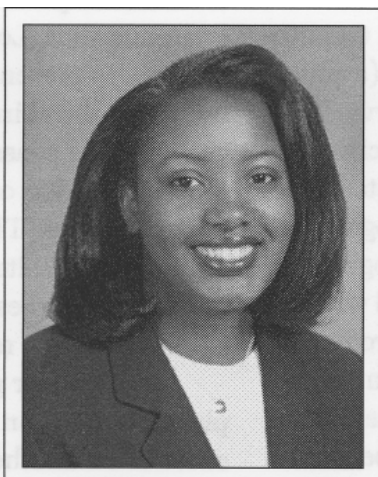
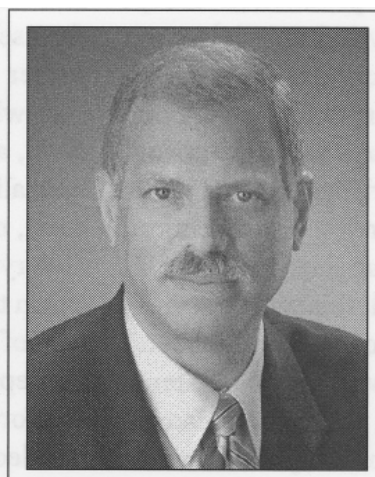


# Who Takes Care of Voice Problems? A Guide to Voice Care Providers

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## INTRODUCTION

Optimal voice care is delivered by an interdisciplinary team consisting of physicians and nonphysicians. The physician may be an otolaryngologist, a specialist who practices all aspects of ear, nose, and throat medicine, or a laryngologist, who specializes in voice disorders. The physician commonly collaborates with other professionals such as a speech-language pathologist, singing voice specialist, acting voice specialist, and others who constitute the voice care team. Under the best of circumstances, all of the members of the team have received special training in not just the gen-

eral aspects of their disciplines, but also additional training in care of the voice. Although even the best training does not guarantee clinical excellence, it does improve the probability that a practitioner will provide superior, modern voice care. This article reviews the typical training and qualifications of the professionals associated most commonly with voice care teams.

## WHAT IS A VOICE CARE TEAM?

A voice care team is ordinarily under the direction of a physician who is usually an otolaryngologist or laryngologist. In addition to the physician who diagnoses and provides medical treatment for voice disorders, the team includes the speech-language pathologist who provides voice ther-

apy and attends to problems that affect the speaking voice; a phoniatriest in countries without speech-language pathologists; a singing voice specialist; an acting voice specialist; a nurse and/or a physician's assistant; and consultant physicians in other specialties. It is helpful for patients to understand the background and role of each member of the voice team, as discussed below.

## WHAT IS AN OTOLARYNGOLOGIST, AND WHAT IS A LARYNGOLOGIST?

The leader of the voice care team is ordinarily a physician (otolaryngologist). Otolaryngologists are physicians (surgeons) who specialize in problems of the ears, nose, and throat (ENT). Laryngologists are otolaryn-

gologists who specialize in care of disorders of the larynx and voice and related problems such as swallowing, in some cases. To practice laryngology, one must first complete training as an otolaryngologist. To become an otolaryngologist, a person completes college, four years of medical school, one or two years of training in general surgery, and four years of residency in otolaryngology—head and neck surgery. In the year following completion of residency, the physician takes a national, standardized board examination given in two parts (written and oral) to become a "board certified" otolaryngologist. Certification by the American Board of Otolaryngology, or the equivalent organizations in other countries, is an important indicator of mastery of basic knowledge in otolaryngology and is considered a basic, minimum qualification. The only exception is "board eligibility" in the case of a physician who has finished residency but has not yet successfully passed the board examinations. Board certification is not granted until after one year of clinical experience following residency, and demonstrated competency on the oral and written board examinations.

Most otolaryngologists' clinical practices include many or all components of the specialty, such as otology (disorders of the ear and related structures), laryngology (disorders of the voice and upper airway structures such as the throat and trachea), head and neck cancer, head and neck neoplasms (masses including benign or malignant lesions), facial plastic and reconstructive surgery, allergy and immunology, bronchoesophagology (lower airway and swallowing disorders), rhinology (nose, sinus, taste, and smell disorders), and pediatric otolaryngology (ear, nose, and throat

disorders of children). Most otolaryngologists and laryngologists care for patients of all ages from early childhood through advanced years. Some otolaryngologists subspecialize, caring for disorders in just one or two areas of otolaryngology as described above. This subspecialization can be either a keen interest in a specific area while still providing a broad range of ear, nose, and throat care, or a focused practice of only one or two of the sub-components of otolaryngology. Laryngology is one such subspecialty.

At present, most physicians specializing in laryngology did not receive laryngology fellowship training. That is always the case as a new field develops. Modern laryngology evolved out of an interest in caring for professional voice users, especially singers. The first comprehensive article guiding otolaryngologists on care of professional singers was published in 1981;<sup>1</sup> the first major modern American otolaryngology textbook with a chapter on care of the professional voice was published in 1986;<sup>2</sup> and the first comprehensive book on care of the professional voice was published in 1991.<sup>3</sup> Thus, most of the senior laryngologists practicing at the turn of the twenty-first century were involved in the evolution of the field before fellowships were developed. Most fellowship training programs started in the 1990s, although a few informal fellowship programs existed in the 1980s and earlier. It is reasonable to expect most voice specialists who finished residency training in the 1990s or later to have completed a fellowship in laryngology. There are approximately a dozen laryngology fellowship training programs in the United States, and they are highly competitive. At present, completion of a fellowship is a reasonably good indicator of superior knowledge and clin-

ical training in laryngology. Most laryngology fellowships include training in the diagnosis and treatment of voice disorders in adults and children, neurology (neurological problems that affect the voice and larynx), swallowing disorders, airway reconstruction, and laryngeal cancer. The training includes both medical diagnosis and treatment, and sophisticated laryngeal surgery. Typically, laryngologists care for both routine and complex problems that affect the voice. Such problems include voice dysfunction associated with something as simple as a common cold, especially when it affects the voice of a professional singer or actor. However, laryngologists also are called upon to diagnose and treat structural lesions such as nodules or polyps, prolonged infections of the vocal folds, cancer, traumatic injury from fracture or internal trauma (intubation injuries from anesthesia, vocal fold injuries from previous surgery), neurological disorders, and other voice problems. The laryngologist is responsible for establishing a medical diagnosis and implementing or coordinating treatment for the patient. The laryngologist may prescribe medication, inject botulinum toxin, perform delicate microsurgery on the vocal folds, or operate through the neck on the laryngeal skeleton. He or she also is usually responsible for initiating evaluation by other members of the voice team, and for generating referrals to other specialists as needed.

Laryngologists may practice in university medical centers or private offices, and in major cities in the United States they are usually affiliated with a voice team including at least a speech-language pathologist, a singing voice specialist, and sometimes an acting voice specialist. Laryngologists also should have—or have

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access to—a clinical voice laboratory with equipment to analyze the voice objectively, and a stroboscope to visualize the vocal folds in slow motion. They also should be familiar with physicians in other specialties who have an understanding of and interest in arts medicine. Even for patients with a voice disorder who are not singers and actors, such knowledge and sensitivity are important. Just as nonathletes benefit from the orthopedic expertise of a sports medicine specialist, voice patients receive more expert care from physicians trained to treat singers, the "Olympic" athletes of the voice world.

At present, there is no official additional certification for those who have completed a laryngology fellowship. However, there are organizations (medical societies) with which many of the leading laryngologists are affiliated. Essentially all laryngologists in the United States are fellows of the American Academy of Otolaryngology—Head and Neck Surgery ([www.entnet.org](http://www.entnet.org)), and laryngologists in other countries are members of their individual nation's analogous organizations. A few are also members of the American Laryngological Association (ALA), the most senior otolaryngology society in the United States ([www.alahns.org](http://www.alahns.org)). The ALA also accepts associate members from other countries. Some laryngologists belong to the American Bronchoesophagological Association ([www.abea.net](http://www.abea.net)), and the Voice Foundation ([www.voicefoundation.org](http://www.voicefoundation.org)). The Voice Foundation was founded in 1969 and is the oldest organization dedicated to voice education and research. It provides seed grants for research, sponsors an annual symposium on care of the professional voice that started in 1972, and fosters voice education through conferences, educational videotapes,

books, and publications such as the *Journal of Voice* and the *Voice Foundation Newsletter*. In recent years, several countries have developed organizations similar to the Voice Foundation, such as the British, Canadian, and Australian Voice Foundations. Laryngologists in such countries are usually members of their national organizations, and many are also members of the Voice Foundation (Philadelphia, Pennsylvania, USA). While membership in these organizations is not a guarantee of excellence in practice, it suggests interest and knowledge in laryngology, particularly voice disorders.

### WHAT IS A SPEECH-LANGUAGE PATHOLOGIST?

The speech-language pathologist is a certified, licensed healthcare professional, ordinarily with either a Master's or Ph.D. degree. After college, speech-language pathologists generally complete a one or two year Master's degree program, followed by a nine month, supervised clinical fellowship, similar to a medical internship. At the conclusion of the clinical fellowship year, speech-language pathologists in the United States are certified by the American Speech-Language Hearing Association, and use the letters "CCC-SLP" after their names to indicate that they are certified. Like otolaryngology, speech-language pathology is a broad field that includes care of patients who have had strokes or other neurological problems affecting speech and swallowing, undergone laryngectomy (removal of the larynx), have swallowing disorders, have articulation problems, stutter, craniofacial disorders, or other related fluency disorders of speech. Some speech-language pathologists subspecialize in voice, which includes

care of the voice disorders, and swallowing disorders. The speech-language pathologist affiliated with a voice team is usually such a subspecialist, and may call himself or herself a "voice pathologist" rather than a speech-language pathologist, although "voice pathologist" is not yet a term recognized officially by the American Speech-Language-Hearing Association. There are relatively few speech-language pathology training programs that provide extensive education in voice, and there are virtually no voice fellowships for speech-language pathologists. Many speech-language pathology training programs do not even require a single course dealing with voice disorders. Thus, one can not assume that all speech-language pathologists are trained or comfortable in caring for individuals with voice problems. Most acquire the subspeciality training they need through apprenticeships, extra courses, symposia, or by obtaining Ph.Ds that include voice-related research.

Speech-language pathologists are responsible for voice therapy and rehabilitation that is analogous to physical therapy. The speech-language pathologist analyzes voice use, and teaches proper voice support, relaxation, and voice placement to optimize use of the voice during speaking. A variety of techniques is utilized to accomplish this goal. Speech-language pathologists ordinarily do not work with the singing voice, although they are involved in the treatment of speaking voices of singers.

Speech-language pathologists may be found in universities, private offices, or free-standing speech and hearing centers. In the United States, most are members of ASHA (the American Speech-Language-Hearing Association), and its voice-related special interest division (SID-3). Many speech-

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language pathologists with special interest in voice in the United States and elsewhere are also members of the Voice Foundation. Like otolaryngologists, speech-language pathologists who subspecialize in voice provide more incisive, state-of-the-art treatment for voice disorders than most general speech-language pathologists who care for patients with various problems encompassing the entire field. Consequently, it is worthwhile for patients with voice disorders to seek out a subspecialist in order to improve the likelihood of a rapid, excellent treatment result. Referrals to speech-language pathologists specializing in voice are usually obtained through a laryngologist or otolaryngologist.

### WHAT IS A PHONIA TRIST?

Phoniatrists do not exist in the United States, but they provide voice care in many European countries. The phoniatrist is a physician who is in some ways a hybrid of the laryngologist and speech-language pathologist. Phoniatrists receive medical training in diagnosis and treatment of voice, swallowing and language disorders, including voice therapy; but they do not perform surgery. In countries with phoniatrists, surgery is performed by otolaryngologists. In many cases, the phoniatrist and otolaryngologist collaborate as a team, just as otolaryngologists and speech-language pathologists do in the United States and elsewhere. A physician who has completed training in phoniatriy is generally well qualified to diagnose voice disorders and provide nonsurgical medical care, as well as voice therapy.

### WHAT IS A SINGING VOICE SPECIALIST?

The singing voice specialist is a singing teacher with special training

equipping him or her to practice in a medical environment with patients who have sustained vocal injury. Most singing voice specialists have a degree in voice performance or pedagogy, although some have only extensive performing and teaching experience without a formal academic degree. Nearly all have professional performance experience, as well as extra training in laryngeal anatomy and physiology of phonation, training in the rehabilitation of injured voices, and other special education. The singing voice specialist must acquire knowledge of anatomy and physiology of the normal and disordered voice, a basic understanding of the principles of laryngology and medications, and a fundamental knowledge of the principles and practices of speech-language pathology. This information is not part of the traditional training of singing teachers. Moreover, at present there are no formal training or fellowship programs that assist singing teachers in becoming singing voice specialists. Their training is acquired by apprenticeship and observation. Many take courses in speech-language pathology programs, but usually not as part of a formal degree or certification program,<sup>4</sup> since there is still no certification of singing voice specialists. A few of the best singing voice specialists are also certified, licensed speech-language pathologists. This combination is optimal, provided the speech-language pathologist has sufficient experience and training not only as a performing artist, but also as a teacher of singing. In patients with vocal injuries or problems, the fundamental approach to training the singing voice is different in important ways from that usually used with healthy students in a singing studio. Hence, even an excellent and experienced voice teacher may harm an

injured voice, if he or she is not familiar with the special considerations for this population. In addition, most voice teachers do not feel comfortable working with a singer who has had a vocal injury or surgery.

Virtually all singing voice specialists are affiliated with voice care teams. Most are members of the National Association of Teachers of Singing (NATS) or the equivalent organization in another country, and of the Voice Foundation. In many cases, their practices are limited to work with injured voices. They work not only with singers, but also with other patients with voice disorders. As members of a voice treatment team working with nonsingers, they help teach speakers the "athletic" techniques utilized by singers for voice production. Singing is to speaking as running is to walking. When rehabilitating some-one who has difficulty walking, if the person can be helped to jog or run, leg strength and endurance improve and walking rehabilitation is expedited. The singing voice specialist helps apply similar principles to voice rehabilitation, in collaboration with the speech-language pathologist and other voice care team members.

### WHAT IS AN ACTING VOICE SPECIALIST?

Acting voice trainers are also called voice coaches, drama voice teachers, and voice consultants. Traditionally, these professionals have been associated closely with the theater. Their skills have been utilized as part of a medical voice team only since the mid-1990s.<sup>5</sup> Consequently, there are few acting voice trainers with medical experience; but their contributions have proved invaluable.

Acting voice trainers use a variety of behavior modification techniques

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that have been designed to enhance vocal communication, quality, projection, and endurance in theatrical settings. They train actors to speak or scream through eight shows a week—or perhaps through theatrical runs that may last years, without tiring or causing injury to their voices. They also teach techniques for adding emotional expression to vocal delivery, and they work with body language and posture to optimize vocal delivery and communication of information. They maybe a great asset to the voice team in teaching people how to apply the many skills learned through the speech-language pathologist and singing voice specialist to their every-day life. Acting voice trainers are especially valuable for people who speak professionally, such as teachers, lecturers, politicians, clergy, sales personnel, and others concerned with effective vocal delivery and with vocal endurance.

There are no formal programs that prepare voice coaches to work in a medical milieu. Those who do receive training generally do so through apprenticeships and collaborations with medical voice care teams, under the direction of a laryngologist.

Acting voice trainers interested in working with voice patients are generally members of the Voice and Speech Trainers Association (VASTA) and the Voice Foundation.

### WHAT IS THE ROLE OF NURSES ON THE VOICE CARE TEAM?

Nurses are an indispensable asset in medical offices, and they are important members of the voice team in many centers. Nurses who work closely with a laryngologist generally have vast experience in the diagnosis and treatment of voice disorders. They are wonderful information resources

for patients and frequently provide much of the patient education in busy clinical settings. Such nurses are usually members of the Society of Otolaryngology—Head and Neck Nurses (SOHN). Nurses with advanced knowledge and skills may be certified (by SOHN) as otolaryngology nurses, and are identified as such by the initials CORLN (certified otorhinolaryngologic nurse) after their names.

Nurse practitioners are advanced practice nurses with Master's degrees who are licensed to provide independent care for patients with selected medical problems. They are identified by the initials CRNP (certified registered nurse practitioner). They work in conjunction with a physician, but they can examine, diagnose, and treat selected problems relatively independently. A few nurse practitioners specialize in otolaryngology and work with voice teams. They ordinarily receive special "on the job" training by the otolaryngologist, and they provide care within their scope of practice. Nurse practitioners can also become members of SOHN, become certified through examination by SOHN, and upon certification will also use the certification CORLN after their names.

### WHAT IS A PHYSICIAN ASSISTANT AND MEDICAL ASSISTANT?

Physician assistants, like nurse practitioners discussed above, function in association with a physician. Physician assistants graduate from a training program that usually lasts four years and teaches them various aspects of medical diagnosis and physical examination. They use the initials PA (physician assistant) after their names. They practice in conjunction with physicians, but can

perform examinations and treat patients independently. They are licensed in many states to write prescriptions. A few physician assistants specialize in otolaryngology, and a smaller number have had extensive training and experience in voice care. In collaboration with their laryngologist and voice teams, they are qualified to evaluate and treat patients with voice disorders.

Physician assistants should be distinguished from medical assistants, who have less training and are qualified to assist in medical care and patient education, but generally not to diagnose and treat patients independently. Medical assistants generally are trained to perform tasks such as phlebotomy (drawing blood) and electrocardiograms. In a laryngology office, a good medical assistant can be trained to perform many other tasks such as taking histories, assisting with stroboscoped laryngoscopy, assisting during the performance of surgical procedures in the office, participating in research, and the like.

### WHAT CONSULTANT MEDICAL PROFESSIONALS ARE INVOLVED WITH THE VOICE TEAM?

Otolaryngologists often refer voice patients for consultation with other medical professionals. Other specialists consulted commonly include neurologists (nerve function), pulmonologists (lungs), gastroenterologists (stomach and intestinal system), psychologists, and psychiatrists. However, physicians in virtually any medical specialty maybe called upon to care for voice patients. Traditional and nontraditional ancillary medical personnel may also be involved in voice care, including nutritionists, physical therapists, chiropractors, osteo-

paths (for manipulation), acupuncturists, and others. Within virtually all these fields, there are a select few professionals who have an interest in and an understanding of arts medicine. Just as caring for voice professionals (especially singers) involves special considerations and challenges for the otolaryngologist, caring for hand problems in a pianist or ankle problems in dancers also poses challenges for the orthopedic surgeon. Orthopedic surgeons, neurologists, pulmonologists and others who are accustomed to working with performing artists (dancers, wind instrumentalists, etc.) are most likely to have the insight, sensitivities, skills, and state-of-the-art information needed to provide optimal care to voice professionals. Many such physicians tend to be associated with arts medicine centers or are performers themselves. There is no certification or broad-based national or international organization that helps to identify such physicians, although some are members of the Performing Arts Medicine Association (PAMA). In most fields, there are no formal arts medicine training programs or associations. Physicians acquire such training through their own interests and initiative, and through apprenticeship or observation with colleagues. If there is no arts medicine center in the area in which a patient is seeking care, arts medicine physicians are identified best by word of mouth or through arts medicine related websites. Referrals can be obtained through the local laryngologist or voice specialist, or by consulting with eminent performing arts teachers in the community. For example, the leading private, university, and conservatory violin and piano teachers often know who the best hand specialists are; the wind instrument teachers know

whom to see for neurological and pulmonary problems that affect musicians; and dance teachers know the best foot and ankle physicians.

### COMMON QUESTIONS

#### **When should I seek out a laryngologist instead of an otolaryngologist?**

Most otolaryngologists possess basic familiarity with common voice disorders such as laryngitis, as it affects most people in the population. However, management of even simple problems such as laryngitis is different in voice professionals such as singers, actors, clergy, teachers, lecturers, and others. People with special voice needs may be served best by consulting a laryngologist or an otolaryngologist with a special interest or concentration in voice disorders, even for common problems. Laryngologists also are helpful in more complex problems that maybe difficult to diagnose or treat for otolaryngologists who do not see unusual voice disorders on a daily basis. If a patient has seen an otolaryngologist a few times for voice problems and is not getting better, obtaining an opinion from a physician subspecializing in laryngology maybe most helpful, especially if the cause of the voice problem has not been identified with certainty. Consultation with a laryngologist also should be considered when surgery is recommended, particularly surgery for benign problems such as nodules, cysts, and polyps. The technology and standard of care for voice microsurgery has changed dramatically in the 1990s. Laryngologists should be familiar with state-of-the-art treatment, and it is impossible for general otolaryngologists to be up to date in every aspect of ear, nose, and throat care.

#### **Are there any "red flags" that should make me get a second opinion immediately?**

Yes. If a physician recommends immediate "emergency" surgery for benign problems such as nodules, a second opinion should be obtained. In addition, if the physician uses the words "vocal fold stripping," these imply an antiquated surgical technique that is more likely to result in permanent hoarseness than more delicate phonosurgical approaches. If stripping is recommended, a second opinion should be sought from an expert laryngologist.

#### **How do I find an expert laryngologist?**

It is not easy to find an expert laryngologist. Guidelines are discussed above in the section on laryngologists. Contacting organizations such as the Voice Foundation or the American Laryngological Association is a good start. It is also reasonable to check the literature (and Internet) to see who has written articles or books about voice problems like the one for which a patient is seeking care.

#### **Do I really need to see other (nonphysician) members of the voice team?**

Most of the time, yes. The speech-language pathologist is invaluable in diagnosing and correcting errors in voice usage that can cause or aggravate voice dysfunction. In nearly all cases, patients use hyperfunctional voicing in an attempt to compensate for their voice disorders. It is always important to eliminate the hyperfunction to unmask the true nature of the voice disorders. Moreover, in many cases, voice therapy alone is enough to cure the problem. For example, more than ninety percent of vocal

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nodules resolve or become asymptomatic through voice therapy, without surgery. The singing voice specialist not only defines and rectifies similar inefficient muscle use patterns in singers, but also teaches nonsingers some of the athletic exercises and tricks used by singers to improve vocal control, volume, projection, quality, and variability. Even in someone with no skill or interest in singing, these athletic techniques can be applied to the speaking voice quickly and can speed voice therapy. The acting voice specialist can be extremely helpful in identifying how vocal techniques are being used in the context of daily vocal activities. The acting voice specialist helps integrate optimal techniques into daily use, and teaches additional methods for improving vocal expression and the overall impact of personal communication. Learning the techniques used by actors to project a message efficiently allows all voice users to get their points across skillfully, without having to rely on vocal strain.

### Is it safe to be seen at a teaching hospital or clinic?

Virtually all of the leading voice specialists and teams are affiliated with medical schools and teaching hospitals. Residents in training may be involved with patient care in these settings. They are ear, nose, and throat specialists who have normally already completed four years of college, four years of medical school, a year of surgical internship, and four to five years of training in the treatment of ear, nose, and throat disorders. They are under the supervision of an otolaryngologist and laryngologist, as is a laryngology fellow who has already completed residency. In some cases, medical students may also be involved, but they are not responsible for hands-on care in those cases. The teaching

environment encourages the most advanced state-of-the-art care. Although information usually is kept about treatment outcomes (part of the process of self critique through which clinical care is improved), being seen at a teaching hospital does not mean that you are going to be part of an experiment. Any procedures or protocols that are experimental are identified clearly, and patients are always given the option of participating or not participating. Often, these experimental opportunities represent the best, cutting edge therapy for problems that are generally considered untreatable; and such experimental advanced treatment is usually made available only by physicians who are affiliated with teaching programs.

### If I find the best laryngologist and the best voice team, am I guaranteed a good result?

No. Even if everything is done perfectly, sometimes outcomes are disappointing. In most cases, bad outcomes (such as permanent hoarseness from scarring after vocal fold surgery) are due to healing problems that are neither the fault of the physician and his or her voice team, nor of the patient. This should be easy to understand. As an analogy, if a surgeon makes a similar appendectomy incision on one hundred consecutive patients, a few of them may develop a large, ugly (hypertrophic) scar, even though the incision was made perfectly every time. There are uncertainties involved with the human body, and even the best care in the world does not guarantee a perfect outcome. However, it does decrease the chance of a bad outcome. Optimal results require the best efforts of every member of the voice care team, including the patient, who is the most important member of the team. Compliance

with voice therapy, good technical voice use, and voice rest when prescribed, are essential to "stack the odds" in the favor of an optimal result.

## CONCLUSION

Voice care has evolved into a sophisticated, well-organized medical science. Patients with voice disorders are served best by a comprehensive voice team that coordinates the skills of professionals trained in various disciplines. It is important for health care professionals to assemble interdisciplinary teams, and to affiliate with arts medicine specialists and other disciplines in order to provide comprehensive care for voice patients. It is also important for patients to be educated about the kind of health care that is now available for voice disorders and how to evaluate and select health care providers.

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