marketing authorisation for this indication. See [NICE's information on prescribing medicines](#).

- 1.4.10 Do not offer phosphodiesterase-5 inhibitors solely for the purpose of treating LUTS in men, except as part of a randomised controlled trial. **[new 2015]**

Review

- 1.4.11 Discuss active surveillance (reassurance and lifestyle advice without immediate treatment and with regular follow-up) or active intervention (conservative management, drug treatment or surgery) for:
- men with mild or moderate bothersome LUTS
 - men whose LUTS fail to respond to drug treatment. **[2010]**
- 1.4.12 Review men taking drug treatments to assess symptoms, the effect of the drugs on the patient's quality of life and to ask about any adverse effects from treatment. **[2010]**
- 1.4.13 Review men taking alpha blockers at 4 to 6 weeks and then every 6 to 12 months. **[2010]**
- 1.4.14 Review men taking 5-alpha reductase inhibitors at 3 to 6 months and then every 6 to 12 months. **[2010]**
- 1.4.15 Review men taking anticholinergics every 4 to 6 weeks until symptoms are stable, and then every 6 to 12 months. **[2010]**

1.5 Surgery for voiding symptoms

- 1.5.1 For men with 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. **[2010]**
- 1.5.2 If offering surgery for managing voiding LUTS presumed secondary to 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. **[2010]**
- 1.5.3 Offer transurethral incision of the prostate (TUIP) as an alternative to other types

- of surgery (see recommendation 1.5.2) to men with a prostate estimated to be smaller than 30 g. **[2010]**
- 1.5.4 Only offer open prostatectomy as an alternative to TURP, TUVP or HoLEP (see recommendation 1.5.2) to men with prostates estimated to be larger than 80 g. **[2010]**
- 1.5.5 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 recommendation 1.5.2). **[2010]**
- 1.5.6 If offering surgery for managing voiding LUTS presumed secondary to BPE, only consider offering botulinum toxin injection into the prostate as part of a randomised controlled trial. **[2010]**
- 1.5.7 If offering surgery for managing voiding LUTS presumed secondary to BPE, only consider offering laser vaporisation techniques, bipolar TUVP or monopolar or bipolar transurethral vaporisation resection of the prostate (TUVRP) as part of a randomised controlled trial that compares these techniques with TURP. **[2010]**

1.6 Surgery for storage symptoms

- 1.6.1 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 being offered surgery that effectiveness, side effects and long-term risk are uncertain. **[2010]**
- 1.6.2 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. **[2010]**

1.6.3 Consider offering cystoplasty to manage detrusor overactivity only to men whose symptoms have not responded to conservative management or drug treatment and who are willing and able to self-catheterise. Before offering cystoplasty, discuss serious complications (that is, bowel disturbance, metabolic acidosis, mucus production and/or mucus retention in the bladder, urinary tract infection and urinary retention). **[2010]**

1.6.4 Consider offering bladder wall injection with botulinum toxin to men with detrusor overactivity only if their symptoms have not responded to conservative management and drug treatments and the man is willing and able to self-catheterise. **[2010]**

In June 2015, botulinum toxin A and botulinum toxin B did not have UK marketing authorisations for this indication. See [NICE's information on prescribing medicines](#).

1.6.5 Consider offering implanted sacral nerve stimulation to manage detrusor overactivity only to men whose symptoms have not responded to conservative management and drug treatments. **[2010]**

1.6.6 Do not offer myectomy to men to manage detrusor overactivity. **[2010]**

1.6.7 Consider offering intramural injectables, implanted adjustable compression devices and male slings to manage stress urinary incontinence only as part of a randomised controlled trial. **[2010]**

1.6.8 Consider offering urinary diversion to manage intractable urinary tract symptoms only to men whose symptoms have not responded to conservative management and drug treatments, and if cystoplasty or sacral nerve stimulation are not clinically appropriate or are unacceptable to the patient. **[2010]**

1.6.9 Consider offering implantation of an artificial sphincter to manage stress urinary incontinence only to men whose symptoms have not responded to conservative management and drug treatments. **[2010]**

1.7 Treating urinary retention

- 1.7.1 Immediately catheterise men with acute retention. **[2010]**
- 1.7.2 Offer an alpha blocker to men for managing acute urinary retention before removal of the catheter. **[2010]**
- 1.7.3 Consider offering self- or carer-administered intermittent urethral catheterisation before offering indwelling catheterisation for men with chronic urinary retention. **[2010]**
- 1.7.4 Carry out a serum creatinine test and imaging of the upper urinary tract in men with chronic urinary retention (residual volume greater than 1 litre or presence of a palpable or percussable bladder). **[2010]**
- 1.7.5 Catheterise men who have impaired renal function or hydronephrosis secondary to chronic urinary retention. **[2010]**
- 1.7.6 Consider offering intermittent or indwelling catheterisation before offering surgery in men with chronic urinary retention. **[2010]**
- 1.7.7 Consider offering surgery on the bladder outlet without prior catheterisation to men who have chronic urinary retention and other bothersome LUTS but no impairment of renal function or upper renal tract abnormality. **[2010]**
- 1.7.8 Consider offering intermittent self- or carer-administered catheterisation instead of surgery in men with chronic retention who you suspect have markedly impaired bladder function. **[2010]**
- 1.7.9 Continue or start long-term catheterisation in men with chronic retention for whom surgery is unsuitable. **[2010]**
- 1.7.10 Provide active surveillance (post-void residual volume measurement, upper tract imaging and serum creatinine testing) to men with non-bothersome LUTS secondary to chronic retention who have not had their bladder drained. **[2010]**

1.8 Alternative and complementary therapies

- 1.8.1 Do not offer homeopathy, phytotherapy or acupuncture for treating LUTS in men. [2010]

1.9 Providing information

- 1.9.1 Ensure that, if appropriate, men's carers are informed and involved in managing their LUTS and can give feedback on treatments. [2010]
- 1.9.2 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. [2010]
- 1.9.3 Provide men with storage LUTS (particularly incontinence) containment products at point of need, and advice about relevant support groups. [2010]

Recommendations for research

The guideline committee has made the following recommendations for research. See the [full guideline](#) for the full set of research recommendations.

1 Multichannel cystometry

What is the clinical and cost effectiveness of multichannel cystometry in improving patient-related outcomes in men considering bladder outlet surgery? **[2010]**

Why this is important

This research would clarify whether this test could improve the outcome of surgery. By identifying which patients had bladder outlet obstruction, it could improve the chance of a good outcome from surgery. The study should be a randomised controlled trial comparing multichannel cystometry before surgery with no intervention in men waiting to have bladder outlet surgery.

2 Catheterisation

What are the clinical and cost effectiveness and associated adverse events of intermittent catheterisation compared with indwelling catheterisation (suprapubic or urethral) for men with voiding difficulty and chronic retention of urine? **[2010]**

Why this is important

The number of patients in this group is steadily increasing as the population ages and more radical prostatectomies are carried out. Current practice varies widely across the UK with no established standard of good practice. This research could establish the best approach to management in these men and so bring more effective, patient-focused treatment that is more cost effective. The study should be a randomised controlled trial comparing intermittent catheterisation, indwelling suprapubic and indwelling urethral catheterisation. Outcomes of interest would be quality of life, healthcare resource use and adverse events (including leakage, skin breakdown, infection, erosion and death).

3 Products for men with urinary incontinence

What are the clinical and cost effectiveness and associated adverse events of absorbent pads compared with sheath collectors for men with urinary incontinence? [2010]

Why this is important

The number of patients in this group is steadily increasing as more radical prostatectomies are carried out and the population ages. Current practice varies widely across the UK with no established standard of good practice. This research could establish the best approach to continence management in these men and so provide more effective, patient-focused treatment that is more cost effective. In current non-specialist practice, bladder training is often not considered, and adequate diagnosis and hence optimal treatment of bladder dysfunction is often not implemented. Evidence-based guidance on selecting the most suitable containment product and its subsequent management will increase the quality of life of patients, use skilled nurse or carer resources more efficiently and reduce the costs of waste of unsuitable or sub-optimal product use. The study should be a randomised controlled trial reporting symptom severity, quality of life, changes in measured leakage and occurrence of adverse events.

4 Male slings

In men with mild to moderate post-prostatectomy urinary incontinence, what is the clinical and cost effectiveness of a male sling or an implanted adjustable compression device, when assessed by symptom severity, quality of life, changes in measured leakage and occurrence of adverse events? [2010]

Why this is important

Guidance is needed on the most suitable surgical options for this growing group of men who, until recently, have had no acceptable treatment option other than insertion of an artificial urinary sphincter. Many men consider insertion of an artificial sphincter to be too invasive and too prone to complication or failure, and therefore depend on containment alone for control of their urinary incontinence. A number of new interventions have been devised but it is uncertain which of these offers the best outcomes. This research could lead to clear recommendations and effective treatment for the majority of these men. A randomised controlled trial is recommended, comparing up to three current interventions:

retrobulbar 'non-compressive' male sling, adjustable compression sling, and implanted adjustable compression device.

5 Phosphodiesterase-5 inhibitors

As part of the 2015 update, the committee made an additional research recommendation on treating lower urinary tract symptoms (LUTS) in men.

What is the clinical and cost effectiveness of phosphodiesterase-5 inhibitors (PDE5Is) for treating lower urinary tract symptoms in men who do not have erectile dysfunction? **[new 2015]**

Why this is important

There is a gap in the evidence about the effectiveness of PDE5Is in men with LUTS who do not have erectile dysfunction. The current evidence includes men with LUTS and erectile dysfunction. Therefore, the standing committee decided that it was not appropriate to make a recommendation about the routine use of PDE5Is in clinical practice. More evidence is needed to enable a recommendation to be made on the use of PDE5Is in all men with LUTS, including those without erectile dysfunction. The study should be a randomised controlled trial comparing PDE5Is with usual care in men over 45 years with LUTS without erectile dysfunction. Outcomes should include the International Prostate Symptom Score (IPSS) symptom score, IPSS quality of life, maximal urinary flow, residual urine volume, postural hypotension, headaches and withdrawals due to adverse events.

See the [addendum](#) for more information.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the [NICE topic page on lower urinary tract symptoms](#).

For full details of the evidence and the guideline committee's discussions, see the [full guideline](#). You can also find information about [how the guideline was developed](#), including details of the committee.

NICE has produced [tools and resources to help you put this guideline into practice](#). For general help and advice on putting our guidelines into practice, see [resources to help you put NICE guidance into practice](#).

Update information

June 2015: A recommendation on phosphodiesterase-5 inhibitors has been added to section 1.4 on drug treatment. A research recommendation on phosphodiesterase-5 inhibitors has been added to section 2.5. The [addendum](#) contains details of the methods and evidence used to develop these recommendations.

Recommendations are marked as **[new 2015]** or **[2010]**:

- **[new 2015]** indicates that the evidence has been reviewed and the recommendation has been added or updated.
- **[2010]** indicates that the evidence has not been reviewed since 2010.

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