Editorial

Reimagining Audiology in China: Insights from the United States Model

Carol Pang[1†], Linjie Shi[2†], Yilai Shu[3,4,5,6], Yike Li[7*]

[1] *Health Science Center, East China Normal University, Shanghai, China*
[2] *Department of Hearing and Speech Sciences, Vanderbilt University Medical Center, Nashville, Tennessee, USA*
[3] *ENT Institute and Otorhinolaryngology Department, Eye & ENT Hospital, Fudan University, Shanghai, China*
[4] *NHC Key Laboratory of Hearing Medicine, Fudan University, Shanghai, China*
[5] *State Key Laboratory of Medical Neurobiology and MOE Frontiers Center for Brain Science, Fudan University, Shanghai, China*
[6] *Institutes of Biomedical Science, Fudan University, Shanghai, China*
[7] *Department of Otolaryngology-Head and Neck Surgery, Vanderbilt University Medical Center, Nashville, Tennessee, USA*
[*] *Corresponding author. E-mail: yike.li.1@vumc.org*
[†] *These authors contributed equally to this article.*

In an era where hearing health is increasingly recognized as essential to overall well-being, audiology stands at the forefront as a multidisciplinary field integrating medicine, psychology, neuroscience, engineering, linguistics, education, and more. Audiology is a profession that specializes in the assessment, diagnosis, treatment, rehabilitation, and prevention of hearing and balance disorders [1]. While both China and the United States share the common goal of advancing hearing healthcare, their approaches to audiology education, certification, and clinical practice differ significantly, shaping the profession in distinct and culturally specific ways. This article adopts a narrative comparison to highlight the structural and cultural factors shaping audiology in each country.

1 Education and Training

In the United States, audiology education started in the mid-1940s and has since developed into a well-structured and standardized system[2]. Aspiring audiologists typically pursue a four-year post-baccalaureate Doctor of Audiology (Au.D.) program that integrates rigorous academic coursework with extensive clinical training, with a few institutions offer accelerated three-year tracks. The curriculum covers hearing science, diagnostics, vestibular function, and rehabilitation, complemented by over 1,820 hours of supervised clinical practicum. As of 2025, there are 78 accredited Au.D. programs nationwide, providing a consistent and comprehensive pathway for professional preparation[3].

In contrast, China's audiology education, which began in the 1990s, is still evolving into a distinct professional discipline[4]. Training is primarily offered through interdisciplinary programs including Hearing and Speech Rehabilitation Science (Bachelor of Science), Educational Rehabilitation (Bachelor of Education), and Speech-Language-Hearing Rehabilitation Technology (vocational diplomas)[4]. However, there is no unified degree equivalent to the Au.D., and training standards vary widely across institutions. Approximately 30 universities and vocational institutions currently engage in audiology-related education and research, though many do not offer standalone audiology qualifications[4]. This fragmented landscape leads to inconsistencies in training quality and professional identity.

2 Certification and Licensing

The United States maintains a robust certification and licensure system. Audiologists must pass the Praxis exam and obtain state licensure, often supported by certification from the American Speech-Language-Hearing Association (ASHA) or the American Board of Audiology (ABA). These organizations establish national practice standards, administer specialty certifications (such as

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ASHA's Certificate of Clinical Competence in Audiology [CCC-A] and ABA's board certification programs), and advocate for the profession at policy levels. These credentials ensure clinical competence, ethical standards, and eligibility for insurance reimbursement. Additionally, certified audiologists must complete continuing education courses to maintain their licensure and stay current with evolving clinical practices.

China, however, lacks a nationally standardized certification or licensure system for audiologists, with no professional body possessing comparable regulatory authority. Credentialing is typically managed by individual universities or hospital-based training programs, leading to inconsistencies in clinical qualifications across regions. While some professionals gain recognition through affiliations with speech-language-hearing associations or ear, nose, and throat (ENT) departments, the absence of a cohesive national framework limits professional mobility and public recognition of audiology as an independent healthcare field.

3 Career Pathways and Professional Development

In the United States, audiologists benefit from a well-established professional landscape that supports a wide range of career trajectories. Beyond clinical roles, many pursue careers in academic research, public health, hearing technology development, and policy advocacy. Opportunities for specialization, such as pediatric audiology, vestibular science, or tinnitus management, are supported by advanced training programs and continuing education. The flexibility to work in diverse settings, including hospitals, private practices, K-12 educational systems, academic centers, industry, and increasingly via telehealth, allows audiologists to tailor their careers to their interests and expertise. Additionally, professional organizations like ASHA and the American Academy of Audiology offer structured pathways for leadership, mentorship, and lifelong learning.

In China, audiology remains in a transitional phase toward greater specialization, and career development is more limited in scope. Most audiologists are employed in hospital-based ENT or rehabilitation departments, with fewer opportunities for independent practice or academic advancement. Meanwhile, recent developments in hearing healthcare, including national policy initiatives and technological advancements such as digital hearing aids, cochlear implants, and tele-audiology, have expanded professional opportunities across clinical and commercial sectors. As public awareness of hearing health grows and educational programs continue to mature, more structured career pathways are expected to emerge, offering enhanced professional recognition and mobility.

4 Scope of Practice and Patient Access

In the United States, audiologists are recognized as autonomous healthcare providers, licensed to diagnose and manage hearing and balance disorders without physician oversight. Their scope of practice includes hearing aid and cochlear implant fittings, vestibular assessments, auditory rehabilitation, counseling, prevention, research, education, and advocacy[5]. These services are delivered through a person-centered care (PCC) model that emphasizes cultural sensitivity and psychosocial support to improve patient outcomes. Audiologists practice in a wide range of settings and serve as integral members of interprofessional healthcare teams. Broad insurance coverage, including Medicare, Medicaid, and private plans, supports access to care. As of 2025, over 14,000 certified audiologists are practicing in the United States, equating to approximately one audiologist per 23,000 people[6].

In comparison, audiologists in China are classified as "engineering technical personnel"[7] and typically work under the supervision of ENT specialists. Audiology is often viewed as a subspecialty of otolaryngology or rehabilitation medicine, limiting clinical autonomy. Most audiologists primarily conduct hearing assessments, with only a minority authorized to interpret results or select testing protocols independently[8]. Hearing aid and cochlear implant services are frequently provided by commercial vendors outside the hospital system, many of whom lack standardized training or regulation. Access to audiological care is uneven, with urban centers offering more comprehensive services than rural areas. Insurance coverage remains limited, particularly for adult services, and the physician-centered model contributes to fragmented care pathways. While official statistics are unavailable, estimates suggest there are fewer than 2,000 practicing audiologists in China, translating to roughly one audiologist per 700,000 people, significantly fewer than in the United States.

5 Clinical Standardization and Protocols

In the United States, audiology practice is guided by nationally standardized protocols and professional guidelines. Audiometric testing adheres to the American National Standards Institute (ANSI)/Acoustical Society of America (ASA) S3.6 standards, ensuring consistency in pure-tone and speech audiometry, tympanometry, and otoacoustic emissions[9]. Universal newborn hearing screening is mandated across all states, supported by structured follow-up systems that facilitate early diagnosis and intervention[10]. Hearing aid fittings adhere to evidence-based practices, including the recommended use of real-ear measurements, although clinician adoption varies[11]. Cochlear implantation for infants under 12

months was approved by the Food and Drug Administration in 2020, but practices vary among surgeons due to regulatory and insurance constraints[12]. Interprofessional practice (IPP) is well-established, with audiologists collaborating alongside ENTs, speech-language pathologists (SLPs), pediatricians, and educators. This collaboration model is reinforced by interprofessional education (IPE) embedded in training programs and institutional protocols[13].

By contrast, China is actively working to develop and implement unified clinical standards, though their application varies significantly across regions. While pure-tone audiometry is routinely performed, speech audiometry lacks consistency due to the absence of standardized testing materials and limited reimbursement. Newborn hearing screening has expanded significantly, achieving high coverage rates in urban areas, but rural regions still face high rates of follow-up loss[14]. Hearing aid fittings follow similar technical principles as in the United States, and cochlear implantation in infants under 12 months has been practiced for over a decade, reflecting a more proactive stance in pediatric intervention. However, the physician-led model limits the role of audiologists and SLPs, who are often viewed as technical support rather than clinical partners. Interprofessional collaboration remains underdeveloped, and IPE is not yet widely integrated into audiology training programs.

6 Insurance Coverage

In the United States, insurance coverage for audiology services is fragmented and varies by provider, plan, and state. Hearing diagnostics are generally covered when deemed medically necessary. Medicare Part B and Medicaid offer partial support, particularly for children under the Early and Periodic Screening, Diagnostic, and Treatment program[15]. Private insurers also provide coverage for diagnostic tests, though often with copays, deductibles, and strict medical necessity requirements. Hearing aids, however, are rarely covered. Medicare excludes them entirely, and only some Medicaid programs and private plans offer partial coverage, primarily for children. In contrast, cochlear implants are widely recognized as medically necessary and are comprehensively covered by Medicare, Medicaid, and most private insurers, with coverage rates ranging from 80%–100% of total costs[16].

China's public healthcare system provides broader coverage for hearing diagnostics, especially for infants and children, through Basic Medical Insurance (BMI) and regional health initiatives. Newborn hearing screening is widely implemented, with coverage exceeding 94% in many urban areas[17]. However, adult diagnostic coverage remains inconsistent and region-dependent. Hearing aids are generally not covered, though some local government programs provide them through public welfare projects[18]. Additionally, hearing aid costs are often higher than in the United States due to import pricing, creating further barriers to access. Cochlear implants receive substantial support, particularly for pediatric patients, with BMI covering 60%–80% of costs. Centralized procurement has significantly reduced device prices, from over CNY 200,000 to approximately CNY 50,000 (roughly USD 28,000 to USD 7,000), making them more accessible[19]. As in the United States, pediatric care is prioritized, while adult access remains limited and uneven.

7 China's Audiology: The Road Ahead

Despite notable challenges, audiology in China also presents promising opportunities. The growing demand, driven by the vast population with hearing loss and a rapidly aging society with 33% projected to be over age 60 by 2050[20–24], highlights the urgency for strategic development. Addressing this need may involve systemic reforms that draw from global best practices while remaining sensitive to China's unique cultural and healthcare context. Potential areas for advancement include redefining professional qualifications, modernizing service delivery models, and integrating emerging technologies. Progress in these domains could be reinforced by parallel improvements in education and regulation, supporting a skilled and sustainable workforce and transition toward a PCC model.

Education reform could begin with exploring the establishment of dedicated audiology programs, such as a clinical doctorate (comparable to the Au.D. in the United States), to prepare clinicians for independent practice. Embedding IPE within training may also help foster collaboration with ENT specialists, SLPs, and other allied professionals. Strengthening clinical partnerships between universities and hospitals, especially in underserved areas, will ensure practical, supervised experience. A national accreditation and certification framework is also essential to standardize training quality, define career pathways, and offer specialization tracks such as pediatric audiology, vestibular care, and cochlear implants.

Clinical practice reform is equally critical. It is important that China transition from a fragmented, biomedical model to an integrated PCC model that emphasizes holistic, patient-centered care. Despite advances in gene therapy and neural implants, most hearing loss remains medically untreatable, making the current disease-focused approach insufficient. This is reflected in China's hearing aid adoption rate, which remains below 10%, compared to 30%–50% in Western countries[25,26]. Encouragingly, PCC tools and methodologies have been adopted in over 200 clinics, with core principles incorporated into 12 university programs and segments of the hearing health

industry[27]. Building on this momentum, the Person-Centered Care Hearing Research Center (PCCHRC) has been established in 2025, aiming to advance PCC implementation through clinical care, training, research and advocacy[28]. To support long-term progress, it may be valuable to consider formally incorporating PCC in national certification standards. This would institutionalize patient empowerment, improve care continuity, and align with broader health initiatives such as the "Healthy China 2030" and the "Medical Humanities Enhancement Action Plan (2024–2027)."

8 Final Words

Audiology in both China and the United States is on a dynamic path of growth, shaped by distinct educational systems, certification frameworks, and healthcare infrastructures. The United States benefits from a mature, standardized model with clearly defined professional roles, while China is actively working to establish a more structured and autonomous audiology profession. As global awareness of hearing health continues to rise, both countries have opportunities to contribute to advancements in access, education, and patient-centered care. Through shared learning and international collaboration, they may help improve outcomes for individuals with hearing loss and support the broader development of audiology as a global discipline.

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Y.S. and Y.L. conceived the study, provided resources, and supervised the work. C.P. and L.S. drafted the manuscript, and all authors reviewed, edited, and approved the final version.

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