

MENTAL HEALTH CARE PRACTICE

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Need for Mental Health Providers in Progressive Tinnitus Management: A Gap in Clinical Care

Hearing loss and tinnitus (ringing or other noises in the ears or head) have been problematic for military service members and veterans for many years. Military personnel are exposed to high levels of noise in operational and training settings. In spite of hearing conservation efforts, hearing loss and auditory injuries (including tinnitus) continue to occur. Although current military leadership teaches the importance of hearing protection, that was not usually the case until the past few decades. Military leadership provides the means for hearing protection and monitors risk through conservation and hearing readiness programs. Unfortunately, the need for hearing during battle often overrides the expediency of using hearing protective devices.

Military members often equate hearing protection with increased vulnerability, widening the gap between preventive efforts and hearing preservation. It is therefore not surprising that tinnitus and hearing loss have been the 2 most common

service-connected disabilities for veterans for a decade.¹ These conditions are irreversible; affected service members and veterans need strategies to cope with distress associated with these chronic conditions. Clinical care often is essential to manage the associated distress and mental health (MH) symptoms, such as sleep disturbance, irritability, isolation, tension, and low mood.

There is no cure for tinnitus, meaning there is no proven method to permanently eliminate or even reduce the perception of tinnitus. Intervention for tinnitus therefore is limited to methods intended to mitigate reactions to tinnitus, with the ultimate goal to facilitate good quality of life in spite of the perception of this unwanted auditory anomaly. These methods include numerous means of utilizing therapeutic sound.² Sound therapy, however, has been shown in controlled trials to be effective only when accompanied by counseling, which often focuses on teaching different coping skills.³ In such instances, MH providers can become an integral part of the hear-

ing health team to assist patients in the management of their tinnitus.

EVIDENCE-BASED PRACTICE

Evidence-based research should guide clinical services that are offered for tinnitus. Randomized controlled trials (RCTs) comprise the most important source for such evidence.⁴ Cochrane Reviews uses meta-analyses to examine rigorous RCTs to determine which methods have credible evidence. One of these reviews conducted in 2007 and updated in 2010 concluded that cognitive behavioral therapy (CBT) can improve depression scores and reduce distress for many people with bothersome tinnitus.^{5,6} Another Cochrane Review concluded that sound therapy combined with counseling can be beneficial, but on its own, sound therapy has not been shown to result in significant benefit.³ Yet another Cochrane Review focused on using hearing aids with patients who have both hearing loss and bothersome tinnitus; the researchers concluded that “there is currently no evidence to support or refute their use as a more routine intervention for tinnitus.”⁷ However, many patients and clinicians report hearing aids are helpful for coping with tinnitus.

The American Academy of Otolaryngology–Head and Neck Surgery Foundation (AAO-HNSF)

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published a clinical practice guideline (CPG) for the management of tinnitus.⁸ Developing the CPG involved a comprehensive evaluation of the peer-reviewed literature, including the available Cochrane Reviews, to identify appropriate RCTs to inform evidence-based recommendations. Cognitive behavioral therapy was the only intervention for tinnitus recommended in the CPG. Cognitive behavioral therapy targets emotional response by identifying behaviors, thoughts, and beliefs that may be altered.⁹ For tinnitus, CBT typically includes stress management including relaxation exercises, purposeful distraction, and changing how individuals view and appraise their tinnitus.

Both the CPG and Cochrane Reviews concluded that CBT has the strongest evidence base for reducing effects of tinnitus. It should be noted that the CPG recommended teaching patients basic information about tinnitus management and stated that it was optional (due to limited research evidence) to use sound therapy to augment coping skills training.

PROGRESSIVE TINNITUS MANAGEMENT

Tinnitus research at the VA National Center for Rehabilitative Auditory Research (NCRAR) has led to the development and refinement of an interdisciplinary program called Progressive Tinnitus Management (PTM). Audiologists and MH providers work together to deliver portions of the protocol. In addition, otolaryngologists are important for patients requiring a medical examination. Audiologists, MH providers, and otolaryngologists comprise the hearing health team for tinnitus management. The PTM program involves 5 stepped-care levels of management,

and patients receive only the levels they need.

Level 1 is the referral level, which specifies guidelines for any clinician who encounters patients experiencing tinnitus. The “standard” referral is to audiology for a hearing evaluation (PTM level 2)—every patient reporting tinnitus should have a hearing evaluation and brief tinnitus assessment. Less typical would be an urgent referral to a different provider for certain symptoms such as referral to ENT for sudden hearing loss.

Patients who desire intervention for bothersome tinnitus are offered PTM skills education (level 3). At this level, patients are taught facts and skills that they need to self-manage their tinnitus-related problems. Ideally, the audiologist and MH provider collaborate to deliver the level 3 intervention, which utilizes a 5-session (2 with an audiologist and 3 with a MH provider) problem-solving method. Audiologists explain different forms of sound therapy, and MH providers deliver brief CBT. The research studies and clinics that use PTM have shown that the majority of patients who receive the level 3 skills education interventions have their tinnitus needs met to the degree that they do not desire further services.

Those relatively few patients who desire further services are invited for a PTM interdisciplinary evaluation (level 4), which involves a more in-depth needs evaluation by both an audiologist and a MH provider. Based on the outcome of the level 4 evaluation, clear treatment goals are discussed with the patient. If the patient and providers mutually agree that further intervention is needed, then the patient is offered PTM individualized support (level 5), which involves one-on-one services by an audiologist and/or a MH provider. The provid-

ers then build on the lessons taught during level 3 and address barriers to enacting the already discussed skills. The MH provider also may expand on CBT skills that were provided in level 3, offering care such as CBT for insomnia during level 5, depending on the specific needs and desires of the patient.

At the NCRAR, a pilot study and 2 RCTs of PTM have been completed.¹⁰ The first of these 2 RCTs was a clinical effectiveness study of PTM that was conducted in 2 VA audiology clinics: Memphis, Tennessee, and West Haven, Connecticut.¹¹ Patients who came to the clinics signed up for the study if they felt that the PTM level 3 intervention might be helpful. Half of the 300 veterans in the study were enrolled to receive PTM right away, and half were put on a 6-month wait list. The PTM group showed significantly greater benefit than that of the wait-list group.

The second RCT of PTM was motivated by the high number of service members and veterans with a history of traumatic brain injury (TBI), which is strongly associated with tinnitus.¹² The PTM level 3 skills education was administered to participants individually over the telephone by both an audiologist and a psychologist. Participants, located all over the U.S., had bothersome tinnitus, and some had experienced ≥ 1 TBI. They were randomized to receive either Tele-PTM immediately for 6 months or to be put on a 6-month wait list. The Tele-PTM group showed much greater improvement than that of the wait-list group.

Both of these recent RCTs have validated the effectiveness of PTM and demonstrated that PTM should be considered for the practice of evidence-based tinnitus management. PTM is mostly consistent with

the AAO-HNSF CPG and provides a structured and defined framework for implementing both assessment and intervention services for patients who report tinnitus. As such, VA Central Office has endorsed PTM as an effective intervention for tinnitus management and has recommended its use at VAMCs. The NCRAR researchers have provided PTM training to hundreds of VA audiologists and MH providers, yet the level of implementation across the VA system of care varies widely.

VA SURVEY

In 2015, in partnership with the VA Offices of Audiology and Speech Pathology and Mental Health Services, and the Health Services Research & Development/Quality Enhancement Research Initiative (HSR&D/QUERI), the NCRAR conducted a study to examine PTM variation across sites via surveys and/or interviews of VA Audiology and MH programs nationwide.^{13,14} The objectives of this study were to: (1) describe current tinnitus-management practices in VAMCs; (2) identify barriers and facilitators to PTM program implementation based on clinics that have fully, partially, or not implemented PTM; and (3) determine readiness to implement PTM within VISN 20 (Northwest states and Alaska).

Clinicians at VAMCs nationwide were surveyed regarding current provision of tinnitus clinical services. Requests were sent to audiology programs and MH programs at 142 major VAMCs along with instructions to complete the online survey. Responses were received from 87 audiologists and 66 MH providers. Clinicians at VAMCs with full PTM, partial PTM, and no-PTM (based on survey results) were then interviewed

regarding site-specific barriers and facilitators to implementing and providing PTM, readiness to adopt PTM, and strategies for full PTM implementation.

Key findings from the study demonstrated the following: (1) There is considerable between-site variability in how PTM is implemented, particularly with the delivery of the MH portion of the protocol; (2) audiologists show higher levels of readiness to provide tinnitus services than do MH providers (7% of MH survey respondents vs 62% of audiologists reported their site implementing PTM); (3) 66% of MH survey respondents were interested in receiving training in tinnitus management (note that online PTM training for MH does not yet exist); (4) PTM implementation barriers include audio-visual technology issues, room scheduling, as well as lack of collaboration and colocation between MH and audiology departments, administrative time/support, group facilitator skills, and availability of PTM materials.

Overall, results of this HSR&D/QUERI-funded study suggested the need to develop MH-specific training to support the necessary interdisciplinary engagement. Although a patient workbook is available to order and visual presentation aids may be accessed online, it became clear that lack of MH participation in the inherently interdisciplinary PTM skills education was the most common deviation from PTM.

DOD AND VA QUESTIONNAIRE

In 2014 the DoD Hearing Center of Excellence (HCE) conducted the DoD and VA Tinnitus Evaluation, Management, and Treatment Assessment.¹³ The HCE conducted this questionnaire under the Tinnitus Care Quality Improvement, Process

Development, and Implementation Plan, to develop, establish, and implement an interdisciplinary and ongoing process to continually assess and improve the quality and continuum of tinnitus care delivered to service members and veterans at a consistent, enterprise-wide level. The HCE developed the questionnaire to: (1) identify DoD and VA audiologists and otolaryngologists and their institutions providing comprehensive tinnitus care; (2) assess current tinnitus evaluation and management/treatment protocols used; (3) disseminate common practice improvements to all providers for enhancing overall tinnitus evaluation and management/treatment; and (4) evaluate implementation of improvements to include efficiency of implementation and efficacy of improvements.

The questionnaire was administered using SurveyMonkey (San Mateo, CA) and was disseminated by the otolaryngology and audiology consultants to the Army, Navy, and Air Force surgeons general and specialty leaders as well as through VA specialty leaders. Also, the HCE posted the link for the questionnaire on its website for 11 months. A total of 200 providers responded to the questionnaire, of which 13 did not indicate their specialty (eg, otolaryngology) or classification (eg, DoD active duty) and were excluded from data analysis. The 187 qualified respondents included 66 DoD audiologists, 120 VA audiologists, and 1 DoD otolaryngologist.

The questionnaire results indicated that DoD and VA respondents provided tinnitus services for their patients at similar rates (72% of DoD providers and 79% of VA providers). The use of PTM by those same providers, however, was far more widespread in VA (66%) than it was in DoD (37%). Of the providers

indicating they did not offer tinnitus clinical services, the main reasons given were lack of necessary training/expertise, lack of time, and insufficient clinical support. The majority of respondents indicated they had training on tinnitus evaluation and/or management and that they were comfortable providing these services; despite this, most providers indicated a need or desire for tinnitus-specific training and education. These results suggested that more support and education for hearing health care providers were needed to implement PTM in VA and, especially, in DoD.

About half of the respondents indicated that psychological/behavioral treatment services, which would correspond to PTM levels 3 and 5, are available for patients at their facility who have tinnitus. It is encouraging to know that some patients with problematic tinnitus are receiving MH services. However, it is essential that patients with any degree of bothersome tinnitus have access to evidence-based clinical services, which would require CBT delivered by a qualified MH provider.

CONCLUSION

Numerous VA and DoD clinics have begun providing PTM. Individual sites, however, typically adapt the program during the process of implementation.^{13,14} The most common adaptation that sites make to PTM is to proceed with level 3 skills education without the assistance of MH, and thus CBT, due to the lack of provider availability. It is unknown what impact this has on the effectiveness of PTM. Skills education forms the heart of PTM and addresses the needs of the majority of patients who seek intervention.

Collaboration with MH is integral to the delivery of PTM. Mental health providers partner in PTM levels 3 and 5 by providing CBT, which has the strongest evidence for reducing tinnitus distress among all interventions and always will be critical to the provision of PTM. Clearly VA MH programs need to increase involvement in veterans' tinnitus management. Increased involvement may be accomplished by (1) developing training or other materials that increase understanding of MH's role in addressing tinnitus; (2) developing pathways for coordination of care between audiology and MH providers, including different models of coordination based on individual site needs; and (3) documenting the prevalence of tinnitus-MH comorbidities to empirically justify the need for such coordination between audiology and MH providers.

To address gaps identified in the VA survey and in a similar questionnaire conducted by HCE regarding tinnitus care in VA and DoD, the NCRAR, HCE, and Walter Reed National Military Medical Center are collaborating on several initiatives to improve tinnitus services for service members and veterans.¹³⁻¹⁵ These efforts include enhancing service member and veteran access to VA and DoD MH services in PTM. ●

Author disclosures

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