Mapping the Future of Otolaryngology: Utilizing Healthcare Workforce Projections in the Southern United States

Anna Benafield, MD., Ravi Sun, MD, Ph.D., Gresham T. Richter, MD,. Ozlem E. Tulunay-Ugur, MD
Department of Otolaryngology – Head and Neck Surgery, University of Arkansas for Medical Sciences, Little Rock, AR
AAO- HNSF 2026 Annual Meeting

BACKGROUND

The U.S. otolaryngology workforce is projected to face increasing demand over the next decade, driven by population growth, demographic change, and an aging physician workforce. National projections, however, may obscure important regional differences in workforce adequacy. The Southern United States is particularly relevant given its rapid population growth, substantial rural population, and geographic variation in physician distribution and training capacity. This study modeled otolaryngology workforce supply and demand across 16 Southern states through 2036 and evaluated the effects of changes in retirement and training output on future workforce adequacy. By 2036, modeled Southern workforce adequacy falls to 93.7% (≈257-ENT shortfall), with the largest gaps concentrated in rapidly growing states.

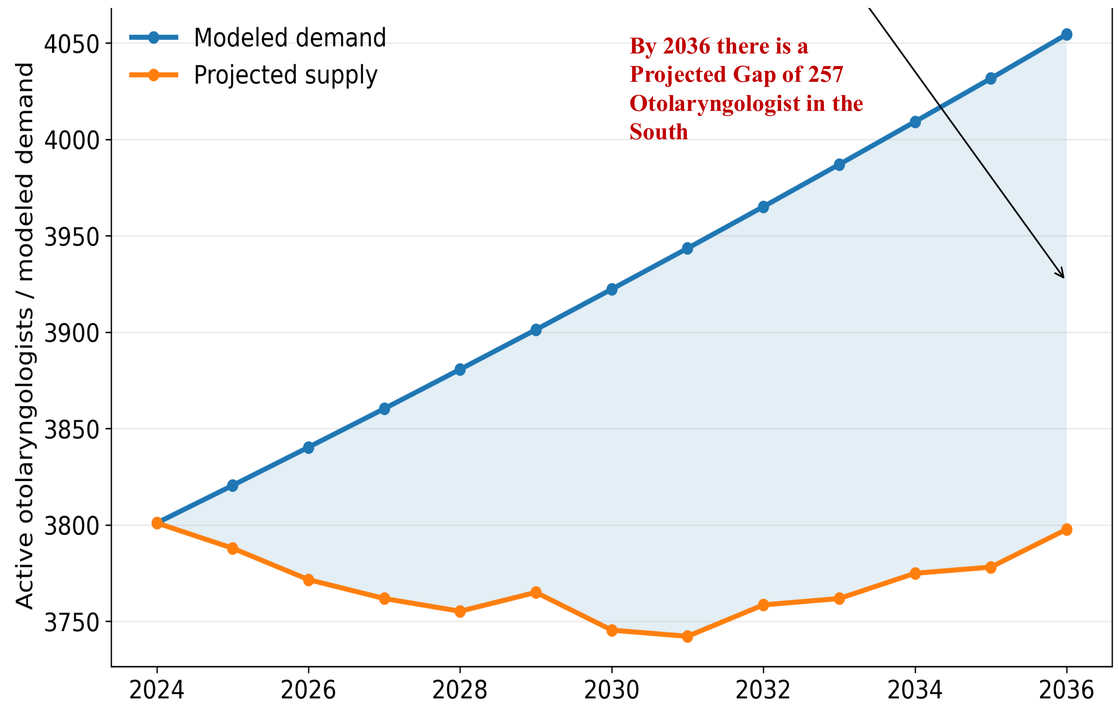


Figure 1. Projected Otolaryngology Supply and Demand, 2024–2036
Projected otolaryngology supply remains relatively stable while modeled demand increases through 2036. Under the status quo scenario, projected supply reaches 3,798 otolaryngologists compared with modeled demand of 4,054, corresponding to a net shortfall of approximately 257 physicians.

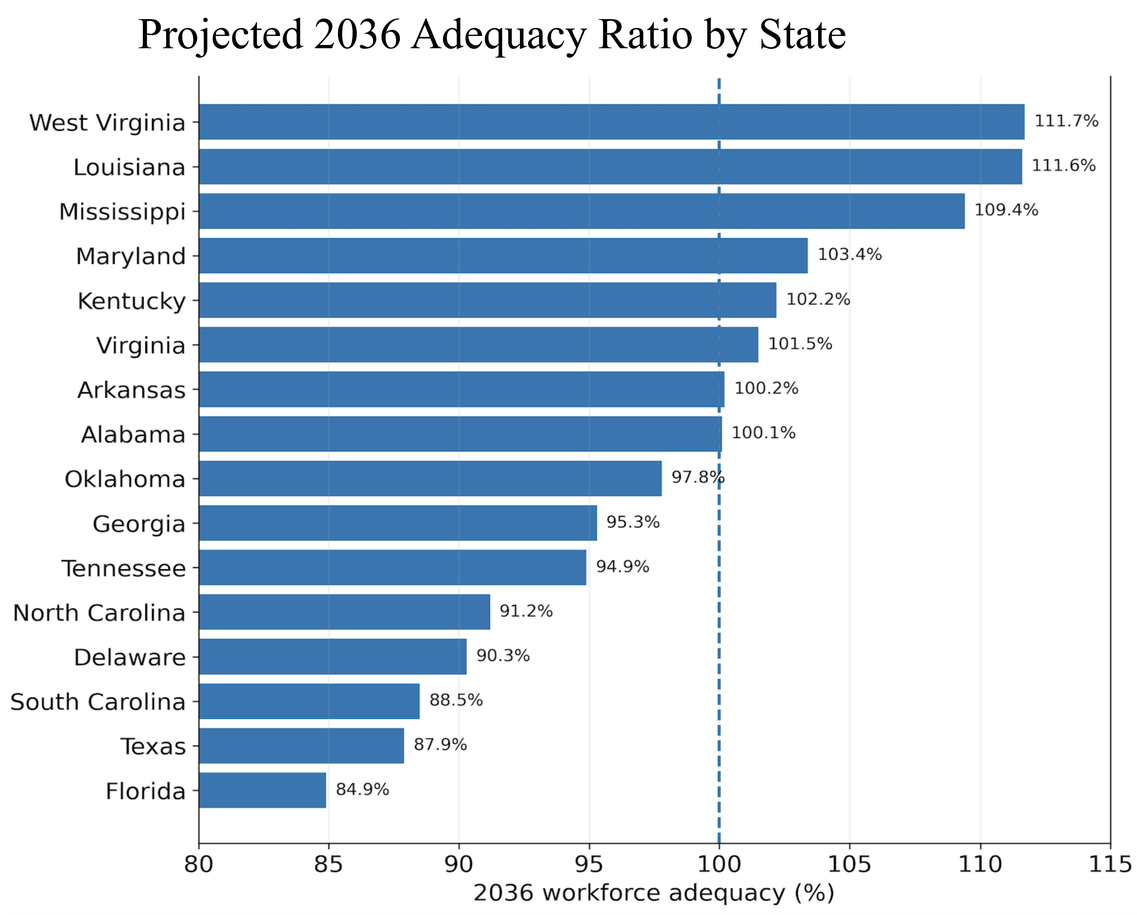


Figure 2. State-Level Workforce Adequacy in 2036
Projected workforce adequacy varied substantially across the 16 Southern states. Adequacy ranged from 84.9% in Florida and 87.9% in Texas to 111.6% in Louisiana and 111.7% in West Virginia. Values below 100% indicate projected supply below modeled demand.

METHODS

We developed a state-level scenario-based workforce projection model for the 16 states in the U.S. Census South Region, excluding the District of Columbia. Baseline otolaryngology supply was defined using 2024 AAMC active physician counts, and state population trends were derived from U.S. Census estimates. Published national otolaryngology supply and demand trajectories from the HRSA Health Workforce Simulation Model (HWSM) were adapted to project workforce changes through 2036. State-level demand was modeled relative to a 2024 supply-demand equilibrium and adjusted for projected national demand growth and state-specific population growth. Workforce adequacy was calculated as projected supply divided by modeled demand. Sensitivity analyses evaluated the effects of ±10% annual residency graduate output and ±2 years in physician retirement timing.

.

RESULTS

Across the 16-state region, 3,801 active otolaryngologists served approximately 132.0 million residents in 2024, corresponding to 2.88 otolaryngologists per 100,000 population. Under the status quo scenario, regional otolaryngology supply remained nearly unchanged through 2036 (3,798 physicians), while modeled demand increased to 4,054, resulting in 93.7% workforce adequacy and a modeled net shortfall of approximately 257 otolaryngologists.

Substantial state-level variation was observed. Projected 2036 workforce adequacy ranged from 84.9% in Florida and 87.9% in Texas to 111.6% in Louisiana and 111.7% in West Virginia. Increasing graduate output by 10% improved regional adequacy to 97.5%, whereas a 10% reduction decreased adequacy to 89.8%. Delaying retirement by 2 years increased adequacy to 95.8%, compared with 91.1% with retirement 2 years earlier.

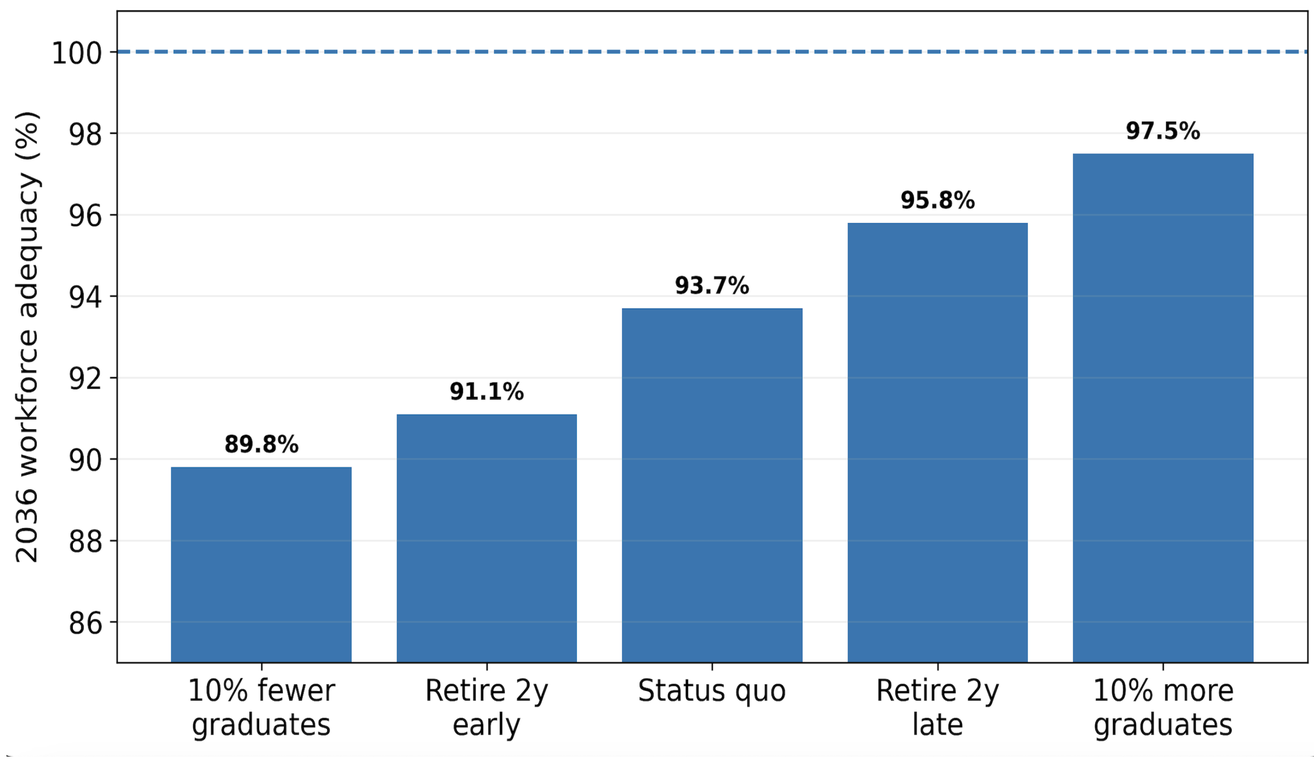


Figure 3. Sensitivity Analysis of 2036 Workforce Adequacy
Changes in graduate output and retirement timing meaningfully affected projected regional workforce adequacy. Adequacy ranged from 89.8% with a 10% reduction in graduate output to 97.5% with a 10% increase in graduate output; no modeled scenario reached 100% adequacy by 2036.

CONCLUSIONS

Otolaryngology workforce adequacy in the Southern United States is projected to decline through 2036, with substantial state-level variation. Relatively stable physician supply and increasing modeled demand produced a projected regional adequacy of 93.7%. Training output and retirement timing meaningfully influenced future adequacy, highlighting the importance of geographically targeted workforce planning.

SELECTED SOURCES
AAMC U.S. Physician Workforce Data Dashboard (2024; AMA PPD). Berisha L, et al. Laryngoscope Investig Otolaryngol. 2025;10:e70142. U.S. Census Bureau Population Estimates Program.
Berisha L, Patel AM, Nguyen A, Patel RV, Patel SM, Choudhry HS, Bahethi R, Wassef DW, Cowan PT, Mir GS, Filimonov A. Otolaryngology Workforce Projections in the United States, 2021-2036. Laryngoscope Investig Otolaryngol. 2025 May 24;10(3):e70142. doi: 10.1002/lio2.70142. PMID: 40416774; PMCID: PMC12102661.
Pillsbury, H.C., Cannon, C.R., Holzer, S.E.S., Jacoby, I., Nielsen, D.R., Benninger, M.S., Denneny, J.C., Smith, R.V., Cheng, E.Y., Hagner, A.P. and Meyer, G.S. (2000), The Workforce in Otolaryngology-Head and Neck Surgery: Moving into the Next Millennium. Otolaryngology–Head and Neck Surgery, 123: 341-356. https://doi.org/10.1067/mhn.2000.109761
American Academy of Otolaryngology–Head and Neck Surgery , ed., The Otolaryngology Workforce in the U.S.: Demographic and Geographic Characteristics, 2023rd ed. (American Academy of Otolaryngology–Head and Neck Surgery, 2023), https://www.entnet.org/wp-content/uploads/2024/09/2023-Otolaryngology-Workforce.pdf. [Google Scholar]
American Academy of Otolaryngology–Head and Neck Surgery , The 2022 Otolaryngology Workforce (AAO-HNS, 2023), www.entnet.org/wp-content/uploads/2022/07/2022-Otolaryngology-Workforce.pdf. [Google Scholar]
Sreeram A, Gourin CG, Saraswathula A. Quantifying Patient Demand for Otolaryngologists in the United States. Laryngoscope. 2026 Jul 30. doi: 10.1002/lary.70770. Epub ahead of print. PMID: 42530351.
J. Zeitouni, H. May, H. Seo, et al., " Geographic Trends and Geospatial Analysis of Head and Neck Fellowship-Trained Surgeons," Head & Neck 48, no. 1 (2026): 125–133, https://doi.org/10.1002/hed.70016.

Contact: acbenafield@uams.edu