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Evidence-based practice and speech-language pathology

Swallowing disorders are commonly seen among veterans as a result of stroke, traumatic brain injury, and head and neck cancer. These and other neurological and nonneurological conditions associated with dysphagia can lead to a number of adverse consequences, including malnutrition, aspiration pneumonia, immunocompromised health, and reduced quality of life. Department of Veterans Affairs (VA) speech-language pathologists (SLPs) are integral to the management of individuals with dysphagia, oftentimes employing one or more treatment approaches to improve deglutition for functional oral intake. These approaches can include dietary modifications, compensatory postures and maneuvers, tactile and thermal stimulations, and oral motor exercises.

In recent years, SLPs have been called on to justify their treatment decisions with sound scientific evidence and have been seeking resources to effectively engage in evidence-based practice (EBP). Originating from a definition by Sackett and colleagues [1], EBP refers to “the integration of best research evidence with clinical expertise and client values.” EBP informs clinicians who seek the best treatment course based on a balance between research-based evidence, clinical expertise and experience, and the client’s wishes. Providers evaluate the scientific literature as it pertains to the choice of a specific diagnostic protocol or treatment approach.

However, while the movement for evidence-based accountability from well-designed, methodologically sound research has garnered considerable attention, the practical application of EBP has not been easy for many, including SLPs working in the field of dysphagia. In 2008, the American Speech-Language-Hearing Association (ASHA) performed a Knowledge, Attitudes, and Practices Survey [2] and found that SLPs recognize the importance of EBP and are overall very or moderately confident in a number of its aspects. Specifically, most clinicians reported confidence in using MEDLINE and other electronic online databases to identify and retrieve scientific literature (68.9%), identify types of study designs used in research (70.2%), and assess the quality of the research (74.4%). Unfortunately, insufficient time to perform literature searches, limited resources, and the sparse literature base were reported as major barriers hindering their ability to successfully engage in EBP. SLPs are not alone in the struggle to fully engage in evidence-based decision-making, because these same trends have been reported across the spectrum of healthcare providers [3–6].

In an effort to overcome these barriers and better equip SLPs engaging in EBP, numerous organizations have taken the lead in helping clinicians become more evidence-based. Organizations such as the Academy of Neurologic Communication Disorders and Sciences, The Cochrane and Campbell Collaborations, The Agency for Healthcare Research and Quality, ASHA’s National

Center for Evidence-Based Practice in Communication Disorders (N-CEP), and the VA are conducting evidence-based systematic reviews (EBSRs) on clinically relevant topics in speech-language pathology. Systematic reviews offer SLPs a concise view of the current state of the science on a particular treatment or diagnostic protocol. The reports are developed through the use of transparent, replicable procedures applied to evaluate and synthesize a preset clinical question or set of questions, and their results provide a “time-saving” synthesis of the best external evidence for a specific patient population and clinical circumstance.

In addition to the organizations just mentioned, clinicians can access systematic reviews from a number of electronic searchable registries. These databases provide SLPs with a central place to look for evidence on a given topic or population. ASHA’s Compendium of Systematic Reviews (<http://www.asha.org/members/ebp/compendium>), the Psychological Database for Brain Impairment Treatment Efficacy (<http://www.psycbite.com>), the Database of Abstracts of Reviews of Effects (<http://www.crd.york.ac.uk/crdweb/Home.aspx?DB=DARE>), and the Turning Research into Practice Database (<http://www.tripdatabase.com>) are a few of the registries available to SLPs seeking evidence. These sources offer clinicians a “one-stop shopping” approach to searching for answers to clinical questions and provide a synopsis of the systematic evidence as well as the link to the full systematic review report. The number and types of studies included, methodological quality of studies, participant characteristics, and findings are often included.

EBSR findings or lack thereof are also beneficial to researchers and can help elucidate areas in need of future investigation. Research is one of the missions of the VA’s Veterans Health Administration (VHA). As such, it is not surprising that the VA recognizes the importance of systematic reviews. Currently, the VA has been involved in a number of projects to improve clinical care for veterans with swallowing disorders (VHA Directive 2006-032). The dysphagia single-topic section of this *JRRD* issue highlights one such project supported by the VA in an effort to

assist SLPs engaging in evidence-based dysphagia care and management.

In the fall of 2007, ASHA’s N-CEP teamed with the VA to systematically examine seven behavioral swallowing treatments as an expansion of initial work from the National Audiology and Speech Pathology VA Field Advisory Council. Three original Task Force members, Nan Musson, Daniel McCabe, and John Ashford, along with Karen Wheeler-Hegland and Carol Smith Hammond, further refined the clinical questions initially posed by the Task Force and served as an evidence panel for a series of reviews. The systematic reviews investigated the specific compensatory swallowing postures and maneuvers commonly used by SLPs, including side lying, chin tuck, head rotation, effortful swallow, Mendelsohn maneuver, supraglottic swallow, and super supraglottic swallow, and examined the impact of these treatments on physiology, functional swallow ability, and pulmonary health for nondisordered healthy adults, neurological populations, and head and neck cancer populations.

The culmination of this year-long endeavor is presented in the series of articles in this single-topic section. Following the first article (Frymark et al., this issue, Part I, p. 175) outlining the details of the systematic literature search and methodology used to critically appraise the evidence, three separate EBSRs (Wheeler-Hegland et al., this issue, Part II, p. 185; Ashford et al., this issue, Part III, p. 195; and McCabe et al., this issue, Part IV, p. 205) examine the state of the evidence on these seven swallowing postures and maneuvers for disordered and nondisordered populations. Given the paucity of evidence that was found for individuals with neurologically and structurally induced dysphagia and the challenges expressed by SLPs trying to integrate evidence into the clinical decision-making process, the final article in the series (Wheeler-Hegland et al., this issue, Part V, p. 215) provides practical applications of the EBSR findings.

The systematic reviews emphasize the need for future research from more rigorous, well-designed treatment studies. With dysphagia research still in its infancy, VA providers are in a unique position to

guide and advance the evidence base and shape the future of dysphagia treatment.

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