ABSTRACT: This article compares professional standards in the field of audiology in Russia to standard practices for audiologists in the United States. Information was obtained by analyzing legal documents and statistical reports pertaining to audiology and by completing interviews with professionals who practice in the field of audiology during a visit to Russia in the summer of 2005. Findings revealed a significant difference in educational background, scope of practice, and qualification standards between American audiologists and their Russian colleagues. Furthermore, the study demonstrated different approaches in each country for the delivery of audiolologic services to the general population.

KEY WORDS: surdology, surdologs, surdopedagog, code of ethics, scope of practice

Hearing disorders have always been considered a significant health issue as they have a serious effect on people’s lives. Hearing difficulties can cause psychological discomfort and problems in personal relationships, interfere with successful education, and interrupt career growth. Children are most affected by this disorder. When left untreated, hearing difficulties prevent normal speech and language development. Underdeveloped speech may disrupt the connection of the affected child with his or her environment and may inhibit or limit that child’s ability to become a successful member of society (Tye-Murray, 2004).

There is a growing concern in Russia for the well-being of people with hearing impairments. The Department of Health of Russian Federation reported a rising number of people with hearing loss, which is attributed to various factors including extended use of ototoxic medications, poor ecology, and increased incidence of congenital disorders (Department of Health of Russian Federation, 1996a). According to the World Health Organization (WHO), approximately 250 million people have some type of hearing impairment (2002). That number includes 28 million Americans (Martin & Clark, 2003) and more than 12 million Russians (Department of Health of Russian Federation, 1996a). Furthermore, as the life span increases, society becomes older. It is well known that elderly people often have a decrease in hearing sensitivity (Stach, 1998). Additionally, thanks to improvements in medicine, the survival rate of premature newborns is increasing. It was predicted that the number of people with a significant hearing loss will increase by at least 30% by the year 2020 (Department of Health of Russian Federation, 1996a). Thus, more and more people need audiolologic services. At the same time, technological advances result in constant improvement of hearing amplification devices and development of new methods of audiolologic assessment. The growing complexity of hearing aids and other audiolologic equipment requires more complex preparation of audiologists. Increasing professional expectations for these specialists in Russia and America have resulted in recent changes in the field of audiology in both countries. However, the problem of educating and training audiologists is approached quite differently in these two countries. Each system is adapted to the needs of the society as well as the state organization of the health service. Professionals who would fulfill the role of audiologists in the United States belong to two separate but related professions in Russia: surdolog and surdopedagog. This article compares the role of American audiologists and Russian surdologs and surdopedagog in the organization of...
audiologic services to the population and explains the reasons behind those differences.

METHOD

Information concerning professional standards for audiologists in the United States was obtained from published statements of the American Speech-Language-Hearing Association (ASHA). Information concerning professional standards for surdologs was difficult to acquire in Russia because there were no specific professional organizations or journals for this occupation. Traditionally, ear-nose-and-throat specialists conduct much of the research and provide the basis for entry into the profession of surdologs. For the evaluation of the preparation of surdologs, a study plan for the certificate course in surdology was obtained from the Department of Audiology, Amplification, and Hearing/Speech Rehabilitation at the Federal Research/Clinical Ear-Nose-and-Throat Center of the Department of Health of Russian Federation (2004). Additionally, some statistical data and information about the history of surdology in Russia and current state requirements for surdologs and hearing centers were obtained from the Decrees of the Department of Health and Social Development of Russian Federation (1968, 1981, 1985, 1996a, 1996b).

Similar difficulties were encountered when gathering information about the profession of surdopedagogy. Information about the history of Russian surdopedagogy was found in the archives of the Museum of History of Russian Surdopedagogy. A list of courses, which are required to receive a degree in surdopedagogy, was obtained from the Department of Education and Science of Russian Federation (1968, 1981, 1985, 1996a, 1996b). Finally, 10 interviews (Appendix A) with practicing surdologs and surdopedagogs, working both for state organizations and in private centers, were conducted by the first author, who is a native of Russia and is fluent in both Russian and English. A number of employees were interviewed from the following institutions (Appendix B): Department of Audiology, Amplification, and Hearing/Speech Rehabilitation at the Federal Research/Clinical Ear-Nose-and-Throat Center of the Department of Health of Russian Federation, Center of Rehabilitation of the Deaf Otophone, Center of Correction of Hearing and Speech Melphone, and Department of Surdopedagogy of the Moscow State Pedagogical Institute. These sites were chosen because of their reputation as leading institutions in Russia in the field of audiology. Additionally, observations of the audiologic equipment and typical clinical procedures were made during visits to the above-named organizations.

AUDIOLGISTS IN RUSSIA

Surdologs

In Russia, a specialist who delivers audiologic services is called a surdolog, from the Latin “surdus,” meaning deaf (Museum of History of Russian Surdopedagogy, 2005). A surdolog is the main specialist in any hearing center. This professional performs a hearing evaluation, assesses a person’s communication difficulty, and makes the decision about the amount and type of help the patient needs. The same person fits the patients with hearing aids. Therefore, a Russian surdolog is analogous to an American audiologist in many ways.

History of profession. It was learned from interviewees that professional services for people with a hearing loss have traditionally been provided by ear-nose-and-throat-specialists. Before the 1960s, hearing aids could be obtained in a store of medical equipment where they were sold by acoustic engineers. By 1968, the government organized professional audiologic help, and the first hearing rehabilitation centers were founded at the state clinics and hospitals (Department of Health and Social Development of Russian Federation, 1968). By 1985, there were 119 hearing clinics in Russia. Ear-nose-and-throat doctors, working at these centers, were typically trained at the Moscow Research Institute of the Ear, Nose and Throat. This institution was founded in 1935 and has always been a center of research, education, and clinical practice in the field of audiology. Unfortunately, many hearing centers were not fully equipped and certainly were not able to provide the necessary diagnostic and rehabilitative services to all people with hearing loss. Children with a hearing impairment were at a disadvantage because their hearing loss often was left unidentified for years. But even children with a known hearing loss were not always properly monitored and treated. Consequently, in the 1980s and 1990s, the Russian government took a number of measures to extend and improve audiologic help to the population (Department of Health and Social Development of Russian Federation, 1985 & 1996b).

By 2004, according to the Minister of Health of the Russian Federation (Zurabov, 2004), there were 206 state centers providing audiologic help to the population and 157 private organizations involved in the sale and maintenance of hearing amplification devices. Federal help prompted the development of locally made hearing aids, which have been distributed free of charge to school-age children, older people, and people with disabilities. One of the most important government actions was adoption of Decree 335 of the Department of Health and Social Development of Russian Federation in 1996 (1996a). This decree announced the establishment of a new medical occupation in the health organizations of Russia, the surdolog, and described the scope of practice for this new profession.

Normative acts. All important rules and regulations in the field of audiology in Russia are developed by the Department of Health and Social Development of Russian Federation (1968, 1981, 1985, 1996a, 1996b). In order to acquire a certificate to practice as a surdolog, an individual must first obtain a medical degree and then complete one course related to the field of audiology (Department of Health and Social Development of Russian Federation, 1996a). In addition, all private organizations whose activity involves medical practice are required to receive a license from the state Department of Health. In order to comply
with the licensure requirements, all surdologs practicing in a private medical establishment are obliged to have a medical degree and a surdolog certificate. Additionally, a director of a hearing center must have at least 5 years of appropriate work experience before opening a practice. If a surdolog is working alone, the amount of previous work experience has to be at least 2 years. This license is valid for only 5 years. In order to renew it, all surdologs working at the center have to retake the certification course (Government of Russian Federation, 2002).

**Education.** Audiology is a profession that requires an extensive and complex preparation that should include both theoretical study and the development of practical skills. The interviewees reported that more than 6 years is required in order to become a surdolog in Russia.

First, future surdologs have to complete a 6-year program in medical school. During their studies in medical school, students have only one course concentrating on the diseases of the ear, nose, and throat. The study material of this course includes general information about the types and degrees of hearing loss. This course also covers some parts of an audiologic assessment: otoscopic examination, audiometric testing, and tympanometry. However, apart from the otoscopic examination, which all ear-nose-and-throat specialists are able to perform, students do not have an opportunity to work with the equipment and practice these skills.

After graduation, physicians can choose a desired specialization and complete a year of residency under the guidance of an experienced specialist. Future surdologs have to specialize as ear-nose-and-throat doctors. The amount and quality of the knowledge and skills students can receive during their clinical fellowship greatly depends on the particular placement. Unfortunately, most offices of ear-nose-and-throat specialists do not have the necessary audiologic equipment (Suprunov, 2004).

After completion of medical school, ear-nose-and-throat specialists may enter a certificate program in surdology. This program is a 2-month course that is available from the Academic Center of Surdology and Hearing Amplification of the Department of Health of Russian Federation, departments of ear-nose-and-throat disorders at various research institutes or medical schools, and some institutes of continuing education for physicians (Department of Health of Russian Federation, 1996a). For the majority of students, this course is their first chance to achieve the skills necessary to perform an audiologic assessment and to prescribe appropriate hearing amplification. This program consists of 24 lessons, or 144 hours of class, and covers the following topics: professional issues in surdology, anatomy and physiology of the hearing mechanism, speech science, types of hearing loss, methods of hearing testing, introduction to aural rehabilitation, hearing amplification, language development of the hard-of-hearing, and psychological characteristics of the hard-of-hearing. Every subject of this program requires a 1-hr or 2-hr lecture and 2 to 12 hr of clinical practice (Department of Health of Russian Federation, 2004). After the program is completed, students must take a comprehensive test that covers all course material.

It is obvious that even for a person with a medical degree, it would be extremely difficult to become a specialist in such a short time. Unfortunately, according to the Director of the Center of Audiology, Amplification, and Hearing/Speech Rehabilitation, many students choose to attend only some of the lessons, even though this course already appears to be very concise. When young surdolog specialists start to work, they often lack some basic skills and have to learn from their more experienced colleagues. Fortunately, most hearing aid companies organize regular seminars for practicing surdologs where they can learn more about a particular model of a hearing aid and advancements in the field. In addition, every 5 years, all surdologs have to take another 1-month course in surdology in order to renew their certificate (Department of Health of Russian Federation, 1996a). During this time, working professionals can refresh their knowledge and learn about new methods of testing or new types of amplification devices.

**Code of ethics.** Surdologs do not have their own code of ethics, but as all physicians, they must follow the Hippocratic Oath (Hippocrates, 400 B.C.E). According to the oath, a physician should treat all patients to the best of his or her abilities. Also, physicians cannot divulge medical information about their patients. Interviewees were in agreement that there are also some unwritten ethical rules that have been created by clinicians. For example, surdologs are expected to try different models of hearing aids on a patient before asking the consumer to make a final choice.

**Scope of practice.** According to the Decree of the Department of Health of Russian Federation 335 (1996a), there are three qualification categories of surdologs: advanced, first, and second. The regulations for qualification are the same for all physicians; professionals are placed into one of these categories according to their work experience and their results on a national examination. Additionally, they need to continue their education every 5 years. Initially, a professional does not qualify for any steps on the tier system. However, after 5 years of related work experience, a surdolog can apply for placement into the second category. The requirement for the first category is 7 years of experience, and for the advanced category, 10 years. An exception is made for those who have shown extraordinary achievements in the professional field. In such cases, the requirement for years of work experience may be waived. Thus, professionals can move from one category to the next according to their experience and/or professional accomplishments (Department of Health of Russian Federation, 1995). The main difference between the first and second categories is a right to teach. Whereas a surdolog of the second category can only train a nurse-audiometrist (a person who can perform an audiometric testing of hearing), a surdolog who ranks in the first category can also provide clinical and academic training to students in audiology. The duties of a surdolog of the superior category are the same as those of a surdolog of the first category; however, his or her level of professional expertise is considered superior (Department of Health of Russian Federation, 1996a).
The areas of practice of a surdolog that are similar to those of his or her American colleagues are the identification and assessment of hearing impairment, fitting of amplification, and cerumen management. A surdolog can also determine candidacy for a cochlear implant and further participate in the process of implantation, providing pre- and postsurgical assessment and audiologic monitoring of the patient. Additionally, unlike an American audiologist, a surdolog is a physician; consequently, he or she is also able to make a medical diagnosis and prescribe an appropriate treatment, including medications and surgery, for all ear, nose, and throat diseases. However, it was observed that practicing surdologs concentrate on hearing disorders and typically refer patients who need other medical treatment elsewhere.

A typical appointment with a surdolog includes otoscopic examination, air and bone conduction audiometry, and tympanometry. Speech audiometry was not conducted in any of the centers that were observed. Public hearing centers usually have auditory brainstem response (ABR) equipment and other devices necessary for the testing of children, but most private offices do not work with young children. This is due to the fact that at public hearing centers, all school-age children can receive free hearing aids from the government. If amplification is recommended, a surdolog takes ear canal impressions and then selects, fits, evaluates, and dispenses hearing aids and other amplification systems. Samples of different models of behind-the-ear hearing aids are kept at the center. Each center also has a technical laboratory where earmolds or custom aids can be made. Thus, patients can be fitted with different models of hearing aids and select the one they prefer. Effectiveness of the hearing aids is assessed by the patient’s satisfaction and the results of a speech test, which entails words whispered by the surdolog that the patient must repeat. No questionnaires or testing in the soundfield were used in any of the observed centers. Hearing aid checks and real-ear-measurements are typically completed by a laboratory technician. Technicians also clean, modify, and repair hearing amplification devices. Consequently, no shipping is required and repairs can be completed in less time.

Not all auditory impairments are a matter of concern for Russian surdologs. Typically, a surdolog concentrates on the peripheral diseases of the auditory function. No tests for the differentiation of the sensory and neural origin of the hearing loss are usually performed during a patient’s visit to a surdolog. In Russia, a neurologist usually assesses the neural function. Consequently, surdologs normally do not participate in the intraoperative monitoring of the VIII nerve during a surgery. Moreover, most hospitals do not have the equipment necessary for ABR measurements, so such monitoring is rarely done.

Surdologs commonly are not responsible for the provision of professional services to patients with auditory processing abnormalities. Consequently, of all of the surdologs interviewed, none of the professionals performed any testing for the assessment of the central auditory system, and none were aware of anyone who did. Both children and adults who have normal hearing sensitivity but still experience difficulties understanding speech are referred to a neurologist. After diagnosis of an auditory disorder is made by a neurologist, all habilitative and rehabilitative services are provided by speech therapists.

The practice of audiology in Russia does not include assessment, diagnosis, or treatment of vestibular function or tinnitus. Patients with balance disorders or who complain of tinnitus are referred to regular ear-nose-and-throat specialists and/or otoneurologists.

Many Russian surdologs are aware of the necessity of early detection and treatment of hearing loss in children. Unfortunately, until recently, there was no organized newborn screening. Typically, parents are considered to be responsible for the identification of hearing loss of their child. In 2001, only 16% of Russian children with hearing loss were identified before 3 years of age (Zagoryanskaya, Rumyantseva, & Danyak, 2003). In 1996, the Department of Health of Russian Federation promulgated Decree 108, which requires obligatory audiologic screening of newborns and infants who are at risk for a hearing loss (1996b).

Those who fail the screening are referred to a surdolog. However, interviewees reported that amplification is rarely attempted before 3 years of age. Decree 108 recommends using behavioral observation audiometry. In the United States, infants typically are tested using physiologic measures such as otoacoustic emissions or ABR (Joint Committee on Infant Hearing, 2000). Unfortunately, the interviewees explained that few hospitals and doctors’ offices in Russia are equipped with these devices.

School-age children are to be screened annually by an ear-nose-and-throat specialist (Department of Health of Russian Federation, 1996b). Unfortunately, no modern equipment is usually involved in the screening process. Typically, a child has to repeat three to five words that a physician is whispering. Of course, a child with a severe hearing loss would not be able to repeat those words. However, such a test is very subjective, with too many variables: noise level in the room, loudness of the physician’s voice and clarity of his or her pronunciation, difficulty of the chosen word, and so forth.

On the whole, many children do not receive annual screenings or hearing evaluations as needed. For example, in 2001, of the 37.3 million children in Russia, only 24.1 million were tested. Hearing impairments were identified in 57,500 children, but only 10,000 were referred to a surdolog (Zagoryanskaya et al., 2003).

When a significant hearing loss is identified, a surdolog has to participate with the medical teaching commission that makes the decisions about the placement of children with a hearing impairment in special schools and preschools for the deaf and hard-of-hearing. Surdologs also perform an annual hearing evaluation of all students enrolled in these educational establishments (Decree of the Department of Health of Russian Federation, 1996a).

Interviewees explained that even though one of the responsibilities of a surdolog is to perform regular hearing evaluations for workers who may be “at risk” for a hearing loss, surdologs rarely participate in the organization of hearing conservation programs. All norms and regulations regarding noise levels are developed by the public health offices. Noise regulations in Russia differ greatly from those in the United States. Although the Occupational Safety and Health Administration (OSHA) describes in detail
what steps should be taken in a conservation program (hearing tests, training, hearing protection) (OSHA, 2006). Russia does not address these issues in its regulations. However, there are regulations on excessive noise levels. These include ceiling level, impulse noise, and permissible exposure limit (PEL). Ceiling level, or the level at which no exposure is permitted for any time, is 135 dB SPL in Russia and 115 dB SPL in the United States. Impulse noise is capped at 125 dBA in Russia and 140 dB SPL in the United States. The PEL in Russia depends on the type of work performed and the frequency characteristic of the noise, whereas OSHA’s PEL is defined by the level and amount of exposure (OSHA, 2006; State Russian Public Health, 1996). Engineers responsible for the prevention of accidents follow the implementation of these noise regulations in industry. Every big company or organization either has its own medical clinic or uses a state hospital for medical help for their workers. An ear-nose-and-throat doctor working for the organization provides screenings to employees and refers all people with a suspected decrease in hearing sensitivity to a surdolog for further evaluation and treatment. Surdologs can also recommend and provide hearing protection devices.

Some surdologs engage in public education about hearing loss in which the topics of prevention and treatment are covered. For example, the Center of Correction of Hearing and Speech Melphone has an Internet magazine called Otoscope, which serves as a source of information to people with hearing impairments.

Certified surdologs may provide professional training to students in surdology. Practicing surdologs rarely participate in research. Most researchers in the area of normal and disordered auditory function are ear-nose-and-throat doctors who do not actively practice in the field of audiology.

Support personnel. A large hearing center in Russia, such as Melphone, usually has several types of support personnel: an audiometrist who is trained in pure-tone testing only, a technician who makes earmolds and shells for custom hearing aids, and another technician who checks and repairs amplification devices. An audiometrist in Russia is similar to support personnel for audiology in the United States. No professional education is required, and training is completed at the workplace by a supervising audiologist (ASHA, 1998). A laboratory technician’s role and training, however, are quite different. Those who work with earmolds and shells for aids receive training directly from hearing aid companies that provide the hearing centers with the devices. These technicians do have some type of bachelor degree before they start their training. The technician who repairs hearing aids has the strictest requirements in that only radio-electrical engineers can apply. They also receive training provided by the hearing aid companies. Commonly, in smaller facilities, there is no audiometrist, and surdologs perform all audiometric testing. However, all the centers that were seen, whether large or small, had a technician responsible for repairing hearing devices.

Surdopedagogs

Most Russian centers of hearing rehabilitation include a main office, a technical laboratory, and offices of surdologs and surdopedagogs. Whereas a surdolog concentrates on the medical and technical side of the hearing rehabilitation, a surdopedagog functions as a teacher, speech therapist, and even psychologist for people with a hearing loss.

History of profession. Surdopedagogy has developed as a branch of defectology (a science of education and development of children with physical or mental impairments) that concentrates on the problems of education and development of children with a hearing impairment, with the main goal focusing on speech and language development. First attempts at educating children with a severe hearing loss were noted in 1806, when the Petersburg School for the Deaf and Mute was founded. More schools soon followed. The first university preparing surdopedagogs, Central Institute for the Deaf, was also founded in Saint Petersburg in 1918 (Museum of History of Russian Surdopedagogy, 2005).

Interviewees from the Department of Surdopedagogy of the Moscow State Pedagogical Institute explained that the scope of practice for surdopedagogy has changed since the 20th century. At first, surdopedagogs practiced exclusively in residential schools for the deaf, but then gradually started working with children outside of special educational facilities, mostly in hearing rehabilitation centers or in regular schools. The State Research Institute of Defectology in Moscow is where most research in the field of surdopedagogy is conducted.

Normative acts. As surdopedagogs are considered to be teachers, their education and professional activity is controlled by the Department of Education and Science of Russian Federation (2005). This department develops requirements for education programs in the profession and for state certification of the graduates. Their statements also define the profession and determine the areas of professional practice and rules of professional ethics.

Education. To become a surdopedagog, a person must complete 5 years at the department of defectology of a College of Education. A program of study includes the following subjects: surdopedagogy; history of surdopedagogy; preschool surdopedagogy; general and special psychology; psychopathology; psychological diagnostics of children with a hearing impairment; anatomy, physiology and pathology of speech, hearing, and vision mechanisms; neuropathology; neurophysiology; audiology and hearing amplification; sign language; technical means and information technology in the education of people with a hearing impairment; human verbal development; speech therapy; and methods of teaching children with a hearing impairment. To become certified specialists, students also need to meet the following requirements: complete 20 weeks of supervised clinical practice in special schools and preschool establishments for children with a hearing impairment; write a master’s thesis; and pass the national standardized examination (Department of Education and Science of Russian Federation, 2005). Interestingly, there is a group of students with hearing impairments who are enrolled in the department of surdopedagogy. Their goal is to work as teachers at the special schools for the deaf and hard-of-hearing children.

Code of ethics. In order to comply with the state educational standard for graduate programs in surdopedagogy, surdopedagogs should provide high-quality
services using different methods of education; ensure a satisfactory level of preparation of school students; maintain the rights and freedom of students according to the Law of Russian Federation “About Education” and Convention on the Rights of a Child; continue their professional development throughout their careers; participate in the composition of educational guides and textbooks; follow the norms of labor and fire hazards safety and the rules for prevention of accidents; and protect the life and health of students during the educational process (Department of Education and Science of Russian Federation, 2005).

Scope of practice. Teaching general subjects at special schools for children with a hearing impairment is one of the two main areas of practice of surdopedagogs. All surdopedagogs are certified to teach the following subjects: Russian language, literature, mathematics, fine arts, and the basics of natural science (Department of Education and Science of Russian Federation, 2005). Another important area of practice for surdopedagogs is providing aural rehabilitation services. Rehabilitation services provided by surdopedagogs include auditory skill development, communication management, speech reading, speech and language development, psychosocial and vocational counseling to the child, and counseling to the parents (Department of Education and Science of Russian Federation, 2005). Speech and language development of young children is considered the most important professional activity of a surdopedag. During the training, special radio and tactile equipment may be used.

From the interviewees, some details about surdopedagogs’ responsibilities and employment settings were revealed. Typical work places of surdopedagogs are schools and preschool establishments, hearing rehabilitation centers, and medical organizations. Additionally, they can serve as members of multidisciplinary diagnostic commissions. A surdopedag working at a general public school or a preschool establishment helps children with a hearing impairment who are included in a regular classroom. In this case, apart from the regular audiologic rehabilitation services, a surdopedag also provides consultation to the parents and general educators about a hearing loss and its effect on the educational process. Additionally, a surdopedag monitors the academic success, social adaptation, and psychological well-being of the students. A surdopedag can also serve as a sign language interpreter.

Many surdopedagogs choose to receive a dual degree with a minor in special psychology. Such specialists can work as school psychologists or perform psychosocial counseling to people with a hearing impairment and their family members (Department of Education and Science of Russian Federation, 2005).

**DISCUSSION**

In general, the profession of audiology in Russia is emerging. Audiology in the United States is an independent profession with a broad scope of practice. However, in Russia, many functions that are typical for American audiologists are still performed by otologists, neurologists, and ear-nose-and-throat specialists. Moreover, the profession itself was not officially recognized until 1996 (Department of Health of Russian Federation, 1996a). In both countries, audiologists initially could only recommend but not sell hearing amplification devices, which typically were provided by hearing aid dispensers. In the United States, the dispensing of hearing aids became part of an audiologist’s professional responsibilities in the 1970s (Stach, 1998). However, hearing aids are still sold by hearing aid dispensers. In Russia, since 1981, hearing amplification is provided exclusively at hearing centers by surdologs (Department of Health of Russian Federation, 1981).

Professional standards for audiologists in the United States are administered by two professional organizations: ASHA and the American Academy of Audiology (AAA). Both organizations publish peer-reviewed journals that contain the results of the latest research in the field of audiology. ASHA and AAA also adapted two important documents that define the rights and responsibilities of American audiologists: a Code of Ethics and a Scope of Practice (ASHA, 2003, 2004a; AAA, 2004, n.d.). The first code describes the main principles and rules of ethics directed on implementation of the highest standards of the profession. The second document describes current practice activities within the profession of audiology. ASHA also manages accreditation for graduate programs in audiology (ASHA, 2004b). Furthermore, when entering a career as an audiologist, a person has the option to obtain the ASHA Certificate of Clinical Competence in Audiology (CCC) (ASHA, 1997–2005) or board certification through the American Board of Audiology (2005). Apart from the professional organizations, there are also laws in the United States that regulate the professional activity of audiologists. In most states, an audiologist must obtain a license in order to practice audiology. For example, in Illinois, the licensure requirements are defined by the Illinois Practice Act of Speech Language Pathology and Audiology (Illinois General Assembly, 2005). State requirements are usually very similar to the ASHA standards. Some government regulations regarding a practice of audiology are also contained in the Hearing Instrument Consumer Protection Act of 1987.

Unlike their American colleagues, Russian surdologs do not have their own professional organizations or journals. Research in the field of audiology is conducted at the departments of ear-nose-and-throat disorders, and studies are published in such journals as the Herald of Otolaryngology or the Russian Otolaryngology. All important decisions regarding audiology in Russia are made by the Department of Health of Russian Federation. This department defines the profession, delineates the places and content of education, organizes centers of hearing rehabilitation and offices of surdologs, and so on.

In both the United States and Russia, a specialization in audiology follows completion of a college degree. However, the applicants in these countries come from different educational backgrounds. Whereas American students who enter a graduate program in audiology have a bachelor’s degree, often in a related field such as speech pathology.
and audiology, surdologs are required to have a medical degree. In order to currently receive the right to practice audiology, an American applicant must have a graduate degree, obtain 375 hours of supervised clinical experience, complete a 36-week postgraduate clinical fellowship, and pass the national standardized examination (ASHA, 1997–2005). As of 2012, the entry level requirements for the field of audiology will entail a doctorate degree, 1820 hours of clinical experience, a 12-month external practicum, and a passing score on the standardized national exam (ASHA, 1997–2005). In contrast, a Russian applicant receives only superficial professional training (144 hours). However, he or she already has a degree in medicine and even a year of clinical practice as an ear-nose-and-throat specialist. The question arises as to whether this is adequate training for professionals in audiology.

Let’s take a closer look at the preparation of audiologists from an ear-nose-and-throat doctor. The initial impression might be that the Russian approach to the education of audiologists is well grounded in that no referral would be necessary for those patients needing medical attention. However, from observations from the site visits, it became evident that it simply would not be possible to provide every ear-nose-and-throat specialist with all the necessary equipment and training to become competent in the field of audiology. Conversely, because it is reported that only 4% to 7% of the Russian population suffers from a hearing loss (Zagoryanskaia et al., 2003), it may appear that the demand for the number of audiologists may be reduced. However, these data may be conservative because the Department of Health of Russian Federation reports a larger incidence of hearing loss to be around 8% (1996a).

In Russia, special centers for people with hearing difficulties are based in a general hospital/clinic or are founded as separate organizations. For example, a surdolog working in a hearing center does not practice as a typical ear-nose-and-throat specialist but fully concentrates on the problem of hearing loss. Of course, an extensive study of medicine is helpful in this area. However, a considerable part of the medical knowledge, which surdologs receive during their 6 years of study, is irrelevant.

The system of preparation of audiologists can only work in a country like Russia because of the financial peculiarities of its educational and medical systems. The preparation of a physician is relatively inexpensive in Russia when compared to a medical degree in the United States. A typical American physician invests a vast amount of money in his or her education but later enjoys a respectable income. The situation is quite different in Russia, where physicians are paid through government salaries. This is why working in a private center selling hearing instruments can attract some Russian physicians, as this business is much more profitable than a government job.

The ASHA Code of Ethics (2003) describes the fundamental principles and rules of ethical conduct that an audiologist should observe under all conditions of professional activities. This Code imposes a minimally acceptable professional behavior regarding the audiologist’s interactions with the public, patients, or other professionals. Any violation of this Code is considered unethical and can affect the individual’s certification or ASHA membership status (ASHA, 2002). There is no similar document in Russia. People working in the field of audiology observe the general rules for physicians or teachers depending on their job position.

There are also serious discrepancies in the scope of practice of audiologists and surdologs. American audiologists provide a broad range of professional services. These specialists “promote healthy hearing, communication competency, and quality of life for persons of all ages through the prevention, identification, assessment, and rehabilitation of hearing, auditory function, balance and other related systems” (ASHA, 2004a, p. 29). Audiologic tests can also be used by audiologists in neurophysiologic intraoperative monitoring of the central nervous system and evaluation of cranial nerve function. Apart from the fitting of amplification devices, habilitative and rehabilitative services provided by audiologists to people with a hearing impairment and their family members can include communication management, speechreading, auditory training, and counseling on hearing loss and amplification devices. An audiologist can also serve as a member of cochlear implant teams. Audiologic services to young children include supervision and conduct of newborn and school hearing screening programs. When working in public schools, educational audiologists oversee the provision and maintenance of all hearing amplification devices necessary for successful academic and social functioning of students with a hearing impairment, consult the school staff on all aspects of hearing, and participate in elaboration of individual family service plans (IFSPs) and individualized educational programs (IEPs). In addition to clinical practice, audiologists can become scientific researchers in the field of audiology. They provide information and training on hearing and balance mechanisms to the students in audiology and other professionals. Furthermore, they organize and manage hearing conservation programs in those branches of industry that involve hazardous noise levels and develop education programs for industry and the public (ASHA, 2004a).

The scope of practice for specialists working in Russia, which is defined by the Decree of the Department of Health of Russian Federation #335 (1996), is much more narrow. Their main task is the identification, assessment, and treatment of peripheral hearing disorders. Surdologs do not evaluate patients with auditory processing disorders or retrocochlear pathology. They do not assess or treat balance disorders. On the other hand, similar to their American colleagues, surdologs can participate in the management of cochlear implant patients. They also monitor and treat school-age children with a significant hearing impairment. Extensive rehabilitative services also are not within the scope of practice of a surdolog. All patients, especially children who need more help than just fitting of amplification, are referred to surdopedagogs. Similar to audiologists, surdologs provide information and seminars to both professionals and the general public on issues in audiology. They may also participate in hearing conservation or screening programs but rarely are directly responsible for them.
CONCLUSION

The professional standards of American and Russian audiologists are very distinct. Audiologists and surdologs come from different fields, and their responsibilities differ in both amount and content. The organization of audiologic help in these countries varies, but each one has its merits and demerits.

The method of preparation of audiologists in the United States appears more practical, expedient, and economical. There is a clear and consistent program of education from undergraduate to graduate level. Deep medical study is undoubtedly beneficial for audiologists, but this type of education does not necessarily prepare a professional to work with people with hearing impairments. Even though surdologs receive more extensive medical training, the list of their professional activities is significantly shorter than that of audiologists. Responsibilities of a typical American audiologist in Russia are divided between a surdolog, a surdopedagog, and a neurologist. Unfortunately, neither surdologs nor surdopedagogs have their own professional organization, and there is no common system of clinical and ethical rules for professional practice in the field of audiology in Russia. Professionals must follow their own judgment. There is also no agency that promotes the interests of surdologs and surdopedagogs or advocates for people with hearing disability. Another important matter is technological equipment. Unfortunately, few audiologic offices in Russia are sufficiently equipped with the latest technology. However, the Russian system does provide a more specialized discipline for audiology by dividing the medical/amplification practice for surdologs and the habilitation/rehabilitation for surdopedagogs. Also, Russian surdologs enjoy a more extensive background in the medical aspects of audiology. They are better prepared to make a medical diagnosis to pathologies related to the ear and hearing.

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APPENDIX A. POOL INTERVIEW QUESTIONS FOR PRACTICING PROFESSIONALS IN RUSSIA

1. What specialists perform hearing evaluations and provide professional services to the people with hearing loss in Russia?

2. Do you need a license in order to legally practice audiology in Russia?

3. What are the state requirements?

4. Tell me about your education. How do you become a surdolog? How do you become a surdopedagog?

5. What kind of degree do you have?

6. How long did you have to study?

7. When did you select your major?

8. What subjects did you study?

9. What textbooks or other materials did you use during your study?

10. What kind of clinical practice have you completed?

11. Are there any professional organizations for surdologs or surdopedagogs?

12. Are there any professional journals for surdologs or surdopedagogs?

13. Are there any professional rules of ethics for surdologs or surdopedagogs

14. What are the professional responsibilities of surdologs and surdopedagogs?

15. Who can legally dispense hearing aids in Russia?

16. What kind of equipment do you have in your office?

17. What tests can you perform?
APPENDIX A. POOL INTERVIEW QUESTIONS FOR PRACTICING PROFESSIONALS IN RUSSIA (continued)

18. Tell me about a typical hearing evaluation of a new patient.

19. What kind of procedure do you perform to fit a patient with hearing aids? How do you perform a hearing aid assessment?

20. Do you repair hearing aids?

21. Who is responsible for the treatment of patients who have the following disorders: auditory processing disorder, tinnitus, dizziness and balance problems, cranial nerve dysfunction?

22. Is there obligatory newborn screening in Russia? Are all infants tested or only those at risk? Who is performing screening?

23. Are there hearing conservation programs in Russia? Who is responsible for monitoring and treatment of workers?

24. Who is doing research in the field of audiology?

25. What kind of rehabilitative services are provided to the people with hearing loss?

APPENDIX B. INTERVIEWEES

<table>
<thead>
<tr>
<th>Site</th>
<th>Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Audiology, Amplification, and Hearing/Speech Rehabilitation at the Federal Research/Clinical Ear-Nose-and-Throat Center of the Department of Health of Russian Federation</td>
<td>Surdologs — 3 (including a director of a certificate program in surdology) Surdopedagog — 1</td>
</tr>
<tr>
<td>Center of Rehabilitation of the Deaf Otophone</td>
<td>Surdolog — 2 Surdopedagog — 1</td>
</tr>
<tr>
<td>Center of Correction of Hearing and Speech Melphone</td>
<td>Surdolog — 1 Surdopedagog — 1</td>
</tr>
<tr>
<td>Department of Surdopedagogy of the Moscow State Pedagogical Institute</td>
<td>Surdopedagog (professor) — 1</td>
</tr>
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