Name of Policy:
Posterior Tibial Nerve Stimulation for Voiding and Sexual Dysfunction

Policy #: 286                                      Latest Review Date: July 2014
Category: Surgery                                    Policy Grade: B

Background/Definitions:
As a general rule, benefits are payable under Blue Cross and Blue Shield of Alabama health plans only in cases of medical necessity and only if services or supplies are not investigational, provided the customer group contracts have such coverage.

The following Association Technology Evaluation Criteria must be met for a service/supply to be considered for coverage:

1. The technology must have final approval from the appropriate government regulatory bodies;
2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes;
3. The technology must improve the net health outcome;
4. The technology must be as beneficial as any established alternatives;
5. The improvement must be attainable outside the investigational setting.

Medical Necessity means that health care services (e.g., procedures, treatments, supplies, devices, equipment, facilities or drugs) that a physician, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury or disease or its symptoms, and that are:

1. In accordance with generally accepted standards of medical practice; and
2. Clinically appropriate in terms of type, frequency, extent, site and duration and considered effective for the patient’s illness, injury or disease; and
3. Not primarily for the convenience of the patient, physician or other health care provider; and
4. Not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient’s illness, injury or disease.
**Description of Procedure or Service:**
Posterior tibial nerve stimulation (PTNS) is a technique of electrical neuromodulation used for treating voiding dysfunction. The tibial nerve is stimulated using a fine-needle electrode inserted slightly above the ankle, and low-voltage electrical current is delivered. The recommended course of treatment is 12 weekly 30-minute sessions followed by an individualized maintenance schedule.

**Background**
Altering the function of the posterior tibial nerve with posterior tibial nerve stimulation (PTNS) is believed to improve voiding function and control. While the posterior tibial nerve is located near the ankle, it is derived from the lumbar-sacral nerves (L4-S3), which control the bladder detrusor and perineal floor. Voiding dysfunction includes urinary frequency, urgency, incontinence, and nonobstructive retention. Common causes of voiding dysfunction are pelvic floor dysfunction (e.g., from pregnancy, childbirth, surgery), inflammation, medication (e.g., diuretics and anticholinergics), obesity, psychogenic factors, and disease (e.g., multiple sclerosis, spinal cord injury, detrusor hyperreflexia, diabetes with peripheral nerve involvement).

The procedure for PTNS consists of the insertion of a needle above the medial malleolus into the posterior tibial nerve followed by the application of low-voltage (10 mA, 1–10 Hz frequency) electrical stimulation that produces sensory and motor responses (i.e., a tickling sensation and plantar flexion or fanning of all toes). Noninvasive PTNS has also been delivered with surface electrodes. The recommended course of treatment is an initial series of 12 weekly office-based treatments followed by an individualized maintenance treatment schedule.

PTNS is less invasive than traditional *sacral nerve neuromodulation, which has been successfully used in the treatment of urinary dysfunction but requires implantation of a permanent device. In sacral root neuromodulation, an implantable pulse generator that delivers controlled electrical impulses is attached to wire leads that connect to the sacral nerves, most commonly the S3 nerve root that modulates the neural pathways controlling bladder function.

*See policy #159 Sacral Nerve Modulation/Stimulation for Pelvic Floor Dysfunction*
**Policy:**

**Posterior tibial nerve stimulation for voiding dysfunction**, including but not limited to overactive bladder syndrome, urinary frequency, urgency, incontinence, retention, and sexual dysfunction **does not meet** Blue Cross and Blue Shield of Alabama’s medical criteria for coverage and is considered **investigational**.

Blue Cross and Blue Shield of Alabama does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Cross and Blue Shield of Alabama administers benefits based on the members' contract and corporate medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

**Key Points:**

This policy was originally created in 2006 and was updated regularly with searches of the MEDLINE database. The most recent literature search was performed through **December 15, 2013**. Following is a summary of the key literature to date:

Overactive bladder

**Systematic reviews**

An updated TEC Assessment on posterior tibial nerve stimulation (PTNS) for treatment of voiding dysfunction was published in December 2013 and concluded that PTNS as treatment for voiding dysfunction meets the TEC criteria for treatment of voiding dysfunction. The Assessment included the six randomized controlled trials (RCTs) discussed next and had the following conclusion:

Evidence from randomized placebo-controlled trials supports the clinical efficacy of PTNS applied in the standard 12-week regimen. No concurrently controlled evidence exists from a trial over longer periods of time in maintenance therapy. Although the lack of controlled evidence on maintenance PTNS raises concern whether short-term efficacy is maintained over the long term, the available 12- to 36-month evidence appears consistent with maintained efficacy in relieving symptoms of overactive bladder (OAB) and urinary voiding dysfunction. Adverse event rates, assuming accurate ascertainment, appear limited.

In 2012 and 2013, several other systematic reviews of the literature on PTNS for treating overactive bladder were published. Only one of these systematic reviews, however, conducted pooled analyses of study results. This review, by Burton et al, conducted a pooled analysis of data from 4 trials (two of which were abstracts) comparing PTNS with sham treatment. They found a significantly higher risk of successful treatment with PTNS (risk ratio [RR], 7.02; 95% confidence interval [CI], 1.69 to 29.17) compared with a control intervention. The confidence interval was wide, indicating a lack of precision in
the pooled estimate. The SUmiT trial, discussed next, contributed 220 of 289 patients (76%) in the pooled analysis.

Also in 2012, the Agency for Healthcare Research and Quality (AHRQ) Effective Health Care Program published a comparative effectiveness review on the broader topic of nonsurgical treatments for urinary incontinence in adult women. The review identified four reports of RCTs comparing PTNS and no active treatment in patients with OAB. Two of the four articles reported 12-week results of the sham-controlled SUmiT trial; one of these included a subgroup of SUmiT participants and was only published as an abstract. The AHRQ report included a pooled analysis of data from three studies that found statistically significantly greater improvement in urinary incontinence in the PTNS group compared with the control group (RR=1.9; 95% CI, 1.1 to 3.2). This pooled analysis included a total of 405 patients; 220 in the SUmiT trial, 150 in the SUmiT trial subanalysis and 35 in a trial by Finazzi-Agro et al. A limit of the analysis in the AHRQ review was that the 150 patients in the SUmiT subanalysis were included twice. The AHRQ report did not discuss evidence on the efficacy of PTNS beyond 12 weeks.

Randomized controlled trials
Two key randomized controlled trials (RCTs) that evaluated percutaneous tibial nerve stimulation for treating patients diagnosed with overactive bladder syndrome have been published. In 2009, Peters et al published an industry-sponsored non-blinded comparison of PTNS and extended-release tolterodine (Detrol LA) in women with overactive bladder syndrome (the OrBIT trial). The study included 100 patients (50 per group); more than 90% were women. Study participants were identified at 11 centers between June 2006 and September 2008. Subjects had to have symptoms of OAB, with at least eight voids per 24 hours; the mean daily voids for those entering the study were 12.3. A total of 87 of the 100 (87%) patients completed the study, and voiding diary data were available for 84 patients, 41 of 50 (82%) in the PTNS group and 43 of 50 (86%) in the tolterodine group. The primary outcome was the non-inferiority of PTNS in the mean reduction in the number of voids per 24 hours after 12 weeks of treatment. Non-inferiority was defined as no more than a 20% difference in the mean void reduction. Study findings showed non-inferiority of PTNS based on results for 84 patients. The decrease in number and SD of voids per day was 2.4 (4.0) in the PTNS group and 2.5 (3.9) in the tolterodine group.

The study also reported a number of secondary outcomes, and findings on these were mixed. There were no statistically significant differences in the PTNS and tolterodine groups for other symptoms recorded in the voiding diary; this includes mean change in episodes of nocturia (-0.7 and -0.6, respectively), episodes of moderate to severe urgency per day (-2.2 and -2.9, respectively), and episodes of urge incontinence per day (-1.0 and -1.7, respectively). In other secondary outcomes, 35 of 44 patients (79.5%) in the PTNS group and 23 of 42 (54.8%) in the tolterodine group reported symptom improvement or cure. This difference was statistically significant (p=0.01), favoring the PTNS group. However, the proportion of patients reporting symptom improvement (excluding the three patients reporting that they were cured) did not differ significantly between groups, 34 of 44 (77.3%) of those receiving PTNS and 21 of 42 (50%) receiving tolterodine. For
the adverse event data, responses were obtained in person for the PTNS group in conjunction with their weekly treatment sessions and over the phone for the medication group, using standard checklists. It is not clear how response to treatment or quality-of-life data were collected. Limitations of the OrBIT trial included the lack of blinding of patients and providers and the lack of comparative data beyond the end of the initial 12-week treatment period. Moreover, there was no sham or placebo group to mitigate the potential bias due to subjective outcomes. In addition, the authors did not clearly define criteria for “improvement” or “cure”, a key secondary outcome, and did not report the extent of compliance with medical therapy and used different methods of data collection in the two groups for adverse event outcomes and possibly also for other self-report outcomes.

In 2010, MacDiarmid et al reported one-year follow-up data for patients from the OrBIT trial who had been assigned to the PTNS group and had responded to the initial course of treatment, defined as reporting symptom improvement at 12 weeks. Thirty-three of the 35 responders were included. They received a mean of 12.1 (SD=4.9) additional treatments between the 12-week and 12-month visits, and there was a median of 17 days between treatments. Data were available for 32 of the 33 (97%) participants at six months and 25 of the 33 (76%) participants at 12 months. The mean reduction in number of voids per day from baseline (the original primary outcome of the study) was 3.2 (SD=3.7) at six months and 2.8 (SD=3.7) at 12 months. Other voiding diary outcomes at 12 months, based on 25 responses, were mean changes in nocturia episodes of -0.8, in episodes of moderate to severe urgency per day of -3.7, and in episodes of urge incontinence per day of -1.6. As previously noted, this analysis was limited in that no data from the tolterodine group were available to compare long-term outcomes. Another limitation was not all patients in the PTNS group were included in the follow-up analysis, only PTNS responders were eligible. A potential bias is that the initial subjective outcome measure may be subject to the placebo effect. Moreover, patients in the PTNS group who responded to initial treatment may be particularly susceptible to a placebo response and/or may represent those with the best treatment response. Thus, these individuals may also be susceptible to a placebo response during maintenance treatments, especially treatments offered on an as-needed basis.

The second key RCT on overactive bladder syndrome, also industry-sponsored, was published by Peters et al in 2010. This study, known as the SMiT trial, had a sham-comparison group. Prior to conducting the trial, the researchers performed a pilot study in healthy volunteers to determine the adequacy of a sham PTNS intervention. Findings were that 10 of 30 volunteers (33%) correctly identified the sham procedure. This percentage is below the 50% that could be expected by chance; the investigators concluded that the procedure was a feasible sham. The SMiT trial included patients with overactive bladder syndrome. Eligibility criteria included a score of at least four on the Overactive Bladder Questionnaire short form for urgency, self-report bladder symptoms lasting at least three months, and having failed conservative care. Data were collected from 23 centers in the U.S. A total of 220 patients were randomly assigned, 110 to the PTNS group and 110 to the sham group. Both groups received 12 weekly 30-minute intervention sessions. In the sham group, a blunt (placebo) instrument was used to
simulate the location and sensation of needle electrode insertion in active treatment. An inactive PTNS surface electrode was used and also two active transcutaneous electrical nerve stimulation (TENS) surface electrodes. The TENS unit was used to deliver low-level sensation to simulate the PTNS intervention. The 12-week course of treatment was completed by 103 of 110 (94%) in the PTNS group and 105 of 110 (95%) in the sham group.

The primary study outcome was response to treatment based on a single-item global response assessment (GRA) variable at 13 weeks. Possible responses were that symptoms were markedly worse, moderately worse, mildly worse, the same, slightly improved, moderately improved, or markedly improved. The proportion of patients who responded to treatment based on the GRA (i.e., answered that symptoms were moderately or markedly improved) was 60 of 110 (54.5%) in the PTNS group and 23 of 110 (20.9%) in the sham group; this difference was statistically significant (p<0.001). Intention-to-treat (ITT) analysis was used for the primary end point only. Several secondary outcomes also favored the PTNS group. The mean reduction in a symptom severity score (a lower score indicates less severity) was 36.7 (SD=21.5) in the PTNS group and 29.2 (SD=20.0) in the sham group (p=0.01). Similarly, the mean reduction in a quality-of-life scale, the SF-36 (a higher score indicates higher quality of life), was 34.2 (SD=21.3) in the PTNS group and 20.6 (SD=20.6) in the sham group (p=0.006).

For the four voiding diary variables used, there was a statistically significant difference between groups favoring PTNS. The mean change from baseline in the number of voids per day was -2.4 (SD=2.5) in the PTNS group and -1.5 (SD=2.4) in the sham group (difference between groups, 0.9 voids per day; p=0.01). The mean change in nocturia episodes was -0.7 (SD=1.2) in the PTNS group and -0.3 (SD=1.4) in the sham group (difference between groups; 0.4 nighttime voids; p=0.04). The mean change in moderate to severe urgency per day was -3.7 in the PTNS group and -2.0 in the sham group (difference between groups, 1.7 episodes; p=0.001). Finally, the mean change in urge incontinence episodes was -1.3 in the PTNS group and -0.3 in the sham group (difference between groups, one episode per day; p<0.002). (Standard deviations were not reported for the latter two outcomes.)

Advantages of the SUm iT trial were that it included a sham comparison and the primary end point analysis was ITT. A limitation was that the primary outcome, the GRA, was a single-item subjective measure. For the more objective measures, the voiding diary variables, there was statistically significantly greater benefit with PTNS compared with sham treatment; however, the clinical significance of the difference between the PTNS and sham groups was unclear, e.g., on average, there was one fewer episode of urge incontinence a day in the PTNS group. In addition, as in the OrBIT trial, the SUm iT trial only reported comparative data immediately following the initial course of treatment; the study did not evaluate the long-term effectiveness of PTNS. Unlike medication which can be taken on an ongoing basis, PTNS involves an initial 12-week course of treatment followed by maintenance therapy, which to date has not been well defined. Therefore, the assumption cannot be made that short-term treatment effects will be maintained.
As with the OrBIT trial, there was a SUmiT extension study including only those patients who had been assigned to the PTNS group and initially responded to treatment. That is, the extension study did not collect additional follow-up data from patients in the PTNS group who failed to meet the 12-week primary effectiveness end point or from patients assigned to the sham-control group. Among the 110 patients assigned to the PTNS group, 60 were initial responders and 50 of these entered the extension study. Data were available on 34 patients at 24 months and 29 patients at 36 months. After enrolling in the extension study, patients underwent a 14-week transitional protocol consisting of two treatments with a 14-day interval, two treatments with a 21-day interval and then one treatment after another 28 days. Following this 14-week period, a personal treatment plan was developed for each patient. PTNS treatments were delivered based on the patient’s reporting of symptoms; patients knew that PTNS sessions were available to them as needed when their symptoms increased. Between six and 36 months, patients received a median of 1.1 PTNS treatments per month. In a per protocol analysis, compared with baseline, 28 of 29 patients (97%) who completed the 36-month follow-up met the primary efficacy end point of moderate or marked improvement in overall bladder symptoms on the GRA. In addition, compared with baseline, all voiding diary measures were significantly improved in this group of patients at every six-month follow-up. As mentioned previously in the discussion of the OrBIT extension study, the SUMIT extension study was limited by a lack of follow-up data on the control group and a lack of follow-up data on all participants in the treatment group.

Several other RCTs have been published; none reported on the efficacy of PTNS beyond 12 weeks. Three trials used a parallel group design. In 2010, Finazzi-Agro et al from Italy conducted a double-blind RCT that included 35 female patients who had urge incontinence and detrusor overactivity on urodynamic testing. Patients were randomly assigned to 30-minute PTNS sessions three times per week for four weeks (n=18) or sham treatment (n=17). One patient dropped out of the PTNS group and two dropped out of the sham group; analysis was not ITT. The primary outcome, percent responders at four weeks (defined as at least 50% reduction in incontinent episodes) was attained by 12 of 17 (71%) in the PTNS group and 0 of 15 (0%) in the sham group. Also in 2010, Schreiner et al in Brazil randomized 51 women older than 60 years who complained of urge urinary incontinence to 12 weeks of conservative treatment (Kegel exercises and bladder training) alone (n=26) or conservative treatment plus 12 weekly sessions of PTNS (n=25). The response rate at 12 weeks, defined as a reduction of at least 50% in the number of incontinence episodes reported by the patient in a bladder diary, was 76% in the PTNS group and 27% in the conservative treatment only group (p=0.001). Blinding was not discussed.

In 2012, Gungor Ugurlucan et al in Turkey published findings of an RCT comparing transvaginal electrical stimulation (ES) (n=38) and PTNS (n=21) in women with OAB. The ES protocol consisted of 20-minute treatments three times a week for 6 to 8 weeks. PTNS was performed with an Urgent PC device used for twelve 30-minute weekly sessions. A total of 52 of 59 (88%) patients completed the study. The authors assessed numerous outcome variables and did not specify primary outcomes or adjust p values for multiple comparisons. Four bladder diary variables were reported. From baseline to the
end of the treatment period, the groups did not differ significantly at the p<0.05 level in mean change in urgency episodes, nocturia or incontinence episodes. For example, the mean number of urgency episodes was 2.9 (SD=4.1) at baseline and 1.6 (SD=0.5) after treatment in the ES group and 2.0 (SD=3.1) at baseline and 1.3 (SD=0.5) after treatment in the PTNS group (p=0.54). There was a statistically significant difference in daytime frequency. The mean daytime frequency was 7.8 (SD=2.7) at baseline and 5.8 (SD=1.9) after treatment in the ES group and 7.6 (SD=2.6) at baseline and 7.4 (SD=2.9) in the PTNS group (p=0.03). The authors reported that a significantly higher proportion of patients in the ES group described themselves as cured, but they did not provide proportions or p values.

One randomized trial, published in 2013, used a crossover design. This study, by Vecchioli-Scaldazza et al in Italy, included 40 women with OAB. The treatments were PTNS (twice weekly for six weeks) and medication (oral solifenacin succinate 5 mg/d for 40 days), given in random order, with a six-week wash-out period between treatments. Group A received medication first and group B received PTNS first. The primary efficacy outcome was reduction in the number of voids in a 24-hour period. Thirty of the 40 patients (75%) completed the study. The number of daily voids significantly decreased after each treatment compared with before treatment. In group A, the mean number of daily voids premedication was 11.6 (SD=1.6) and post-medication was 10.0 (SD=2.1) (p=0.004). The mean number of voids pre-PTNS was 11.5 (SD=1.1) and post-PTNS, 8.5 (SD=2.3) (p<0.001). In group B, the mean number of voids premedication was 11.4 (SD=1.4) and post-medication, 10.4 (SD=1.8) (p=0.008). The mean number of voids pre-PTNS was 11.4 (SD=1.4) and post-PTNS, 9.4 (SD=1.9) (p<0.001). In addition, secondary outcomes including nocturia urge incontinence and voided volume significantly improved after each treatment compared with pretreatment values. The authors did not directly compare the efficacy of medication and PTNS.

Neurogenic bladder
In 2011, two case series evaluating PTNS in patients with multiple sclerosis (MS) were published. One study, by Gobbi et al in the United Kingdom included twelve 30-minute treatment sessions with the Urgent PC device. The study included 21 patients with MS who had lower urinary tract symptoms unresponsive to anticholinergics. Overall, urinary symptoms significantly improved at the end of treatment. For example, median daytime frequency decreased from nine to six episodes per day (p=0.04) and median nocturia decreased from three to one episode per night (p=0.002). The other case series was conducted in France by de Seze et al and used a different protocol. Participants underwent one in-clinic treatment session and were then given a TENS device for in-home tibial nerve stimulation; they were told to use the device 20 minutes a day for three months. A total of 70 individuals with MS and OAB refractory to medication participated in the study. Compared to baseline, there was a statistically significant reduction in OAB symptoms. For example, the proportion of continent patients increased from 26% to 45% (p=0.005). Both studies were limited by lack of control groups and lack of long-term follow-up; the French study used a different device and different protocol than in the other PTNS studies.
Clinical Input Received through Physician Specialty Societies and Academic Medical Centers
While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted. In response to requests, input was received through three physician specialty societies and one academic medical center while this policy was under review in 2012. Clinical input was mixed. There was no consensus or near-consensus that the policy should be changed. The range of opinions included that PTNS should be considered investigational, that it should be considered for use in medically refractory patients as second-line treatment and that the evidence is sufficient to consider this treatment to be medically necessary.

Summary
Posterior tibial nerve stimulation (PTNS) is a technique of electrical neuromodulation used for treating voiding dysfunction. The available RCTs report short-term (up to 12 weeks) improvements on measures of urinary incontinence and overactive bladder. Up to 36 months of data are available for some patients enrolled in RCTs who responded to an initial course of treatment, but not on other RCT participants. There is a lack of control data beyond 12 weeks to control for a possible placebo response. Moreover, there was a high dropout rate in long-term data. The optimal maintenance regimen after an initial 12-week course is unclear. Systematic reviews of the evidence have found short-term improvements with PTNS and have not identified long-term comparative studies. Clinical input obtained in 2012 was mixed regarding whether PTNS should be considered medically necessary. Based on this evidence and clinical input, PTNS for treating voiding dysfunction is considered investigational.

Practice Guidelines and Position Statements
In 2012, the American Urological Association (AUA) and the Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction published a guideline on diagnosis and treatment of nonneurogenic overactive bladder in adults. The guideline included a statement that clinicians may offer PTNS as a third-line treatment option in carefully selected patients. The statement was rated as Grade C, indicating that the balance of benefits and risks/burdens are uncertain.

The 2005 (reaffirmed 2009) American College of Obstetricians and Gynecologists practice bulletin on treatment of urinary incontinence in women does not address PTNS or other types of nerve stimulation.

Key Words:
Incontinence, Posterior Tibial Nerve Stimulation, Percutaneous Stoller Afferent Nerve System, PerQ SANS System, Urgent® PC Neuromodulation System, Uroplasty
Approved by Governing Bodies:
In July 2005, the Urgent® PC Neuromodulation System (Uroplasty, Inc.) received 510(k) marketing clearance for percutaneous tibial nerve stimulation to treat patients suffering from urinary urgency, urinary frequency, and urge incontinence. This device was cleared as a class II “non-implanted, peripheral nerve stimulator for pelvic floor dysfunction” because it was considered to be substantially equivalent to the previously cleared percutaneous Stoller afferent nerve system (PerQ SANS System) in 2001 (K992069, UroSurge, Inc.)

Benefit Application:
Coverage is subject to member’s specific benefits. Group specific policy will supersede this policy when applicable.

ITS: Home Policy provisions apply
FEP contracts: FEP does not consider investigational if FDA approved. Will be reviewed for medical necessity.
Pre-certification requirements: Not applicable

Coding:
CPT Codes:

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>64566</td>
<td>Posterior tibial neurostimulation, percutaneous needle electrode, single treatment, includes programming</td>
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<tr>
<td>64999</td>
<td>Unlisted procedure, nervous system</td>
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<tr>
<td>97014</td>
<td>Application of a modality to one or more areas; electrical stimulation (unattended)</td>
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<tr>
<td>97032</td>
<td>Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes</td>
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</tbody>
</table>

References:
3. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC0. Percutaneous tibial nerve stimulation for the treatment of voiding dysfunction. TEC Assessment 2010;Volume 25, Tab 8.


Policy History:
Medical Policy Group, July 2006 (2)
Medical Policy Administration Committee, August 2006
Available for comment August 17-October 2, 2006
Medical Policy Group, January 2007 (2)
Medical Policy Administration Committee, January 2007
Available for comment January 30-March 8, 2007
Medical Policy Group, July 2008
Medical Policy Administration Committee, July 2008 (2)
Medical Policy Group, July 2010 (1) Description, Key points updated
Medical Policy Panel, October 2010
Medical Policy Group, December 2010) (2)
Medical Policy Panel, January 2011
Medical Policy Administration Committee, January 2011
Available for comment January 25 – March 7, 2011
Medical Policy Panel May 2012
Medical Policy Group, October 2012 (2): 2012 Updates to Key Points and References
Medical Policy Panel, May 2013
Medical Policy Group, June 2013 (2): 2013 Updates to Description, Key Points and References

Medical Policy Group, July 2013 (2): Update to References
Medical Policy Panel, January 2014
Medical Policy Group, July 2014 (4): Updated Key Points and References.

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member’s plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield’s administration of plan contracts.