The management of lower urinary tract symptoms in men

NICE guideline

Draft for consultation, August 2009

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

Contents

Introduction

Lower urinary tract symptoms (LUTS) are a collection of symptoms related to problems with the voiding and post-micturition of urine. They generally arise as a result of abnormalities or inadequate functioning of the prostate, urethra, bladder or sphincters. The pathophysiology of LUTS is diverse. In men, benign prostate enlargement (BPE), which is secondary to benign prostatic hyperplasia (BPH) and causes bladder outlet obstruction, is frequently considered to be the major cause of LUTS. However, many other conditions can cause LUTS, including detrusor muscle weakness or overactivity, prostatitis, urinary tract infection, malignancy and neurological disease. In acknowledgement of the non-specific nature of many male LUTS, this clinical guideline will advise on the effective evidence-based management of male LUTS in general.

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 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. Approximately 30% of men aged 50 years and older have moderate to severe LUTS. This is a large group potentially requiring treatment.

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

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

Patient-centred care

This guideline offers best practice advice on the care of men with lower urinary tract symptoms.

Treatment and care should take into account men's needs and preferences. Men with lower urinary tract symptoms should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If men do not have the capacity to make decisions, healthcare professionals should follow the Department of Health guidelines – 'Reference guide to consent for examination or treatment' (2001) (available from www.dh.gov.uk). Healthcare professionals should also follow the code of practice that accompanies the Mental Capacity Act (summary available from www.publicguardian.gov.uk).

Good communication between healthcare professionals and men is essential. It should be supported by evidence-based written information tailored to the man's needs. Treatment and care, and the information men are given about it, should be culturally appropriate. It should also be accessible to men with additional needs such as physical, sensory or learning disabilities, and to men who do not speak or read English.

If the man agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Families and carers should also be given the information and support they need.

Key priorities for implementation

Initial assessment

- At initial assessment, offer men with LUTS an assessment of their general medical history to identify possible causes and comorbidities. This should include a review of current medication. [1.1.1]
- At initial assessment, offer men with LUTS a focused physical examination guided by their medical history, an examination of the abdomen and external genitalia, and a digital rectal examination (DRE). [1.1.2]
- At initial assessment, ask men with bothersome LUTS to complete a urinary frequency volume chart. [1.1.3]
- 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. [1.1.14]

Conservative management

- Offer men with urinary incontinence management (for example, pads or collecting devices) to achieve social continence until a diagnosis and management plan has been discussed. [1.3.2]
- Offer men with storage LUTS suggestive of overactive bladder (OAB) supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products. [1.3.4]

Surgery for voiding symptoms

- If offering surgery for managing voiding LUTS presumed secondary to BPE, offer monopolar or bipolar transurethral resection of the prostate (TURP), monopolar transurethral vapourisation of the prostate (TUVP) or holmium laser enucleation of the prostate (HoLEP). Perform HoLEP at a centre specialising in the technique. [1.5.2]

- 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 1.5.2). [1.5.5]

Providing information

- Ensure 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.[1.9.2]
- Provide men with LUTS maintenance products at point of need and access to relevant support groups. [1.9.3]

1 Guidance

The following guidance is based on the best available evidence. The full guideline ('The management of lower urinary tract symptoms in men') gives details of the methods and the evidence used to develop the guidance.

1.1 Initial assessment

1.1.1 At initial assessment, offer men with LUTS an assessment of their general medical history to identify possible causes and comorbidities. This should include a review of current medication.

1.1.2 At initial assessment, offer men with LUTS a focused physical examination guided by their medical history, an examination of the abdomen and external genitalia, and a digital rectal examination (DRE).

1.1.3 At initial assessment, ask men with bothersome LUTS to complete a urinary frequency volume chart.

1.1.4 At initial assessment, offer men with LUTS a urine dipstick test to detect blood, glucose, protein, leucocytes and nitrites in the urine.

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 BPE **or**
- their prostate feels abnormal on DRE **or**
- they are concerned about prostate cancer.

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

1.1.7 At initial assessment, offer men with LUTS a serum creatinine test only if there are any indications of renal impairment (for example, palpable bladder, nocturnal enuresis, recurrent urinary tract infection or history of renal stones).

1.1.8 Do not offer cystoscopy to men with uncomplicated LUTS (that is, without evidence of bladder abnormality) at initial assessment.

1.1.9 Do not offer imaging of the upper urinary tract to men with uncomplicated LUTS at initial assessment.

1.1.10 Do not offer flow-rate measurement to men with LUTS at initial assessment.

1.1.11 Do not offer a post void residual volume measurement to men with LUTS at initial assessment.

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.

1.1.13 Refer men for specialist assessment if they have bothersome LUTS that have not responded to conservative management or drug treatment.

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.

1.1.15 Offer men considering any treatment for LUTS an assessment of their baseline symptoms with a validated symptom score (for example, the International Prostate Symptom Score [IPSS]).

1.2 Specialist assessment

1.2.1 Offer men with LUTS having specialist assessment an assessment of their general medical history to identify possible causes and comorbidities. This should include a review of current medication.

1.2.2 Offer men with LUTS having specialist assessment a focused physical examination guided by their medical history, an examination of the abdomen and external genitalia, and a DRE.

1.2.3 Ask men with LUTS to complete a urinary frequency volume chart at specialist assessment.

1.2.4 At specialist 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 BPE **or**
- their prostate feels abnormal on DRE **or**
- they are concerned about prostate cancer.

1.2.5 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.

1.2.6 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.

1.2.7 Offer men with LUTS who are having specialist assessment a measurement of flow rate and post void residual volume.

1.2.8 Consider offering multichannel cystometry for men with LUTS who are considering surgery.

1.2.9 Offer pad tests to men having specialist assessment only if the degree of urinary incontinence needs to be measured.

1.3 Conservative management

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

1.3.2 Offer men with urinary incontinence management (for example, pads or collecting devices) to achieve social continence until a diagnosis and management plan has been discussed.

1.3.3 Offer a choice of containment products to manage urinary incontinence based on individual circumstances and in consultation with the man.

1.3.4 Offer men with storage LUTS suggestive of overactive bladder (OAB) supervised bladder training, advice on fluid intake, lifestyle advice and, if needed, containment products.

1.3.5 Inform men with LUTS and proven bladder outlet obstruction that bladder training is less effective than surgery.

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.

1.3.7 Refer for specialist assessment men with stress urinary incontinence arising from causes other than prostatectomy (for example, radiotherapy or pelvic fracture urethral distraction injuries).

1.3.8 Consider permanent use of absorbent products for men with LUTS only after assessment and exclusion of other methods of management.

1.3.9 Do not routinely offer penile clamps to men with urinary incontinence.

1.3.10 Consider offering sheath appliances for managing urinary incontinence in men if there is no indication for indwelling catheterisation (see 1.3.11).

1.3.11 Consider offering bladder catheterisation (intermittent or indwelling urethral or suprapubic) to men with LUTS that cannot be corrected by less invasive measures such as external collection devices (for example, pubic pressure urinal, sheath appliances).

1.3.12 Consider offering long-term indwelling urethral catheterisation to men:

- for whom surgery is not appropriate
- who are unable to manage intermittent self-catheterisation
- with skin wounds, pressure ulcers or irritation that are being contaminated by urine
- who are distressed by bed and clothing changes
- who express a preference for this form of management.

1.3.13 If offering long-term indwelling catheterisation, discuss the practicalities, benefits and risks with the man and, if appropriate, his carer.

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

1.3.15 Consider offering indwelling suprapubic catheters as an alternative to long-term urethral catheters.

1.4 Drug treatment

1.4.1 Offer men with bothersome LUTS drug treatment only when conservative management options have been unsuccessful or are not appropriate.

1.4.2 Take into account comorbidities and current treatment when offering men drug treatment for LUTS.

1.4.3 Offer an alpha blocker (alfuzosin, doxazosin, tamsulosin or terazosin) to men with moderate to severe LUTS.

1.4.4 Offer an anticholinergic to men to manage the symptoms of OAB.

1.4.5 Offer a 5-alpha reductase inhibitor to men with LUTS who have prostates estimated to be larger than 30 g or PSA greater than 1.4 ng/ml, and who are considered to be at high risk of progression (for example, older men).

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 PSA greater than 1.4 ng/ml.

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.

1.4.8 Consider offering a late afternoon diuretic[1] for men with nocturnal polyuria.

1.4.9 Consider offering oral desmopressin[2] for men with nocturnal polyuria if they have not benefited from other treatments. Measure serum sodium 3 days after the first dose.

Review

1.4.10 Review men taking alpha blockers at 4–6 weeks and then every 6–12 months.

1.4.11 Review men taking 5-alpha reductase inhibitors at 3–6 months and then every 6–12 months.

1.4.12 Review men taking anticholinergics every 4–6 weeks until stable, and then every 6–12 months.

1.4.13 Review men taking an alpha blocker and a 5-alpha reductase inhibitor at 4–6 weeks and then every 6–12 months.

1.4.14 Review men taking an anticholinergic and an alpha blocker at 4–6 weeks until stable, and then every 6–12 months.

[1] At the time of publication (July 2009), diuretics (for example, furosemide) did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

[2] At the time of publication (July 2009), desmopressin did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.

1.4.15 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.

1.5 Surgery for voiding symptoms

1.5.1 Offer surgery only to men with severe voiding symptoms, or men with voiding symptoms for whom drug treatment and conservative management options have been unsuccessful or are not appropriate. Discuss the alternatives to and outcomes from surgery.

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 vapourisation of the prostate (TUVP) or holmium laser enucleation of the prostate (HoLEP). Perform HoLEP at a centre specialising in the technique.

1.5.3 Offer transurethral incision of the prostate (TUIP) as an alternative to TURP, TUVP or HoLEP (see 1.5.2) to men with a prostate estimated to be smaller than 30 g.

1.5.4 Offer open prostatectomy as an alternative to TURP, TUVP or HoLEP (see 1.5.2) to men with prostates estimated to be larger than 80 g.

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 1.5.2).

1.5.6 If offering surgery for managing voiding LUTS presumed secondary to BPE, only offer botulinum toxin as part of a clinical trial.

1.5.7 If offering surgery for managing voiding LUTS presumed secondary to BPE, only offer laser vapourisation[3], bipolar TUVP or monopolar or bipolar transurethral vapourisation resection of the prostate (TURVP) as part of a clinical trial.

1.6 Surgery for storage symptoms

1.6.1 Consider offering surgery 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.

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.

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 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).

[3] Current evidence on the safety and short-term efficacy of potassium-titanyl-phosphate (KTP) laser vaporisation of the prostate for benign prostatic obstruction appears adequate to support the use of this procedure, provided that normal arrangements are in place for consent, audit and clinical governance. (NICE interventional procedure guidance 120). However, research is necessary to understand its role compared with other treatments.

1.6.4 Consider offering bladder wall injection with botulinum toxin[4] only to men with detrusor overactivity whose symptoms have not responded to conservative management and drug treatments and who are willing to self-catheterise.

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

1.6.6 Do not offer myectomy to men to manage detrusor overactivity.

1.6.7 Consider offering intramural injectables, implanted adjustable compression devices and male slings[5] to manage stress urinary incontinence only as part of a clinical trial.

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 root stimulation are not appropriate or unacceptable.

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.

1.7 Treating urinary retention

1.7.1 Immediately catheterise men with acute retention.

1.7.2 Consider offering self- or carer-administered intermittent urethral catheterisation as an alternative to indwelling catheterisation for men with chronic or acute urinary retention.

[4] At the time of publication (July 2009), botulinum toxin did not have UK marketing authorisation for this indication. Informed consent should be obtained and documented.
[5] Current evidence on the safety and efficacy of suburethral synthetic sling insertion for stress urinary incontinence in men appears adequate to support the use of this procedure, provided that normal arrangements are in place for clinical governance (NICE interventional procedure guidance 256). However, research is necessary to understand its role compared with other treatments.

1.7.3 Offer an alpha blocker to men for managing acute urinary retention before removal of the catheter.

1.7.4 Carry out a serum creatinine test and imaging of the upper urinary tract in men with chronic urinary retention.

1.7.5 Catheterise men who have impaired renal function or hydronephrosis secondary to chronic urinary retention.

1.7.6 Consider offering intermittent or indwelling catheterisation before surgery in men with chronic urinary retention.

1.7.7 Consider offering surgery without catheterisation to men who have chronic urinary retention and other bothersome LUTS but no impairment of renal function or upper renal tract abnormality.

1.7.8 Consider intermittent self-catheterisation as an alternative to TURP in men with chronic retention if there is evidence of poor bladder function.

1.7.9 Continue or start long-term catheterisation in men with chronic retention for whom surgery is unsuitable.

1.7.10 Provide active surveillance (imaging and creatinine) to men with non-bothersome LUTS secondary to chronic retention who have not had their bladder drained.

1.8 Alternative and complementary therapies

1.8.1 Do not offer homeopathy, phytotherapy or acupuncture for treating LUTS in men.

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.

1.9.2 Ensure 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.

1.9.3 Provide men with LUTS maintenance products at point of need and access to relevant support groups.

2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from www.nice.org.uk/guidance/index.jsp?action=download&o=39010.

How this guideline was developed

NICE commissioned the National Clinical Guideline Centre: Acute and Chronic Conditions to develop this guideline. The Centre established a guideline development group (see appendix A), which reviewed the evidence and developed the recommendations. An independent guideline review panel oversaw the development of the guideline (see appendix B).

There is more information about how NICE clinical guidelines are developed on the NICE website (www.nice.org.uk/guidelinesprocess). A booklet, 'How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS' (fourth edition, published 2009), is available from NICE publications (phone 0845 003 7783 or email publications@nice.org.uk and quote reference N1739).

3 Implementation

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

4 Research recommendations

The Guideline Development Group has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future. The Guideline Development Group's full set of research recommendations is detailed in the full guideline (see section 5).

4.1 Multichannel cystometry

What is the clinical and cost effectiveness of multichannel cystometry in improving patient-related outcomes in men being considered for bladder outlet surgery?

Why this is important

This research would clarify whether this test could improve the outcome of surgery. If the result is positive, this 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 awaiting bladder outlet surgery.

4.2 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?

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 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).

4.3 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?

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 bring more effective, patient-focused treatment that is more cost effective..It is rare that any element of bladder training or recognition and treatment of bladder dysfunction are recognised as part of continence management. Evidence-based guidance on selecting the most suitable containment product and its subsequent management will benefit the quality of life of patients, use skilled nurse/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.

4.4 Green light laser prostatectomy

What is the clinical and cost effectiveness of green light laser prostatectomy compared to TURP in men with moderate to severe bothersome LUTS considering surgery for bladder outlet obstruction?

Why this is important

The evidence base is inadequate to give clear guidance. This research would help plan future guidance on the use of green light laser prostatectomy for men with LUTS who are having surgery. The potential advantages of reduced blood loss, shorter hospital stay and earlier return to normal activities make green light laser prostatectomy attractive to patients and healthcare providers, although there is uncertainty around the degree of symptom improvement and improvement in quality of life in the short and longer term. The study design should be a randomised controlled trial.

4.5 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 extraurethral non-circumferential compression device, when assessed by symptom severity,

quality of life, changes in measured leakage and occurrence of adverse events?

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. However many men consider this treatment 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 extraurethral non-circumferential compression device.

5 Other versions of this guideline

5.1 Full guideline

The full guideline, 'The management of male lower urinary tract symptoms' contains details of the methods and evidence used to develop the guideline. It is published by the National Clinical Guidelines Centre, and is available from [NCC website details to be added] and our website (www.nice.org.uk/CGXXfullguideline). **[Note: these details will apply to the published full guideline.]**

5.2 Quick reference guide

A quick reference guide for healthcare professionals is available from www.nice.org.uk/CGXXquickrefguide

For printed copies, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk (quote reference number N1XXX). **[Note: these details will apply when the guideline is published.]**

5.3 'Understanding NICE guidance'

A summary for patients and carers ('Understanding NICE guidance') is available from www.nice.org.uk/CGXXpublicinfo

For printed copies, phone NICE publications on 0845 003 7783 or email publications@nice.org.uk (quote reference number N1XXX). **[Note: these details will apply when the guideline is published.]**

We encourage NHS and voluntary sector organisations to use text from this booklet in their own information about male lower urinary tract symptoms.

6 Related NICE guidance

Published

- 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

7 Updating the guideline

NICE clinical guidelines are updated so that recommendations take into account important new information. New evidence is checked 3 years after publication, and healthcare professionals and patients are asked for their views; we use this information to decide whether all or part of a guideline needs updating. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations.

Appendix A: The Guideline Development Group

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Appendix B: The Guideline Review Panel

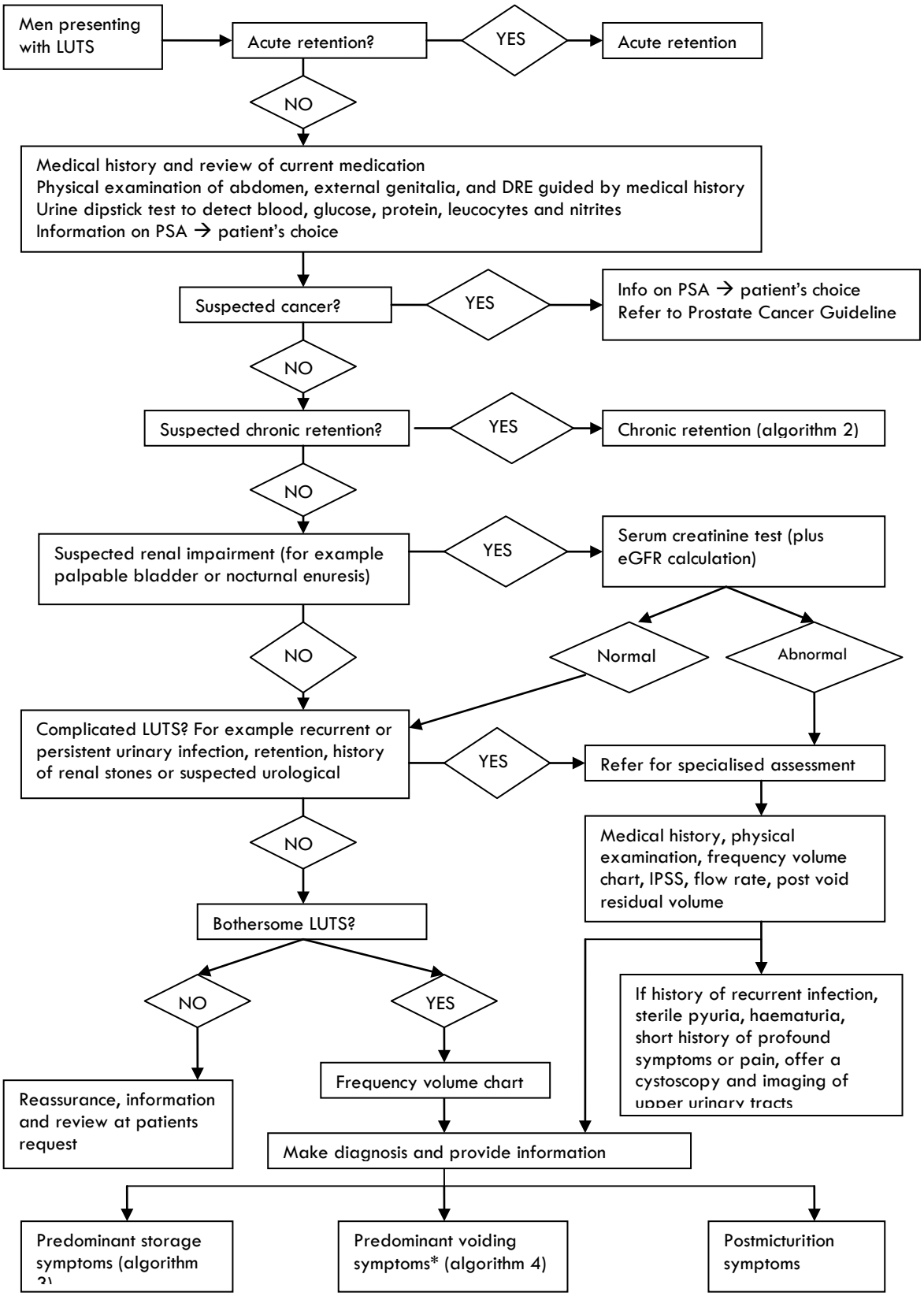
The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

[NICE to add]

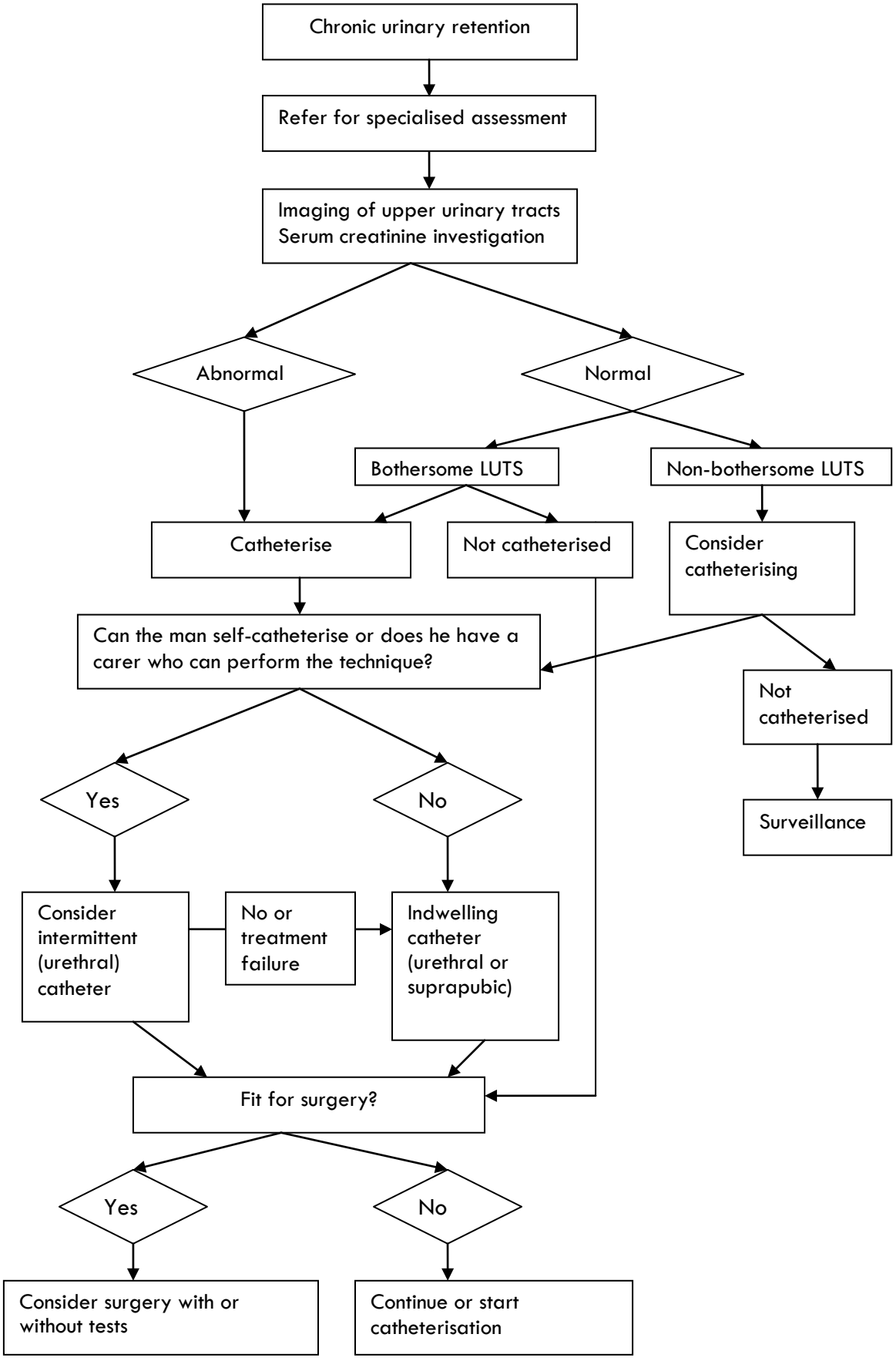
[Name; style = Unnumbered bold heading]
[job title and location; style = NICE normal]

Appendix C: The algorithms

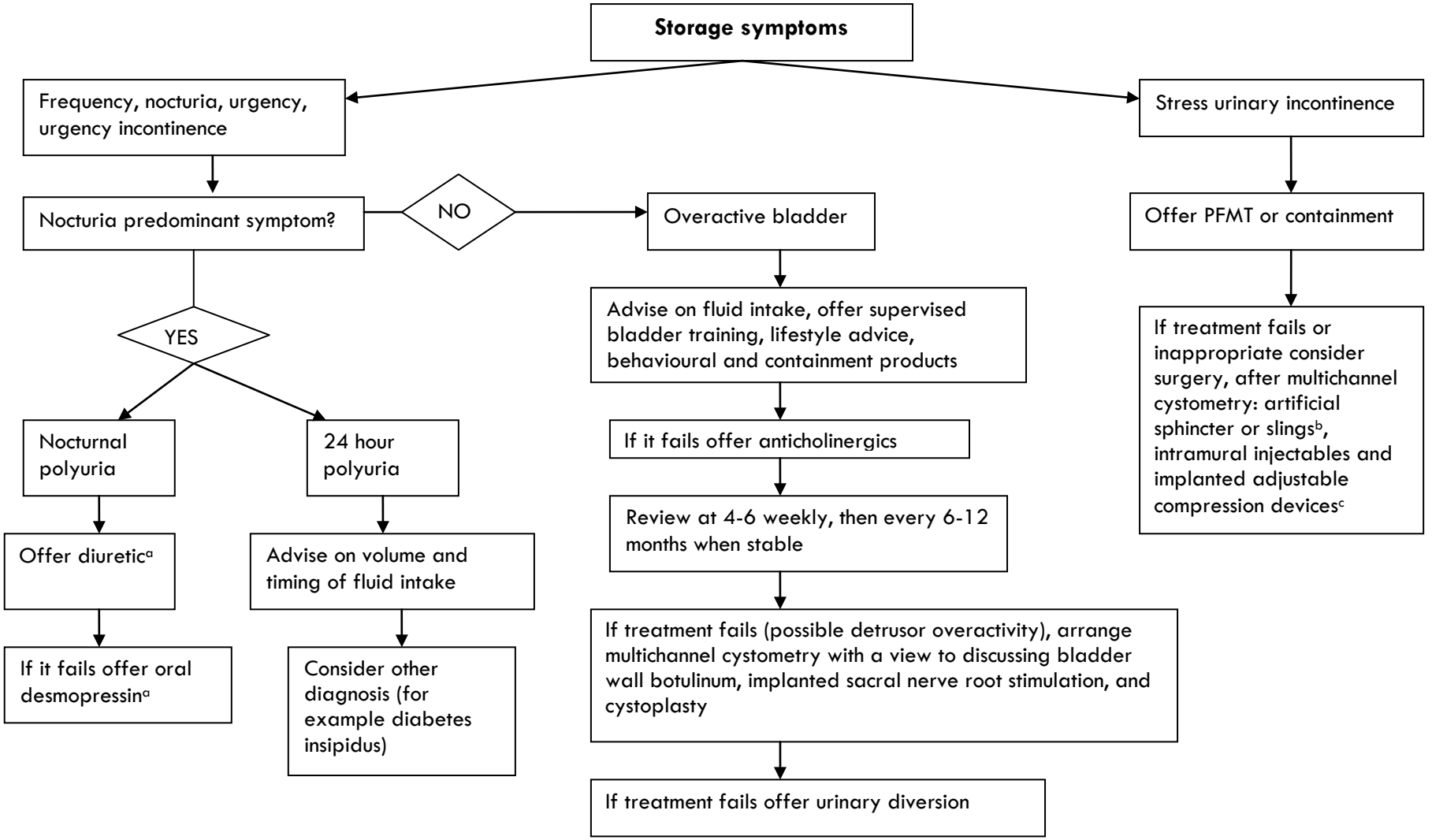
ALGORITHM 1 - DIAGNOSIS



ALGORITHM 2 - CHRONIC URINARY RETENTION (SPECIALIST CARE)



ALGORITHM 3 - STORAGE SYMPTOMS



[a] The use of diuretics (e.g.furosemide) and desmopressin for nocturnal polyuria in men is outside the UK marketing authorisation for these products. Informed consent should be obtained and documented. For desmopressin, measure serum sodium at 3 days following the first dose.

[b] Clinicians should clearly explain to patients that the procedure is not always successful, particularly in men with severe stress urinary incontinence or those who have been previously treated with radiotherapy. Patients should also be made aware that the benefits of the procedure may decrease over time (Interventional Procedure guidance 256).

[c] Current evidence on the safety and efficacy of insertion of extraurethral retropubic adjustable compression devices for stress urinary incontinence in men is not adequate for this procedure to be used without special arrangements for consent and for audit or research (Interventional Procedure guidance 224).

ALGORITHM 4 - VOIDING SYMPTOMS