

**Speech Language Pathology and Audiology Workforce in Kentucky**

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## Introduction

Speech language pathology and audiology are often conceptualized as similar practices; however, the two professions address very different issues. Each specialty has specific requirements, programs that are offered at specific schools, and require special training after education is complete. Both speech language pathologists (SLP) and audiologists (AUD) report to the Kentucky Board of Speech-Language Pathology and Audiology. Both disciplines are required to update their licensures and complete a set number of continuing education credits each year. This paper's purpose is to examine the workforce landscape of SLPs and AUDs with special attention given to the distribution of the workforce across the state of Kentucky. As well as looking at the unique challenges faced by rural communities as it pertains to access to hearing and speech specialists.

### *Educational Requirements*

A master's degree or equivalent is required to practice speech-language pathology. Each SLPs must complete nine months of full-time postgraduate professional experience. Speech-language pathologists must also pass the national Praxis exam in speech-language pathology. Audiology requirements are similar, however, requires a doctorate degree instead of a Master's degree.

### *Speech Language and Audiology Educational Programs in Kentucky*

Kentucky currently has six speech language pathology programs at various universities. However, there is only one audiology degree program in the state, which is at the University of Louisville (American Speech Language Hearing Association [ASHA], 2021). This huge inequity in programs shows a missing piece in hearing care in Kentucky. In surrounding states, there are only two audiology programs remotely close to the rural region of Eastern Kentucky, Eastern Tennessee University and University of Tennessee, Knoxville. No audiology programs are located in rural areas, and only two of the schools offer remote learning. The geographical locations of schools and limited opportunity for remote learning limits access to the programs. Rural students interested in becoming audiologists likely must leave their communities to pursue the degree.

<b>School</b>	<b>Degree</b>	<b>Remote Learning</b>
Brescia University	MS	Yes
Eastern Kentucky University	MA	No
Murray State University	MS	No
University of Kentucky	MS	No
University of Louisville	MS	No
Western Kentucky University	MS	Yes

Table 1. Speech Language Pathology programs in Kentucky

## **Speech Language Pathology**

According to the American Speech Language Hearing Association (n.d.), SLPs work with individuals of all ages, in settings such as private practices, physician offices, hospitals, schools, and rehabilitation centers, to address language issues as well as issues such as feeding and swallowing in younger and older people. Speech Language Pathologists assess, diagnose, treat, and help to prevent communication and swallowing disorders in children and adults, including related cognitive or social communication problems (Bureau of Labor Statistics, n.d.). Clients may be unable to speak at all, they may have difficulty speaking, have voice disorders, or may have rhythm and fluency problems, such as stuttering. A SLP may specialize in a specific age group, such as children or the elderly, or they may focus on treatment for a specific communication or swallowing problem, such as those resulting from strokes, trauma, or a cleft palate.

### ***Speech Language Pathology Job Outlook***

According to the Kentucky Occupational Outlook, the current employment of SLPs is 2,133. In the same report, the projected employment of SLPs in 2026 is 2,413, which equates to a percent change of 13.1%. The average wage for SLPs is \$81,961. The United States employment of SLPs is projected to grow 29% from 2020 to 2030, much faster than the average for all occupations (Bureau of Labor Statistics, nd).

## **Audiology**

Audiologists (AUDs) focus on the vestibular system by identifying and treating issues related to hearing and balance (John Hopkins, n.d.). Similar to SLP, AUDs work with individuals from birth to elder adults and are responsible for fitting hearing devices. Audiologists diagnose, manage, and treat patients who have hearing, balance, or related problems (Bureau of Labor Statistics, n.d.). Audiologists diagnose conditions such as hearing loss and tinnitus. Treatment depends on the type and severity of a patient's hearing loss and may range from cleaning wax out of ear canals to fitting and checking hearing aids. In addition to their work-related to hearing conditions, AUDs help patients who have vertigo or other balance problems. Most AUDs work in healthcare facilities, and some work in schools or for school districts and travel between facilities. Audiologists typically need a doctorate of audiology degree to enter the occupation. All states require audiologists to be licensed.

### ***Job Outlook***

The employment of AUDs is projected to grow 16% from 2020 to 2030 (Bureau of Labor Statistics, n.d.). About 800 openings for audiologists are projected each year, on average, over the decade in the United States. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force. The average income for an AUD is approximately \$78,950 per year.

## **Methods**

Data was retrieved from the Kentucky Board of Speech-Language Pathology and Audiology in 2021. Fields in the SLP data include Name, License Type (all SLP), Legacy #, License number,

disciplinary actions, status, issue date, renewal date, expiration date, first name, last name, address, city, state, and postal code. Frequencies were analyzed using IBM SPSS Version 26.

## Results

### *Speech-Language Pathology*

All cases (3,137) within the dataset are listed as active. Within the data, only 1,843 (41.2%) cases have state-level data included with licensure information. Of that data, 1,237 (67%) cases are working in Kentucky. When controlling cases working in Kentucky, 99.2% (1,227) had no disciplinary actions associated with their license data.

Of the data with state-level data available, 1,215 had county-level and city-level data available. Top cities include Louisville (223), Lexington (133), Bowling Green (58), Owensboro (52), and Richmond (32). Fifteen cities were missing from the data. Table 2 provides the available cities recorded in county-level data by region. The majority of SLPs are working in urban counties (62%) as compared to rural (38%). Only 15% are working in Appalachian and 6% within the Delta county area.

### *Audiology*

There were significantly fewer cases in the Audiology data as compared with the Speech Language Pathology data. Fields in the AUD data include Name, License Type (all SLP), Legacy #, License number, disciplinary actions, status, issue date, renewal date, expiration date, first name, last name, address, city, state, and postal code.

The data was comprised of 278 cases. All cases (278) were active. Of the 278 cases, 57.6% (160) of the data is complete with the state. The largest number of Audiologists licensed in Kentucky are practicing in Kentucky (134 of 160 or 84%). The majority of AUDs are working in urban counties (81%) as compared to rural counties (19%) (Table 2). Only around 5% of AUDs work within the Delta county area.

**Table 2**

	<b>SLP Number (%)</b>	<b>Audiologist Number (%)</b>
<b>Appalachian</b>	177 (15)	13 (10)
<b>Rural</b>	461 (38)	26 (19)
<b>Urban</b>	754 (62)	108 (81)
<b>Delta</b>	71 (6)	6 (5)
<b>Total</b>	1,463	153

The data produced by the Kentucky Board of Speech Language Pathology contained many missing fields, including state-level fields, which makes determining where individuals are practicing impossible. There is a large discrepancy in the numbers gleaned from the data compared to the numbers published in the Kentucky Job Outlook to 2026 report. This could be attributable to the missing data within the dataset acquired from the licensure board.

## **Rural Needs and Challenges in SLP and AUD**

Although there is a shortage in all of Kentucky for audiologists and speech language pathologists, we see a particular need in rural areas for these fields. There are two main rural regions in Kentucky, Eastern, and Western Kentucky. Both of these regions are highly reliant on the business of agriculture and with that comes heavy machinery accompanied by hearing loss (KCDHH, 2021). In rural regions, hospitals and health centers do not have the capacity to support both of these professions, and more often than not, healthcare provider locations are left choosing between speech and hearing specialists, and physical and occupational therapists (The Blue Mountain EAGLE, 2022).

There is also a lack of interest in coming to rural areas for recent graduates because you cannot specialize in rural areas due to a lack of professionals in the area, especially those with a specialization. Most times, audiologists and speech language pathologists are practicing generally in their fields and cannot specialize (The Blue Mountain EAGLE, 2022). The need for this profession is great in rural areas, but both the workforce and the capacity to support the workforce are not there at this time. More programs are needed in rural areas, as are expanding healthcare provider locations in order to address the need for SLPs and AUDs in rural areas.

## **Discussion**

Using the licensure data, it is evident there is a maldistribution of Speech Language Pathologists and especially Audiologists. Only 38% of SLPs and 19% of AUDs are working in rural counties despite the majority of Kentucky's population living in rural areas (United States Census Bureau, 2021)). This maldistribution follows the same trends as other medical professionals such as medical doctors, nurses, and dentists (Howard, 2022; Thompson, 2021; Thompson, Slone, & Feltner, 2021).

In order to determine the workforce, shortages, and create effective solutions, it is imperative to access complete data. Moving forward further analysis is needed to determine where the missing cases are practicing within our state. Offering incentives for individuals to work in rural, offering access to education programs, and providing student loan repayment services have proven effective in other medical professions and may need to be considered for the SLP and AUD professions.

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