

Clinical Policy: Urodynamic Testing

Reference Number: LA.CP.MP.98

Date of Last Revision: 5/23

[Coding Implications](#)

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Description

Urodynamic testing is an important part of the comprehensive evaluation of voiding dysfunction. The clinician must exercise clinical judgment in the appropriate selection of urodynamic tests following an appropriate evaluation and symptom characterization. The purpose of this policy is to define medical necessity criteria for commonly used urodynamic studies.

Policy/Criteria

- I. It is the policy of Louisiana Healthcare Connections that urodynamic testing is **medically necessary** to assist in the diagnosis of urologic dysfunction with any of the following indications:
 - A. Uncertain diagnosis and inability to develop an appropriate initial treatment plan based on the clinical diagnostic evaluation;
 - B. Failure to respond to an adequate therapeutic trial;
 - C. Consideration of urologic surgical intervention, particularly if previous surgery failed or if the patient is a high surgical risk;
 - D. Presence of other comorbid conditions such as any of the following:
 1. Urinary incontinence;
 2. Persistent symptoms of difficult bladder emptying;
 3. History of previous anti-incontinence surgery or radical pelvic surgery;
 4. Symptomatic pelvic prolapse;
 5. Prostate nodule, asymmetry or other suspicion of prostate cancer
 6. Abnormal post-void-residual urinalysis;
 7. Diabetes mellitus with secondary urinary incontinence;
 8. Neurological conditions affecting voiding function (neurogenic bladder) such as multiple sclerosis, Parkinson's disease, and spinal cord lesions or injury;
 9. Complex anorectal malformation.
- II. It is the policy of Louisiana Healthcare Connections that urodynamic testing in the following cases is considered **not medically necessary**:
 - A. More than one cystometrogram (CPT codes 51725 or 51726) or uroflowmetry study (CPT codes 51736 or 51741) per visit.
 - B. The use of any urodynamic testing for screening in asymptomatic patients, except for evaluation of neurogenic bladder or urological abnormalities associated with complex anorectal malformation.

Background

Lower urinary tract symptoms (LUTS), which include urinary incontinence, are a common and significant source of impaired quality of life and comorbidity in a large number of adults and children. LUTS is also a general term used to describe symptoms related to overactive bladder such as frequency, urgency and nocturia.²² Commonly, patients presenting with lower urinary tract symptoms have overlapping symptoms and conditions, making an isolated or homogeneous source of symptoms rare. Clinicians evaluating these disorders collectively utilize history,

physical examination, questionnaires and testing data in the evaluation of symptoms.³ Cystometrogram, uroflowmetry, urethral pressure profile, and voiding pressure studies, among others, are used to identify abnormal voiding patterns in symptomatic patients with disorders of urinary flow. The urodynamic evaluation measures the relationship between movement and compression of bladder and abdominal pressures during the filling/storage and elimination phase of micturition.²² Each of the urodynamic studies has benefits and limitations that must be understood for each specific clinical application.

In clinical practice, the role of invasive urodynamic testing is not clearly defined. Urologists generally accept that conservative or empiric, non-invasive treatments may be instituted without urodynamic testing. Conservative treatments for urinary incontinence include pelvic muscle exercises (Kegel exercise), behavioral therapies such as bladder training and/or biofeedback, and pharmacotherapies (e.g., anticholinergic agents, musculotropic relaxants, calcium channel blockers, tricyclic antidepressants, or a combination of anticholinergic, antispasmodic medications and tricyclic antidepressants). Specifically, urge incontinence is more effectively managed with peripherally acting receptor agonists or antagonists, while stress incontinence is better controlled by pelvic muscle exercises, behavioral therapies, or corrective surgery.⁴

Urodynamic studies are indicated only after an initial evaluation is performed that, at minimum, includes an appropriate history, physical exam, and urinalysis with microscopy. Infection, if present, should be treated and effectiveness of treatment observed before further diagnostic (urodynamic) testing or other therapeutic interventions are undertaken.

Many types of urodynamic testing require urethral catheterization and include cystometry, pressure flow studies (PFS), and urethral function testing. Such testing subjects patients to risks of urethral instrumentation including infection, urethral trauma, and pain. Thus, the clinician must weigh whether urodynamic tests offer additional diagnostic benefit beyond symptom assessment, physical examination, and other diagnostic testing. A cystometrogram is used to distinguish bladder outlet obstruction from other voiding dysfunctions.

- In a simple cystometrogram (CPT code 51725), the physician inserts a pressure catheter into the bladder and using a manometer, records the pressure and flow in the lower urinary tract.
- A complex cystometrogram (CPT code 51726) uses a transurethral catheter to fill the bladder with water or gas while simultaneously obtaining rectal pressure and a transducer measures intravesical pressure.
- CPT code 51727 reports a complex cystometrogram performed in conjunction with a measurement of urethral pressure studies.
- CPT code 51728 reports a complex cystometrogram performed in conjunction with a measurement of voiding pressure studies.
- CPT code 51729 reports a complex cystometrogram performed in conjunction with a measurement of voiding pressure studies and urethral pressure studies.
- Voiding pressure studies (CPT code 51797) measure the effort the patient makes while voiding. This measurement includes the pressure required and the subsequent urine flow.

Uroflowmetry and ultrasound post-void residual (PVR) studies may be appropriate noninvasive tests given the clinical scenario and the options for treatment.³

- In simple uroflowmetry (CPT code 51736), a stopwatch is used to record the volume of the flow of urine over time.
- Complex uroflowmetry (CPT code 51741) uses electronic equipment to measure and record the volume of urine flow over time.
- Measurement of residual urine and/or bladder emptying capacity (CPT code 51798) is accomplished using ultrasound after voiding.

Coding Implications

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| CPT® Codes | Description |
|-------------------|---|
| 51725 | Simple cystometrogram (CMG) (eg, spinal manometer) |
| 51726 | Complex cystometrogram (ie, calibrated electronic equipment) |
| 51727 | Complex cystometrogram (ie, calibrated electronic equipment); with urethral pressure profile studies (i.e., urethral closure pressure profile), any technique |
| 51728 | Complex cystometrogram (ie, calibrated electronic equipment); with voiding pressure studies (ie, bladder voiding pressure), any technique |
| 51729 | Complex cystometrogram (ie, calibrated electronic equipment); with voiding pressure studies (ie, bladder voiding pressure) and urethral pressure profile studies (ie, urethral closure pressure profile), any technique |
| 51736 | Simple uroflowmetry (UFR) (eg, stop-watch flow rate, mechanical uroflowmeter) |
| 51741 | Complex uroflowmetry (eg, calibrated electronic equipment) |
| +51797 | Voiding pressure studies, intra-abdominal (ie, rectal, gastric, intraperitoneal (List separately in addition to code for primary procedure) |
| 51798 | Measurement of post-voiding residual urine and/or bladder capacity by ultrasound, non-imaging |

ICD-10-CM Diagnosis Codes that Support Medical Necessity

| ICD-10-CM Code | Description |
|-----------------------|---------------------------------------|
| A18.13 | Tuberculosis of other urinary organs |
| C70.1 | Malignant neoplasm of spinal meninges |
| C72.0 | Malignant neoplasm of spinal cord |
| C72.1 | Malignant neoplasm of cauda equina |
| D33.4 | Benign neoplasm of spinal cord |

| ICD-10-CM Code | Description |
|---------------------------|--|
| E10.69 | Type 1 diabetes mellitus with other specified complications |
| E11.69 | Type 2 diabetes mellitus with other specified complication |
| G20 | Parkinson's disease |
| G35 | Multiple sclerosis |
| G37.3 | Acute transverse myelitis in demyelinating disease of central nervous system |
| G82.21 | Paraplegia, complete |
| G82.22 | Paraplegia, incomplete |
| G83.4 | Cauda equina syndrome |
| N30.10 through N30.11 | Interstitial cystitis, chronic |
| N30.20 through N30.21 | Other chronic cystitis |
| N31.0 through N31.9 | Neuromuscular dysfunction of bladder, not elsewhere classified |
| N32.0 through N32.89 | Other disorders of bladder |
| N39.0 through N39.8 | Other disorders of urinary system |
| N40.1 | Benign prostatic hyperplasia with lower urinary tract symptoms |
| N40.3 | Nodular prostate with lower urinary tract symptoms |
| N81.0 through N81.9 | Female genital prolapse |
| Q05.0 through Q05.9 | Spina bifida |
| Q06.0 through Q06.9 | Other congenital malformations of spinal cord |
| Q07.00 through Q07.9 | Other congenital malformations of nervous system |
| Q42.0 through Q42.3 | Congenital absence, atresia and stenosis of large intestine |
| R33.8 | Other retention of urine |
| R33.9 | Retention of urine, unspecified |
| R35.1 | Nocturia |
| R39.11 | Hesitancy of micturition |
| R39.14 | Feeling of incomplete bladder emptying |
| R39.81 | Functional urinary incontinence |
| S14.0XXA through S14.9XXS | Injury of nerves and spinal cord at neck level |
| S24.0XXA through S24.9XXS | Injury of nerves and spinal cord at thorax level |

| ICD-10-CM Code | Description |
|---------------------------|--|
| S34.01XA through S34.9XXS | Injury of lumbar and sacral spinal cord and nerves at abdomen, lower back and pelvis level |

In addition to the above ICD-10 codes, the following additional diagnosis codes support medical necessity for CPT code 51798.

| ICD-10-CM Code | Description |
|---------------------|---------------------------------------|
| N13.8 | Other obstructive and reflux uropathy |
| R33.0 through R33.9 | Retention of urine |
| R35.0 | Frequency of micturition |

| Reviews, Revisions, and Approvals | Revision Date | Approval Date |
|--|---------------|---------------|
| Converted corporate to local policy. | 2/21 | |
| Annual review completed. Codes checked. References updated and reformatted for AMA style. Changed “Review Date” in the header to “Date of Last Revision” and “Date” in the revision log header to “Revision Date.” Added “and may not support medical necessity” to coding implications. Specialty review completed. | 2/22 | 4/14/22 |
| References reviewed and updated. In I.D.1, changed “incontinence associated with recurrent UTI” to “Urinary incontinence.” Codes checked. Updated background with no impact to policy statement. Added “and may not support medical necessity” to Coding Implications section. | 5/22 | |
| Annual review. Added criteria I.D.5. for 4.5. Prostate nodule, asymmetry or other suspicion of prostate cancer. Moved N40.3 from ICD-10 Table 2 to ICD-10 Table 1. References reviewed and updated. | 5/23 | 7/24/23 |
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References

1. Winters JC, Dmochowski RR, Goldman HB, et al. Urodynamic studies in adults: AUA/SUFU guideline. *J Urol*. 2012;188(6 Suppl):2464-2472. doi:10.1016/j.juro.2012.09.081
2. Shamliyan T, Wyman J, Kane RL. *Nonsurgical Treatments for Urinary Incontinence in Adult Women: Diagnosis and Comparative Effectiveness*. Rockville (MD): Agency for Healthcare Research and Quality (US); April 2012
3. Holroyd-Leduc JM, Straus SE. Management of urinary incontinence in women: scientific review. *JAMA*. 2004;291(8):986-95. doi:10.1001/jama.291.8.986.
4. Cacciari LP, Dumoulin C, Hay-Smith EJ. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women: a cochrane systematic review abridged republication. *Braz J Phys Ther*. 2019;23(2):93-107. doi:0.1016/j.bjpt.2019.01.002.

5. Flesh G. Urodynamic evaluation of women with incontinence. UpToDate. www.uptodate.com. Updated April 25, 2022. Accessed February 20, 2023.
6. Anderson CA, Omar MI, Campbell SE, Hunter KF, Cody JD, Glazener CM. Conservative management for postprostatectomy urinary incontinence. *Cochrane Database Syst Rev*. 2015;1(1):CD001843. 2015;1(1):CD001843. Published 2015 Jan 20. doi:10.1002/14651858.CD001843.pub5
7. Nepple KG, Cooper CS. Evaluation and diagnosis of bladder dysfunction in children. UpToDate. www.uptodate.com. Updated March 29, 2021. Accessed February 20, 2023.
8. Pang H, Dang X, Yao Z, Feng X, Wu G. Bilateral spontaneous urinary extravasation shown by computed tomography urography in a patient with benign prostatic hyperplasia. *Radiol Case Rep*. 2015;10(4):53-55. Published 2015 Sep 15. doi:10.1016/j.radcr.2015.07.001
9. Deng F, Liu X, Li Y, et al. Ureteral obstruction by prostate cancer leads to spontaneous ureteric rupture: a case report. *Int J Clin Exp Med*. 2015;8(9):16842-16844. Published 2015 Sep 15.
10. Sarmah PB, Noah A, Kelly BD, Ryan PG. Asymptomatic ureteral rupture secondary to chronic urinary retention from massive prostatic enlargement. *J Surg Case Rep*. 2015;2015(11):rjv135. Published 2015 Oct 31. doi:10.1093/jscr/rjv135
11. Mori K, Koga S, Noguchi M, Kanetake H, Suda H, Yamashita S. Spontaneous peripelvic extravasation of urine due to an inflammatory aneurysm of the abdominal aorta. *Int J Urol*. 2004;11(6):419-420. doi:10.1111/j.1442-2042.2004.00805.x
12. Schurch B, Iacovelli V, Averbeck MA, Stefano C, Altaweel W, Finazzi Agrò E. Urodynamics in patients with spinal cord injury: A clinical review and best practice paper by a working group of The International Continence Society Urodynamics Committee. *Neurourol Urodyn*. 2018;37(2):581-591. doi:10.1002/nau.23369
13. Clement KD, Lapitan MC, Omar MI, Glazener CM. Urodynamic studies for management of urinary incontinence in children and adults. *Cochrane Database Syst Rev*. 2013;2013(10):CD003195. Published 2013 Oct 29. doi:10.1002/14651858.CD003195.pub3
14. Lightner DJ, Gomelsky A, Souter L, Vasavada SP. Diagnosis and Treatment of Overactive Bladder (Non-Neurogenic) in Adults: AUA/SUFU Guideline Amendment 2019. *J Urol*. 2019;202(3):558-563. doi:10.1097/JU.0000000000000309
15. Goossens WJ, de Blaauw I, Wijnen MH, de Gier RP, Kortmann B, Feitz WF. Urological anomalies in anorectal malformations in The Netherlands: effects of screening all patients on long-term outcome. *Pediatr Surg Int*. 2011;27(10):1091-1097. doi:10.1007/s00383-011-2959-4
16. Sandhu JS, Breyer B, Comiter C, et al. Incontinence after Prostate Treatment: AUA/SUFU Guideline. *J Urol*. 2019;202(2):369-378. doi:10.1097/JU.0000000000000314.
17. Foster HE, Dahm P, Kohler TS, et al. Surgical Management of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia: AUA Guideline Amendment 2019. *J Urol*. 2019;202(3):592-598. doi:10.1097/JU.0000000000000319
18. Parsons JK, Dahm P, Köhler TS, Lerner LB, Wilt TJ. Surgical Management of Lower Urinary Tract Symptoms Attributed to Benign Prostatic Hyperplasia: AUA Guideline Amendment 2020. *J Urol*. 2020;204(4):799-804. doi:10.1097/JU.0000000000001298
19. Sandhu JS, Breyer B, Comiter C, et al. Incontinence after Prostate Treatment: AUA/SUFU Guideline. *J Urol*. 2019;202(2):369-378. doi:10.1097/JU.0000000000000314.
20. Local coverage determination: urodynamics (L34056). Centers for Medicare and Medicaid Services Web site. <https://www.cms.gov/medicare-coverage->

- ## Important Reminder

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable LHCC administrative policies and procedures.

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