

Clinical Policy: Urodynamic Testing

Reference Number: PA.CP.MP.98

Effective Date: 05/18

Last Review Date: 04/18

[Coding Implications](#)

[Revision Log](#)

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 PA Health & Wellness 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; or
 - B. Failure to respond to an adequate therapeutic trial; or
 - C. Consideration of urologic surgical intervention, particularly if previous surgery failed or if the patient is a high surgical risk; or
 - D. Presence of other comorbid conditions such as:
 1. Incontinence associated with recurrent symptomatic urinary tract infection;
 2. Persistent symptoms of difficult bladder emptying;
 3. History of previous anti-incontinence surgery or radical pelvic surgery;
 4. Symptomatic pelvic prolapse;
 5. Abnormal post-void-residual urinalysis;
 6. Diabetes mellitus with secondary urinary incontinence; or
 7. Neurological conditions affecting voiding function (neurogenic bladder) such as multiple sclerosis, Parkinson's disease, and spinal cord lesions or injury.

- II. It is the policy of PA Health & Wellness 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.

Background

Lower urinary tract symptoms, 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. 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. Each of the urodynamic studies has benefits and limitations that must be understood for each specific clinical

CLINICAL POLICY

Urodynamic Testing

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.

CLINICAL POLICY

Urodynamic Testing

- Measurement of residual urine and/or bladder emptying capacity (CPT code 51798) is accomplished using ultrasound after voiding.

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2017, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. The following is a list of procedures codes for which coverage may be provided when billed with a diagnosis code(s) that supports medical necessity criteria (see list of ICD-10-CM codes supporting medical necessity further below). They are current at time of review of this policy. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

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
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
G83.4	Cauda equina syndrome

CLINICAL POLICY

Urodynamic Testing

ICD-10-CM Code	Description
N30.10-N30.11	Interstitial cystitis, chronic
N30.20-N30.21	Other chronic cystitis
N31.0-N31.9	Neuromuscular dysfunction of bladder, not elsewhere classified
N32.0-N32.89	Other disorders of bladder
N39.0-N39.8	Other disorders of urinary system
N81.0-N81.9	Female genital prolapse
Q05.0-Q05.9	Spina bifida
Q06.0-Q06.9	Other congenital malformations of spinal cord
Q07.0-Q07.9	Other congenital malformations of nervous system
R33.8	Other retention of urine
R33.9	Retention of urine, unspecified
R39.81	Functional urinary incontinence
S34.0-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
N40.1	Benign prostatic hyperplasia with lower urinary tract symptoms
N40.3	Nodular prostate with lower urinary tract symptoms
R33.0-R33.9	Retention of urine
R35.0	Frequency of micturition

Reviews, Revisions, and Approvals	Date	Approval Date
Policy developed	04/18	06/18

References

1. Winters JC, Dmochowski RR, Goldman HB, et al. Adult urodynamics: American Urological Association (AUA)/Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction (SUFU) guideline. Linthicum (MD): American Urological Association (AUA); 2012.
2. Shamliyan T, Wyman J, Kane RL. Nonsurgical treatments for urinary incontinence in adult women: diagnosis and comparative effectiveness. Comparative Effectiveness Review No. 36. Prepared by the University of Minnesota Evidence-based Practice Center under Contract No. HHSA 290-2007-10064-I. AHRQ Publication No. 11(12)-EHC074-EF. Rockville, MD. Agency for Healthcare Research and Quality; April 2012.
3. Holroyd-Leduc JM, Straus SE. Management of urinary incontinence in women: scientific review. JAMA. 2004;291(8):986-995.

CLINICAL POLICY

Urodynamic Testing

4. Dumoulin C, Hay-Smith J. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. *Cochrane Database Syst Rev.* 2010; (1):CD005654.
5. Flesh G. Urodynamic evaluation of women with incontinence. In: UpToDate, Brubaker L, Eckler K (Ed), UpToDate, Waltham, MA. Accessed 09/19/17.
6. Hunter K, Glazener C, Moore K. Conservative management for postprostatectomy urinary incontinence. *Cochrane Database Syst Rev.* 2007;(2):CD001843.
7. Nepple KG, Cooper CS. Evaluation and diagnosis of bladder dysfunction in children. In: UpToDate, Baskin LS, Kim MS (Ed), UpToDate, Waltham, MA. Accessed 09/19/17
8. Thomas LH, Cross S, Barrett J, et al. Treatment of urinary incontinence after stroke in adults. *Cochrane Database Syst Rev.* 2008;(1):CD004462.
9. Pang H, Dang X, Yao Z et al. Bilateral spontaneous urinary extravasation shown by computed tomography urography in a patient with benign prostatic hyperplasia *Radiol Case Rep.* 2015 Sep 15;10(4):53-5. doi: 10.1016/j.radcr.2015.07.001. eCollection 2015.
10. 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.
11. 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 Oct 31;2015(11). pii: rjv135. doi: 10.1093/jscr/rjv135.
12. Mori K, Koga S, Noguchi M, et al. Spontaneous peripelvic extravasation of urine due to an inflammatory aneurysm of the abdominal aorta. *International Journal of Urology* (2004) 11, 419–420
13. Schurch B, Iacovelli V, Averbeck MA, et al. 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.* 2017 Aug 1. doi: 10.1002/nau.23369