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Technical Report

The Use of Voice Therapy in the Treatment of Dysphonia

American Speech-Language-Hearing Association
and American Academy of Otolaryngology-Head and Neck Surgery

About this Document

This report was developed by the American Speech-Language-Hearing Association (ASHA) and the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). It was developed by the AAO-HNS Speech, Voice and Swallowing Committee—Robert Sataloff, Jonathan Aviv, Mary Beaver, Alison Behrman (ASHA representative), Mark Courey, Glendon Gardner, Norman Hogikyan, Christy Ludlow (ASHA representative), Roger Nuss, Clark Rosen, Mark Shikowitz, Robert Stachler, Lee Akst, and Susan Sedory Holzer (staff liaison), and by ASHA Special Interest Division 3, Voice and Voice Disorders Steering Committee members, Leslie Glaze (coordinator), Bernice Klaben, Lori Lombard, Mary Sandage (associate coordinator), Susan Thibeault, and Michelle Ferketic (ex officio). Celia Hooper, vice president for professional practices (2003–2005), served as monitoring vice president for ASHA.

Dysphonia is defined as an impairment of the speaking or singing voice. Dysphonia arises from an abnormality of the structures and or functions of the voice production system and can cause bodily pain, a personal communication disability, and an occupational or social handicap. The cause of dysphonia is generally multifactorial. Genetic factors may predispose an individual to voice disorders (Gray,

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Hammond, & Hanson, 1995). Chronic and acute variables may precipitate dysphonia. These include occupational vocal demands, medications, health problems, environment, physical trauma, and lifestyle choices. Dysphonia is as disruptive to quality of life as angina, sciatica, and chronic sinusitis (Benninger, Ahuja, Gardner, & Grywalski, 1998). The communicative problems associated with dysphonia can lead to social withdrawal, occupational handicaps, and depression (E. Smith et al., 1996).

Voice disorders are a widespread and significant problem. Estimates of prevalence range from 3% to 7% of the general population (Healy, Ackerman, Chappell, Perrin, & Stormer, 1981). Individuals with heavy occupational voice use, a significant risk factor for dysphonia, may comprise from 5%–10% of the U.S. workforce (Titze, Lemke, & Montequin, 1997). The largest epidemiologic study of the prevalence of voice disorders in the United States (Roy et al., 2004) revealed that approximately 43% of adults surveyed experienced voice problems at some point during their life. Approximately 23% of those individuals visited a physician or speech-language pathologist for treatment for dysphonia. The cost of untreated voice disorders total billions of dollars in treatment and lost productivity costs (Ramig & Verdolini, 1998). In teachers alone, the cost of dysphonia approaches \$2.67 billion annually in the United States (Verdolini & Ramig, 2001).

The overall goal for the patient with dysphonia is optimal long-term voice quality and communication function with minimal recurrence. Diagnosis and treatment should be both efficient and effective. Voice therapy is an integral component of intervention and contributes to both its efficacy and efficiency. Evidence from clinical trials documents the efficacy of voice therapy for a spectrum of voice disorders in both adults and children (Bassiouny, 1998; Boone, 1974; MacKenzie Millar, Wilson, Sellars, & Deary, 2001; Roy et al., 2001; Sellars, Carding, Deary, MacKenzie, & Wilson, 2002; Speyer, Wieneke, & Dejonckere, 2004; Verdolini-Marston, Burke, Lessac, Glaze, & Caldwell, 1995; Xu, Ikeda, & Komiyama, 1991). Even in patients with a long history of dysphonia, voice therapy can be highly effective (Speyer et al., 2004). Efficiency includes cost-effective and prompt intervention provided over a time period most suitable for achieving optimal outcome.

Voice therapy is the treatment of choice for muscle tension dysphonia and there is evidence to support its utility in these cases (Andrews, Warner, & Stewart, 1986; Carding, Horsley, & Docherty, 1999; Fex, Fex, Shiromoto, & Hirano, 1994; Kitzing & Akerlund, 1993; Maryn, De Bodt, & Van Cauwenberge, 2003; Roy, Bless, Heisey, & Ford, 1997). In complex disorders, such as paradoxical vocal fold motion, voice therapy prevents long-term costs of treatment by helping reduce expensive emergency room visits and hospitalizations (Bastian, 1987; Boone & McFarlane, 1988; Kotby, Shiromoto, & Hirano, 1993; Martin,

[Blager, Gay, & Wood, 1987](#); [Stemple, Lee, D'Amicco, & Pickup, 1994](#)).

Benign vocal fold lesions are a common cause of dysphonia ([Gould, Rubin, & Yanagisawa, 1995](#)). Most laryngologists consider voice therapy, often together with medical management, the initial treatment of choice for benign lesions ([Anderson & Sataloff, 2002](#); [Garrett & Ossoff, 2000](#); [Pedersen, Beranova, & Moller, 2004](#); [Sulica & Behrman, 2003](#)). Many studies have documented excellent outcomes after voice therapy in patients with a variety of benign lesions ([Blood, 1994](#); [Gordon, Pearson, Paton, & Montgomery, 1997](#); [Holmberg, Hillman, Hammarberg, Sodersten, & Doyle, 2001](#); [Lancer, Syder, Jones, & Le Boutillier, 1988](#); [McCrary, 2001](#); [Murry & Woodson, 1992](#); [S. Smith & Thyme, 1976](#); [Speyer et al., 2002](#); [Verdolini-Marston et al., 1995](#); [Ylitalo & Hammarberg, 2000](#)). Increasingly, otolaryngologists are using response to voice therapy to help differentiate among benign mucosal lesions, inform the treatment decision for surgery, and optimize surgical outcome. In cases in which surgery is necessary, pre- and postoperative voice therapy may shorten the postoperative recovery time, allowing faster return to work and limiting scar tissue and permanent dysphonia ([Woo, Casper, Colton, & Brewer, 1994](#)).

Most laryngologists consider voice therapy essential for patients with unilateral vocal fold paralysis as definitive treatment or as adjunctive to surgery ([Benninger et al., 1994](#)). Evidence suggests that preoperative voice therapy improves voice outcomes for greater than 50% of patients with unilateral vocal fold paralysis and may render surgery unnecessary ([Heuer et al., 1997](#)). In other neurological-based dysphonia, such as Parkinson's disease, voice therapy has yielded significant improvement in overall communication ([de Angelis et al., 1997](#); [Ramig, Countryman, O'Brien, Hoehn, & Thompson, 1996](#); [M. E. Smith, Ramig, Dromey, Perez, & Samandari, 1995](#); [Spielman, Borod, & Ramig, 2003](#)).

In conclusion, research data and expert clinical experience support the use of voice therapy in the management of patients with acute and chronic voice disorders. Voice therapy contributes to increased effectiveness and efficiency in the treatment of voice disorders. When surgery is necessary, adjuvant voice therapy can improve surgical outcomes, prevent additional injury, and limit additional treatment costs.

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Index terms: voice, treatment, dysphonia

Reference this material as: American Speech-Language-Hearing Association. (2005). *The use of voice therapy in the treatment of dysphonia* [Technical Report]. Available from www.asha.org/policy.

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doi:10.1044/policy.TR2005-00158

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