Survey Methodology, Respondent Demographics, and Glossary

For additional information, please contact
Jeanette Janota, Surveys & Analysis Team
American Speech-Language-Hearing Association
Rockville, MD 20850
800-498-2071, Ext. 8738
jjanota@asha.org
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Executive Summary

The American Speech-Language-Hearing Association (ASHA) conducted a survey of speech-language pathologists (SLPs) in the spring of 2023. We designed the survey to provide information about health care–based service delivery and to update and expand information gathered during previous SLP Health Care Surveys. We have presented the results in a series of reports.

We drew samples from six types of health care facilities: general medical, Veterans Affairs (VA), military, long-term acute care (LTAC), or university hospitals; home health agencies or clients’ homes; outpatient clinics or offices; pediatric hospitals; rehabilitation (rehab) hospitals; and skilled nursing facilities (SNFs).

**Highlights**

- The survey was fielded in February, March, and April, 2023 via postal mail.
- The response rate was 34.5%.
- 90% of the respondents were primarily clinical service providers.
- 69% of the respondents were employed full time.
- 51% received primarily an hourly wage.
- Regarding years of experience, the median was 14; the mean was 16.
- 2% had earned a doctoral degree.
- 39% worked in the South.
- 42% were employed in suburban areas.
Survey Methodology

Fieldings

The survey was mailed on February 2, 2023, to a stratified random sample of 5,000 ASHA-certified SLPs who were employed in health care settings in the United States. Individuals who returned their surveys were removed from second (March 6) and third (April 18) mailings. Each survey had 29 questions in Arial 11-point font on 11 in. × 17 in. white paper, folded to 8.5 in. × 11 in. and printed in a format of two columns per page on four pages. Surveys were designed in Teleform to be scannable.

We personalized cover letters with the sample member’s name and address and mailed them under the signature of ASHA’s chief executive officer.

Each mailing consisted of a personalized cover letter, a numbered survey, and a #10 postage-paid business return envelope inserted into a #11 window envelope with an ASHA return address. Metered postage was at the full, first-class rate. In addition, a be-on-the-lookout email was sent to all sample members on February 16.

Weighting

Because facilities with few SLPs (e.g., pediatric hospitals) were oversampled and those with many (e.g., SNFs) were undersampled, weighting was used when presenting data to restore all groups to their actual proportion in the population of ASHA SLPs (see Table 1).

<table>
<thead>
<tr>
<th>Facility</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical, Veterans Affairs (VA), military, long-term acute care (LTAC), university hospital</td>
<td>11,197</td>
<td>900</td>
</tr>
<tr>
<td>Home health agency or clients’ homes</td>
<td>8,555</td>
<td>800</td>
</tr>
<tr>
<td>Outpatient clinic or office</td>
<td>21,539</td>
<td>1,000</td>
</tr>
<tr>
<td>Pediatric hospital</td>
<td>2,332</td>
<td>660</td>
</tr>
<tr>
<td>Rehabilitation (rehab) hospital</td>
<td>4,352</td>
<td>740</td>
</tr>
<tr>
<td>Skilled nursing facility (SNF)</td>
<td>11,246</td>
<td>900</td>
</tr>
<tr>
<td>Total</td>
<td>59,221</td>
<td>5,000</td>
</tr>
</tbody>
</table>
As an incentive, ASHA offered the opportunity for one participant to win a $500 Amazon.com gift card. That one person was randomly selected from the 1,602 SLPs who asked to be included in the drawing.

A total of 1,677 surveys were returned, with 1,602 of them requesting to be in the pool for the Amazon.com gift card.

We designed a methodological experiment into the survey. We randomly selected half of the SLPs to receive a survey form in black and white (control group) and half to receive one with some color graphics (experimental group). Response rates are in Table 2.

The question of interest is this: Will adding some color to the survey instrument increase the likelihood that SLPs will complete and return the survey?

Although the response rate for the surveys with color exceeded that of surveys without color (see Table 2), the difference was not statistically significant ($z = 0.793, p = .214$).

Members of the original sample who (a) had undeliverable mailing addresses, (b) were retired, or (c) were not currently employed in a health care facility were deleted from the calculation of the response rate. The net sample size was reduced from 5,000 to 4,863, resulting in a response rate of 34.5% (see Table 2).

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Total</th>
<th>No color</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original sample size</td>
<td>5,000</td>
<td>2,500</td>
<td>2,500</td>
</tr>
<tr>
<td>Undeliverable mailing address</td>
<td>42</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>Ineligible: Retired</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Ineligible: Other reasons</td>
<td>89</td>
<td>44</td>
<td>45</td>
</tr>
<tr>
<td>Net sample size</td>
<td>4,863</td>
<td>2,433</td>
<td>2,430</td>
</tr>
<tr>
<td>Number of respondents</td>
<td>1,677</td>
<td>826</td>
<td>851</td>
</tr>
<tr>
<td>Response rate</td>
<td>34.5%</td>
<td>33.9%</td>
<td>35.0%</td>
</tr>
</tbody>
</table>
**Data Entry**

We fielded the survey with a scannable, paper form. Data entry was limited to verifying each response on the scanner and making corrections by hand where the scanner misidentified answers. The ASHA staff member with primary responsibility for the survey corrected or deleted erroneous responses.

**Nonresponse**

Not only is it typically the case that some individuals who receive a survey do not complete it (unit nonresponse), but it is likewise true that some who return their surveys do not answer every question (item nonresponse) and thus do not qualify for inclusion in portions of a report. The survey originator may exclude these individuals from analyses because they did not answer a question at all or because their answer disqualified them (such as stating that they were employed part time when a particular analysis was limited to full-time employees). For example, among the 1,677 SLPs who responded, only 1,612 were included in reporting on their primary employment facility because they

- indicated that they had ASHA certification (i.e., the Certificate of Clinical Competence) in Speech-Language Pathology (CCC-SLP);
- indicated that they were employed full time or part time; and
- identified the type of employment facility where they were employed.

**Demographics**

The closer the match between survey respondents and the population of ASHA health care–based SLPs from which they were drawn, the more validity there is in generalizing from the sample to the population—that is, the more truth there is in saying that the people who answered the survey questions represent the broader group from which they were selected. Demographic variables that are present in both the membership database and the survey include primary employment function, highest earned degree, and region of the country. Primary employment facility also appears in both databases but is not included in the comparison because the survey sample was stratified by oversampling and undersampling that variable (see Table 1). Table 3 shows the comparison for the three remaining characteristics that were available from both the membership database and the survey.
Table 3: Comparison of Respondents With Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ASHA’s Health Care Population</th>
<th>Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical service provider</td>
<td>86%</td>
<td>90%</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Region of the country:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>Midwest</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>South</td>
<td>43%</td>
<td>39%</td>
</tr>
<tr>
<td>West</td>
<td>18%</td>
<td>19%</td>
</tr>
</tbody>
</table>

More respondents worked in outpatient clinics or offices than in any other type of facility (see Table 4). Because a disproportional random sample was drawn from each facility, this distribution does not reflect the distribution of SLPs within the Association.

Table 4: Primary Employment Facility

<table>
<thead>
<tr>
<th>Facility</th>
<th>Unweighted (n = 1,608)</th>
<th>Weighted (n = 1,617)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical, VA, military, LTAC, university hospital</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>Home health agency or client’s home</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>Outpatient clinic or office</td>
<td>30%</td>
<td>41%</td>
</tr>
<tr>
<td>Pediatric hospital</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Rehabilitation hospital</td>
<td>12%</td>
<td>7%</td>
</tr>
<tr>
<td>SNF</td>
<td>15%</td>
<td>18%</td>
</tr>
<tr>
<td>Other health care facility</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

We have included the 12 (weighted value) individuals who reported working in an other facility in the ASHA 2023 Health Care Survey Reports only as part of the total, not as a separate category of facility, because of the ambiguous nature of this small group of individuals.
All of the SLPs whose responses were included in the analyses worked either full time (69%) or part time (31%). SLPs who worked in general medical, VA, military, LTAC, or university hospitals were more likely than those in other types of facilities to work part time (42%), and SLPs in SNFs were more likely than SLPs in other types of facilities to work full time (76%; \( p = .000 \)).

As a group, 51% of the SLPs received primarily an hourly wage; 33%, primarily an annual salary; and 16%, primarily a per-visit payment.

Individuals in pediatric hospitals were the most likely group to be paid an annual wage. More than half of the SLPs in general medical, VA, military, LTAC, and university hospitals, in rehab hospitals, and in SNFs received an hourly wage. Half of the SLPs in home health agencies or clients’ homes received a per-visit wage (\( p = .000 \); see Figure 1).

**Figure 1: Salary Basis**

<table>
<thead>
<tr>
<th>Location</th>
<th>Annual</th>
<th>Hourly</th>
<th>Per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medical/VA/Military/LTAC/University</td>
<td>34%</td>
<td>65%</td>
<td>1%</td>
</tr>
<tr>
<td>Home Health</td>
<td>24%</td>
<td>26%</td>
<td>51%</td>
</tr>
<tr>
<td>Clinic/Office</td>
<td>43%</td>
<td>40%</td>
<td>17%</td>
</tr>
<tr>
<td>Pediatric</td>
<td>56%</td>
<td>44%</td>
<td>0%</td>
</tr>
<tr>
<td>Rehab</td>
<td>46%</td>
<td>53%</td>
<td>1%</td>
</tr>
<tr>
<td>SNF</td>
<td>2%</td>
<td>88%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Note. \( n = 1,594 \).

The median number of years of experience was 14, and the mean was 16. The median number of years ranged from 11 in rehab hospitals to 16 in home health agencies or clients’ homes. The mean number of years ranged from 15 years in rehab hospitals and in outpatient clinics or offices to 18 years in home health agencies or clients’ homes and in SNFs (\( p = .001 \)).
In previous iterations of the *ASHA Health Care Survey*, respondents were asked to identify whether they were clinical service providers or administrators or supervisors. Beginning in 2021, the categories were expanded to three options.

- 89% of SLPs who were employed full- or part time were primarily clinical service providers.
- 9% were primarily administrators or supervisors who saw some patients.
- 2% were exclusively administrators or supervisors.

Only 2% (n = 32) of the SLPs reported having received a doctoral degree. Too little data are available in some facility categories to test whether responses vary by facility type.

More than one third (39%) of the SLPs worked in the South. The rest were fairly evenly distributed—with 16% working in the Northeast, 19% in the West, and 26% in the Midwest (not shown in any table). The region where SLPs worked varied by facility type (p = .000; see Figure 2). See the state-by-state listings for each geographic region on page 10.

### Figure 2: Geographic Region

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Northeast</th>
<th>Midwest</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medical/VA/Military/LTAC/University</td>
<td>14%</td>
<td>25%</td>
<td>37%</td>
<td>24%</td>
</tr>
<tr>
<td>Home Health</td>
<td>23%</td>
<td>20%</td>
<td>40%</td>
<td>18%</td>
</tr>
<tr>
<td>Clinic/Office</td>
<td>10%</td>
<td>27%</td>
<td>41%</td>
<td>23%</td>
</tr>
<tr>
<td>Pediatric</td>
<td>14%</td>
<td>33%</td>
<td>37%</td>
<td>16%</td>
</tr>
<tr>
<td>Rehab</td>
<td>15%</td>
<td>26%</td>
<td>42%</td>
<td>17%</td>
</tr>
<tr>
<td>SNF</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note. n = 1,598.
Population Density

Few SLPs worked in rural areas (15%); most worked in either city or urban areas (44%) or in suburban areas (42%). Facility type was significantly related to population density ($p = .000$; see Figure 3).

![Figure 3: Population Density](image)

Note. $n = 1,570$.

Glossary

In this section, we include a glossary of terms used in the ASHA 2023 SLP Health Care Survey Reports. Respondents self-identified for each of the variables, below.

**Facility Type:**
- General medical, Veterans Affairs (VA), military, long-term acute care (LTAC), or university hospital
- Rehabilitation (rehab) hospital
- Pediatric hospital
- Skilled nursing facility (SNF) or subacute care facility
- Home health agency or client’s home
- Outpatient clinic or office
- Other

**Function:**
- Primarily clinical services provider (e.g., SLP)
- Primarily administrative or supervisory, but I do see some patients
- Exclusively administrative or supervisory
| Employment Status | Employment status:  
|                   | □ Employed full time  
|                   | □ Employed part time |
| Population Density | Population density:  
|                   | □ City/urban area  
|                   | □ Suburban area  
|                   | □ Rural area |
| Highest Degree | Highest degree:  
|                 | □ Master’s  
|                 | □ Clinical doctorate (e.g., SLPD, CScD)  
|                 | □ Research doctorate (i.e., PhD)  
|                 | □ Other doctorate, specified |
| Experience | Number of years employed in the speech-language pathology profession, excluding their clinical fellowship |
Regions of the Country

Northeast
- Middle Atlantic
  - New Jersey
  - New York
  - Pennsylvania
- New England
  - Connecticut
  - Maine
  - Massachusetts
  - New Hampshire
  - Rhode Island
  - Vermont

South
- East South Central
  - Alabama
  - Kentucky
  - Mississippi
  - Tennessee
- South Atlantic
  - Delaware
  - District of Columbia
  - Florida
  - Georgia
  - Maryland
  - North Carolina
  - South Carolina
  - Virginia
  - West Virginia
- West South Central
  - Arkansas
  - Louisiana
  - Oklahoma
  - Texas

Midwest
- East North Central
  - Illinois
  - Indiana
  - Michigan
  - Ohio
  - Wisconsin
- West North Central
  - Iowa
  - Kansas
  - Minnesota
  - Missouri
  - Nebraska
  - North Dakota
  - South Dakota

West
- Mountain
  - Arizona
  - Colorado
  - Idaho
  - Montana
  - Nevada
  - New Mexico
  - Utah
  - Wyoming
- Pacific
  - Alaska
  - California
  - Hawaii
  - Oregon
  - Washington
### Response Rate

The response rate was calculated using the following equation:

\[
RR = \frac{(C + P)}{S - (Ret + I)}
\]

where

- \(RR\) = Response rate
- \(C\) = Number of completed surveys
- \(P\) = Number of partial surveys
- \(S\) = Sample size
- \(Ret\) = Ineligible because of retirement
- \(I\) = Ineligible for other reasons (e.g., does not work in health care, no longer in the field, on leave of absence)

\[
RR = \frac{(1,677)}{5,000 - (6 + 131)} = 34.5\%
\]

### Measures of Central Tendency

**Mean:** Add the total of all values and divide by \(n\).

**Median:** Arrange the values in order, from lowest to highest. Select the value in the middle position.

**Mode:** The value that occurs more often than any other.

**Example:** Sample data set

1, 1, 7, 34, 88

Mean: \((1 + 1 + 7 + 34 + 88) / 5 = 26.2\)

Median: 7

Mode: 1

Because medians are more stable and less sensitive to extreme values than are means, we use medians as the most commonly presented statistic in the ASHA 2023 SLP Health Care Survey Reports.
We present results from the ASHA 2023 SLP Health Care Survey in a series of reports at [www.asha.org]:
- Survey Summary Report: Number and Type of Responses
- Caseload Characteristics
- Workforce
- Practice Issues
- Annual Salaries
- Hourly and Per-Visit Wages
- Survey Methodology, Respondent Demographics, and Glossary


For additional information regarding the ASHA 2023 SLP Health Care Survey, please contact Monica Sampson, director, Health Care Services in Speech-Language Pathology, 800-498-2071, ext. 5686, [msampson@asha.org](mailto:msampson@asha.org).

ASHA would like to thank the SLPs who completed the ASHA 2023 SLP Health Care Survey. Reports like this one are possible only because people like you participate.

Is this information valuable to you? If so, please accept invitations to participate in other ASHA-sponsored surveys and focus groups. You are the experts, and we rely on you to provide data to share with your fellow members. ASHA surveys benefit you.

10/11/23