



Effective Health Care

Management of Vertigo and Tinnitus Symptoms

Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Management of tinnitus symptoms was found to be addressed by an in-process AHRQ Effective Health Care (EHC) Program review titled *Evaluation and Treatment of Tinnitus*.
 - 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 EHC Program topics are posted, please go to: <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

- Management of vertigo symptoms was found to be addressed by multiple guidelines and reviews on the treatment of benign paroxysmal positional vertigo, Ménière's disease, and vestibular neuritis. Given that the existing and in-process reviews and guidelines cover this nomination, no further activity will be undertaken on this topic.
 - Fife TD, Iverson DJ, Lempert T, et al. Practice parameter: therapies for benign paroxysmal positional vertigo (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology* 2008 May 27;70(22):2067-74. PMID: 18505980. <http://www.neurology.org/content/70/22/2067.full.pdf>
 - Bhattacharyya N, Baugh RF, Orvidas L, et al. Clinical practice guideline: benign paroxysmal positional vertigo. *Otolaryngol Head Neck Surg* 2008 Nov;139(5 Suppl 4):S47-S81. PMID: 18973840. <http://www.entnet.org/Practice/clinicalPracticeguidelines.cfm>
 - James AL, Thorp MA. Meniere's disease. *Clinical Evidence*. 2007. PMID: 19454061.
 - Hillier SL, McDonnell M. Vestibular rehabilitation for unilateral peripheral vestibular dysfunction. *Cochrane Database Syst Rev* 2011(2):CD005397. PMID: 21328277. <http://summaries.cochrane.org/CD005397/vestibular-rehabilitation-for-unilateral-peripheral-vestibular-dysfunction-to-improve-dizziness-balance-and-mobility>
 - Hilton M, Pinder D. The Epley (canalith repositioning) manoeuvre for benign paroxysmal positional vertigo. *Cochrane Database Syst Rev* 2002(1):CD003162. PMID: 11869655. <http://summaries.cochrane.org/CD003162/the-epley-manoevre-for-benign-paroxysmal-positional-vertigo-bppv>
 - Hunt WT, Zimmermann EF, Hilton MP. Modifications of the Epley (canalith repositioning) manoeuvre for posterior canal benign paroxysmal positional vertigo (BPPV). *Cochrane Database Syst Rev* 2012;4:CD008675. PMID: 22513962. <http://summaries.cochrane.org/CD008675/modifications-of-the-epley-manoevre-for-benign-paroxysmal-positional-vertigo-bppv>
 - Pullens B, van Benthem PP. Intratympanic gentamicin for Meniere's disease or syndrome. *Cochrane Database Syst Rev* 2011(3):CD008234. PMID: 21412917.

<http://summaries.cochrane.org/CD008234/intratympanic-gentamicin-for-menieres-disease-or-syndrome>

- Phillips JS, Westerberg B. Intratympanic steroids for Meniere's disease or syndrome. Cochrane Database Syst Rev 2011(7):CD008514. PMID: 21735432. <http://summaries.cochrane.org/CD008514/intratympanic-steroids-for-menieres-disease-or-syndrome>
- Pullens B, Giard JL, Verschuur HP, et al. Surgery for Meniere's disease. Cochrane Database Syst Rev 2010(1):CD005395. PMID: 20091573. <http://summaries.cochrane.org/CD005395/surgery-for-menieres-disease>
- James AL, Burton MJ. Betahistine for Meniere's disease or syndrome. Cochrane Database Syst Rev 2001(1):CD001873. PMID: 11279734. <http://summaries.cochrane.org/CD001873/betahistine-for-menieres-disease-or-syndrome>
- Burgess, A, Kundu, S. Diuretics for Meniere's disease or syndrome. Cochrane Database of Systematic Reviews; 2006(3):CD003599. <http://summaries.cochrane.org/CD003599/diuretics-for-the-treatment-of-menieres-disease-or-syndrome>
- Fishman JM, Burgess C, Waddell A. Corticosteroids for the treatment of idiopathic acute vestibular dysfunction (vestibular neuritis). Cochrane Database Syst Rev 2011(5):CD008607. PMID: 21563170. <http://summaries.cochrane.org/CD008607/corticosteroids-for-the-treatment-of-idiopathic-acute-vestibular-dysfunction-vestibular-neuritis>
- Pullens, B, van Benthem, P. Positive pressure therapy for Meniere's disease or syndrome (Protocol). Cochrane Database of Systematic Reviews; 2010(3):CD008419.

Topic Description

Nominator: Individual

Nomination Summary: The nominator is interested in management of symptoms of tinnitus and vertigo.

Staff-Generated PICO: Tinnitus

Population(s): Adult patients with a diagnosis of subjective tinnitus

Intervention(s): Medical/surgical treatments (e.g., pharmacological treatments, laser treatments, complementary and alternative therapies), sound treatments/technologies (e.g., hearing aids, tinnitus retraining therapy), psychological/behavioral interventions (e.g., cognitive behavioral therapy, biofeedback), combination therapies

Comparator(s): Placebo, no treatment, comparison to other treatments

Outcome(s): Symptom improvement, sleep disturbance, discomfort, anxiety, depression, quality of life, surgical complications

Staff-Generated PICO: Benign paroxysmal positional vertigo

Population(s): Patients with benign paroxysmal positional vertigo

Intervention(s): Vestibular suppressant medication (e.g., betahistine hydrochloride, prochlorperazine), canalith repositioning maneuvers, vestibular rehabilitation exercises, surgical treatment

Comparator(s): Comparative effectiveness of above interventions, placebo or observation

Outcome(s): Persistence of vertigo attacks, improvement in vertigo symptoms, functional impairment and quality of life, complications of treatment

Staff-Generated PICO: Ménière's disease

Population(s): Patients with Ménière's disease

Intervention(s): Anticholinergic drugs, benzodiazepines, vestibular suppressant medications, antihistamines, diuretics, vasodilators, dietary modifications, psychological support, vestibular rehabilitation, surgery, Meniette device

Comparator(s): Comparative effectiveness of above interventions, placebo, or observation

Outcome(s): Persistence of vertigo attacks, sensation of aural fullness, functional impairment and quality of life, adverse effects of treatment

Staff-Generated PICO: Vestibular neuritis

Population(s): Patients with vestibular neuritis

Intervention(s): Antiviral medications, corticosteroids

Comparator(s): Comparative effectiveness of above interventions, placebo, or observation

Outcome(s): Persistence of vertigo attacks, improvement in vertigo symptoms, functional impairment and quality of life, complications of treatment

Key Questions

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/>.)
- Because vertigo is a symptom rather than a clinical diagnosis and may be due to a variety of underlying etiologies requiring different treatments, evaluation of this nomination focused on the most common underlying etiologies of vertigo. Therefore, this topic has four main areas:
 1. Management of tinnitus symptoms
 2. Management benign paroxysmal positional vertigo (BPPV) symptoms
 3. Management of Ménière's disease symptoms
 4. Management of vestibular neuritis symptoms
- The management of tinnitus symptoms was found to be addressed by an in-process AHRQ EHCProgram review titled *Evaluation and Treatment of Tinnitus*. Key questions include:
 1. In patients with symptoms of tinnitus (e.g., ringing in the ears, whooshing sounds, etc.) what is the comparative effectiveness of methods used to identify patients for further evaluation or treatment?

2. In adults with subjective idiopathic (nonpulsatile) tinnitus, what is the comparative effectiveness (and/or potential harms) of medical/surgical, sound treatment/technological, or psychological/behavioral intervention (including combinations of interventions)?
 3. For adults with subjective idiopathic tinnitus, what prognostic factors, patient characteristics, and/or symptom characteristics affect final treatment outcomes?
- The management of BPPV was found to be addressed by clinical practice guidelines from the American Academy of Neurology and the American Academy of Otolaryngology- Head and Neck Surgery that broadly address management strategies for BPPV. In addition, this topic was found to be addressed by three Cochrane reviews titled *Vestibular rehabilitation for unilateral peripheral vestibular dysfunction*, *The Epley (canalith repositioning) manoeuvre for benign paroxysmal positional vertigo*, and *Modifications of the Epley (canalith repositioning) manoeuvre for posterior canal benign paroxysmal positional vertigo (BPPV)*.
 - The management of Ménière's disease was found to be addressed by a 2007 BMJ Clinical Evidence review that broadly examined the available management strategies for Ménière's disease. In addition, this topic was found to be addressed by seven Cochrane reviews titled *Vestibular rehabilitation for unilateral peripheral vestibular dysfunction*; *Intratympanic gentamicin for Ménière's disease or syndrome*; *Intratympanic steroids for Ménière's disease or syndrome*; *Surgery for Ménière's disease*; *Betahistine for Ménière's disease or syndrome*; and *Diuretics for Ménière's disease or syndrome*; and *Positive pressure therapy for Ménière's disease or syndrome*.
 - The management of vestibular neuritis was found to be addressed by two Cochrane reviews titled *Vestibular rehabilitation for unilateral peripheral vestibular dysfunction* and *Corticosteroids for the treatment of idiopathic acute vestibular dysfunction (vestibular neuritis)*.