



Effective Health Care

Percutaneous Tibial Nerve Stimulation versus Sacral Nerve Stimulation for Overactive Bladder

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Percutaneous tibial nerve stimulation (PTNS) versus sacral nerve stimulation (SNS) for overactive bladder was found to be addressed by existing and in-process AHRQ reports. Given that these reports cover this nomination, no further activity will be undertaken on this topic.
 - Hartmann KE, McPheeters ML, Biller DH, et al. **Treatment of Overactive Bladder in Women.** Rockville (MD): Agency for Healthcare Research and Quality; 2009. Evidence Report/Technology Assessment No. 187. AHRQ Publication No. 09-E017. <http://www.ahrq.gov/downloads/pub/evidence/pdf/bladder/bladder.pdf>.
 - In-process report: **Diagnosis and Comparative Effectiveness of Treatments for Urinary Incontinence in Adult Women.** To view a description and status of the research review, please go to: <http://www.effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/>
 - To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.
- This topic could potentially be considered for new research projects within the EHC Program.

Topic Description

Nominator: Anonymous individual

Nomination

Summary: The nominator requested a comparison of PTNS and SNS for overactive bladder.

Key Question

from Nominator: None

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Overactive bladder syndrome affects millions of adults and the prevalence increases with age. This syndrome is clinically important and can impact a patient's physical, psychological, professional, and

social quality of life. PTNS or SNS are generally indicated for patients who have failed first-line conventional therapies.

- This topic was found to be addressed by a 2009 AHRQ report titled *Treatment of Overactive Bladder in Women* and an in-process AHRQ report titled *Diagnosis and Comparative Effectiveness of Treatments for Urinary Incontinence in Adult Women*.
 - Key questions from the existing report on treatment of overactive bladder include (bolded questions are most relevant):
 1. What is the prevalence and incidence of overactive bladder as estimated in representative populations?
 2. **Among women with overactive bladder, what are the short- and long-term outcomes of the following treatment approaches, or combinations of treatment approaches?**
 - a. Pharmacologic treatments
 - b. Procedural and surgical treatments**
 - c. Behavioral and physical therapy treatments
 - d. Complementary and alternative medicine treatments
 3. **Where direct comparisons have been made between or among treatment modalities of interest, which modalities achieve superior outcomes with respect to benefits, short- and long-term risks, and quality of life?**
 4. Are the short- and long-term outcomes of these treatment approaches modified by clinical presentation, physical exam findings, urodynamic findings, menopausal status, age or other factors?
 5. What are the costs associated with these treatment approaches?
 - Draft key questions from the in-process report on treatments for urinary incontinence include (bolded question is most relevant):
 1. What constitutes an adequate diagnostic evaluation for women in the primary care setting on which to base treatment of urinary incontinence (UI)?
 - a. What are the diagnostic values of different methods—questionnaires, checklists, scales, self-reports of UI during a clinical examination, pad tests, and ultrasound—when compared with multichannel urodynamics?
 - b. What are the diagnostic values of different methods—questionnaires, checklists and scales, self-reports of UI during a clinical examination, pad tests, and ultrasound—when compared with a bladder diary?
 - c. What are the diagnostic values of the methods listed above for different types of UI, including stress, urgency, and mixed incontinence?
 - d. What is the association between patient outcomes (continence, severity, and frequency of UI; quality of life) and UI diagnostic methods?
 2. How effective is the pharmacologic treatment of UI in women?
 - a. How do pharmacologic treatments affect continence, severity and frequency of UI, and quality of life when compared with no active treatment or to combined treatment modalities?
 - b. What is the comparative effectiveness of pharmacologic treatments when compared with each other or with nonpharmacologic treatments of UI?
 - c. What are the harms from pharmacologic treatments when compared with no active treatment?

- d. What are the harms from pharmacologic treatments when compared with each other or nonpharmacologic treatments of UI?
 - e. Which patient characteristics, including age, type of UI, severity of UI, the baseline disease that effects UI, adherence to treatment recommendations, and comorbidities can modify the effects of the pharmacologic treatments on patient outcomes, including continence, quality of life, and harms?
- 3. How effective is the nonpharmacologic treatment of UI in women?**
- a. How do nonpharmacologic treatments affect incontinence, UI severity and frequency, and quality of life when compared with no active treatment?
 - b. How do combined modalities of nonpharmacological treatments with drugs affect incontinence, UI severity and frequency, and quality of life when compared with no active treatment or with monotherapy?
 - c. What is the comparative effectiveness of nonpharmacologic treatments when compared with each other?
 - d. What are the harms from nonpharmacologic treatments when compared with no active treatment?
 - e. What are the harms from nonpharmacologic treatments when compared with each other?
 - f. Which patient characteristics including age, type of UI, severity of UI, the baseline disease that effects UI, adherence to treatment recommendations, and comorbidities can modify the effects of the nonpharmacologic treatments on patient outcomes, including continence, quality of life, and harms?
- The 2009 AHRQ review on the treatment of overactive bladder in women included studies pertaining to SNS, but no studies of PTNS met inclusion criteria. The in-process report on treatments for urinary incontinence in adult women included studies of PTNS compared to sham treatment only. Surgical and invasive procedures were not in the scope of this report; therefore, no studies of SNS were included. These two reports collectively have looked at the existing evidence on both PTNS and SNS.
 - A literature scan revealed that there is a lack of head-to-head comparisons of the two procedures available in the current evidence base. The existing literature has been reviewed by AHRQ in the above listed reports, and comparative literature is insufficient for an additional report on the topic. Thus, this topic will not move forward as a new review but may be considered for new research on the comparative effectiveness of PTNS and SNS.