Not Without Us

MDCR
MICHIGAN DEPARTMENT OF CIVIL RIGHTS

A Census and Needs Assessment
for Michigan's Deaf, DeafBlind, and Hard of Hearing Communities

September 18, 2019

Contents

Welcome to the
Not Without Us Census and
Needs Assessment Viewbook

The following document presents selected findings from the statewide needs assessment of Michigan's Deaf, DeafBlind, and Hard of Hearing populations, with a focus on elevating areas of disparity and barriers to services and supports. For complete results of the needs assessment, please see the appendix.

Project Overview: Components, Partners, Steering Team Composition and Role

In the summer of 2017, the Michigan Department of Civil Rights Division on Deaf, DeafBlind and Hard of Hearing (the division) launched a project to conduct a census and comprehensive needs assessment of Michigan's Deaf, DeafBlind, and Hard of Hearing (DDBHH) communities to better understand the barriers faced by Michiganders with different levels of hearing and identify opportunities for the division to support them. This is the first statewide census of these communities in nearly 30 years and is the first effort to understand their unique needs and preferences.

Components

The project was divided into the following four phases:

- **Literature review:** A review of research studies focused on DDBHH communities to identify best practices for working with individuals with varying levels of hearing.
- **Census:** A randomized phone survey in nine regions of the state to determine the prevalence of households in which a member identifies as part of a DDBHH community or reports a hearing loss. This data was used to estimate the total population of individuals who identify as a member of a DDBHH community.
- **Needs assessment:** A comprehensive survey on circumstances where an individual with a different level of hearing might face barriers. The final needs assessment totaled 154 questions and covers demographics, communication preferences, education and employment, housing and transportation, healthcare and access to services, and priorities for Michigan in service provision.
- **Community conversations:** Public meetings during which survey results will be presented to community members. Discussion will be facilitated to ask what these results mean in the day-to-day reality of a DDBHH community member; how the needs assessment results are similar to or different from their day-to-day experiences; and, potentially, what opportunities exist for the division to address any identified inequities.

Project Team

The division contracted Public Sector Consultants (PSC) in Lansing as well as the Madonna University Department of Sign Language Studies (Madonna University) in Livonia to complete this project. PSC serves as project manager and provides expertise in meeting facilitation, marketing and communications, report writing, data visualization, and survey design and evaluation. Madonna University provides expertise and strategic counsel on Michigan's DDBHH communities, personal connections with these communities, meeting space, interpretation and translation services, and videography services.

Steering Team

It is important that all materials produced through this project, but particularly the survey and final report, are culturally sensitive and relevant to issues faced by Michigan's DDBHH communities. To ensure that all materials meet that requirement, a volunteer steering team of DDBHH individuals has been convened regularly. The steering team's eight members provide strategic counsel to the project team, review and approve the survey questions and final report, and serve as the primary project ambassadors to share information with their social circles and broader communities when possible. The list of steering team members can be found in the appendix of this report.

Census Survey: Methodology, Benchmarks

One of the key project objectives was to estimate the size of the DDBHH communities in Michigan. To achieve this, the project team conducted a short telephone survey of households across nine regions of the state using a sample of both landlines and cell phones. Respondents were asked if they or someone in their household identify as a member of a DDBHH community. The regions sampled were roughly aligned with the regional divisions used for Michigan's online interpreter search system; however, some regions were combined and others were split to balance population size and ensure concentrated sampling in regions of interest. These survey results were then used to estimate the percentage of individuals in each region as well as the state of Michigan as a whole who identify as members of a DDBHH community.

Census Survey: Results, Geographic Diversity

The total estimated population of Michiganders who identify as a member of a DDBHH community is 733,356—approximately 7.4 percent of the state population, based on a statewide population estimate of 9,893,096 The majority of this population identifies as Hard of Hearing (632,825), followed by Deaf/deaf (45,853), and DeafBlind (10,165).

Exhibit 1. Estimate of Statewide Population Size

DDBHH Identity	Lower Bound	Point Estimate	Upper Bound
Deaf/deaf	0.45%	0.46%	0.48%
DeafBlind	0.10%	0.10%	0.11%
Hard of Hearing	6.19%	6.40%	6.61%
Other	0.44%	0.45%	0.46%
Total	**7.17%**	**7.41%**	**7.66%**

DDBHH Identity	Lower Bound	Point Estimate	Upper Bound
Deaf/deaf	44,352	45,853	47,353
DeafBlind	9,833	10,165	10,498
Hard of Hearing	612,121	632,825	653,529
Other	43,057	44,513	45,969
Total	**709,363**	**733,356**	**757,349**

The percentage of individuals in a region who identify as Deaf, DeafBlind, or Hard of Hearing varies from region to region. For example, in Mid-Michigan and the Upper Peninsula, 22.3 percent of households include at least one individual who identifies as a member of a DDBHH community, compared to 15.8 percent of households in Macomb, Oakland, and St. Clair Counties and only 11.8 percent in the city of Detroit.

Exhibit 2. Estimated Incidence of People Who Are Deaf, DeafBlind, and Hard of Hearing by Region

Percentage of individuals ■ Percentage of households
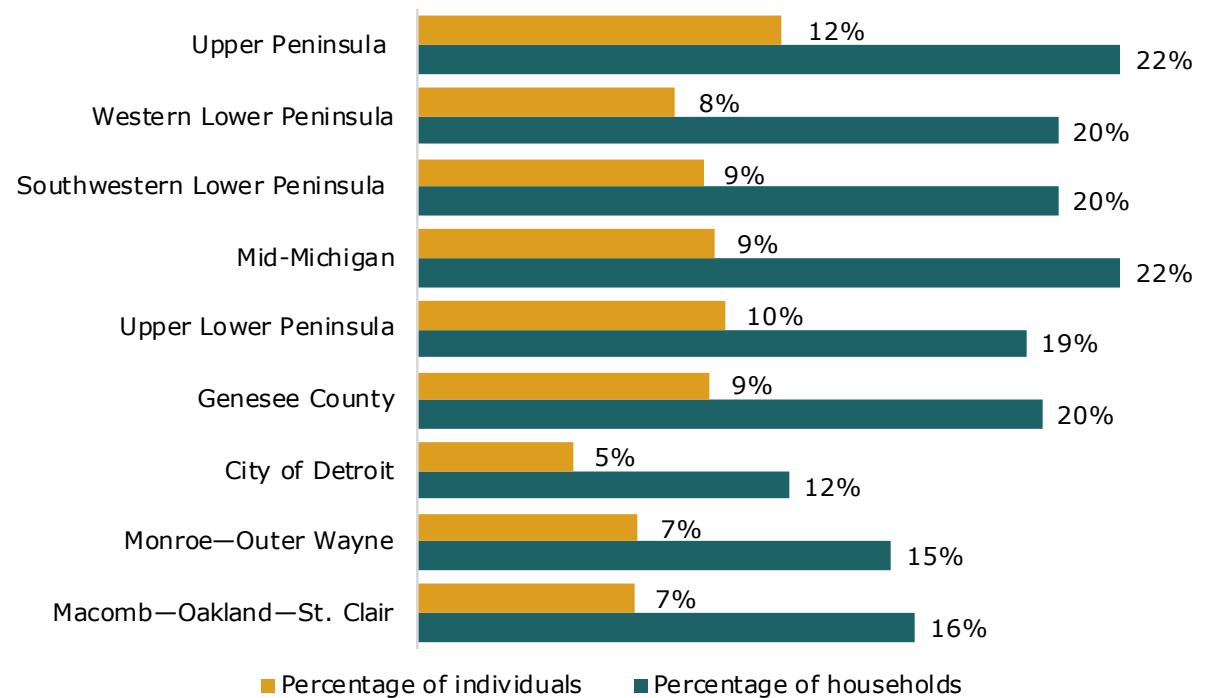
Region	Percentage of Households	Percentage of Individuals
Upper Peninsula	22%	12%
Western Lower Peninsula	20%	8%
Southwestern Lower Peninsula	20%	9%
Mid-Michigan	22%	9%
Upper Lower Peninsula	19%	10%
Genesee County	20%	9%
City of Detroit	12%	5%
Monroe–Outer Wayne	15%	7%
Macomb–Oakland–St. Clair	16%	7%

N = 3,600

Population Estimate

Exhibit 3. Michigan Estimates

Study	Deaf/deaf	DeafBlind	Hard of Hearing	Other	Total
Not Without Us (2018)	0.46%	0.10%	6.40%	0.45%	7.41%
American Community Survey (2017)	Not applicable	Not applicable	Not applicable	Not applicable	3.90%
Market Opinion Research (1989)	0.10%	Not applicable	3.70%	Not applicable	3.80%

Exhibit 4. U.S. Estimate

Study	Deaf/deaf	DeafBlind	Hard of Hearing	Other	Total
Gallaudet Research Institute (2006)	0.38%	NA	3.68%	Not applicable	4.06%

Needs Assessment Overview: Survey Domains, Engagement of Steering Team, Survey Deployment

The needs assessment covers all areas of an individual's life where they might face barriers due to having a different level of hearing, with a focus on areas of life where the State could help to address inequities. As such, the final needs assessment totaled 154 questions and covered demographics, communication preferences, education and employment, housing and transportation, healthcare and access to services, and priorities for Michigan in service provision. The steering team reviewed and approved all content for the need's assessment, ensuring that the instrument was accessible, relevant, and culturally sensitive.

The online needs assessment routed respondents to the questions most relevant to them based on their DDBHH self-identification and responses to prior questions. This advanced skipping pattern meant that no survey respondent had to answer all 154 questions. Lastly, to ensure that the survey was accessible for all individuals, every survey question and potential response was provided in both written English and in embedded American Sign Language (ASL) videos.

Needs Assessment: Respondent Description, Representativeness

The survey respondent sample trends slightly older than the state as a whole, but that is to be expected considering the known relationship between aging and changes in hearing and sight. The survey reaffirmed this knowledge, with 28 percent of Hard of Hearing respondents being 65 and over.

Exhibit 5. Age Distribution of Survey Respondents by Hearing Level Identity

■ Deaf/DeafBlind   ■ Hard of Hearing
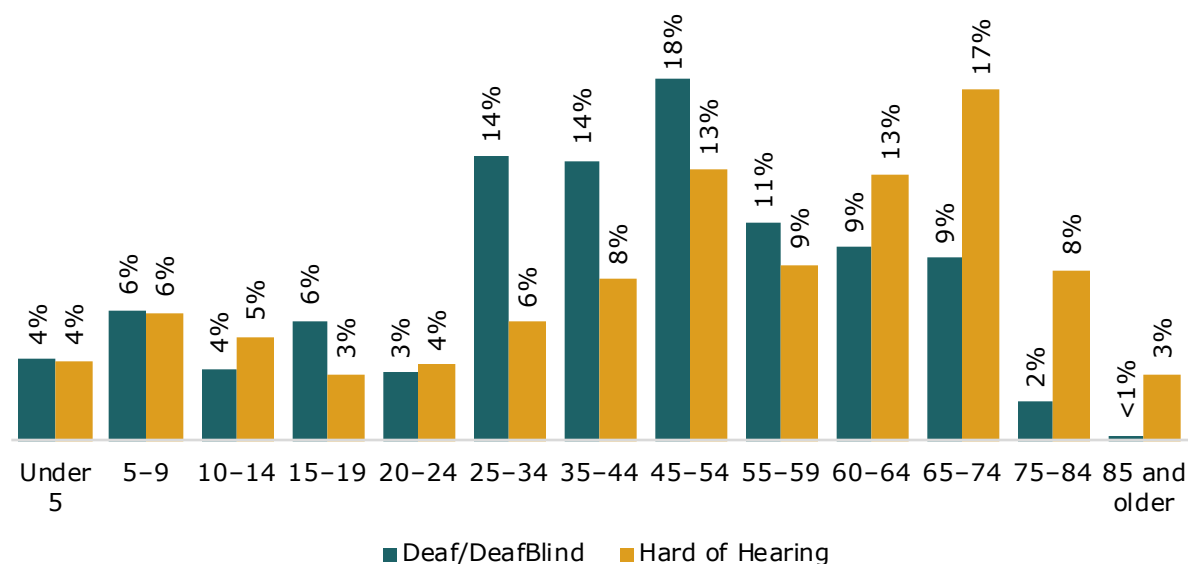
Age	Deaf/deaf and DeafBlind	Hard of Hearing
Under 5	4%	4%
5–9	6%	6%
10–14	4%	5%
15–19	6%	3%
20–24	3%	4%
25–34	14%	6%
35–44	14%	8%
45–54	18%	13%
55–59	11%	9%
60–64	9%	13%
65–74	9%	17%
75–84	2%	8%
85 and older	Less than 1%	3%

N = 852

The majority of survey respondents, 57 percent, are aged 45 years or older; however, average age varied by DDBHH identity, with an average age of 48 for Hard of Hearing respondents and 41 for Deaf and DeafBlind respondents. Among the DDBHH identity groups, the most frequently reported age varied, for Hard of Hearing respondents the largest cohort were respondent aged 65–74 at 17 percent of all Hard of Hearing respondents, compared to Deaf/deaf and DeafBlind individuals for whom the largest cohort were those aged 45–54 at 18 percent of that group.

Exhibit 6. Age Distribution of Survey Respondents as Compared to the State
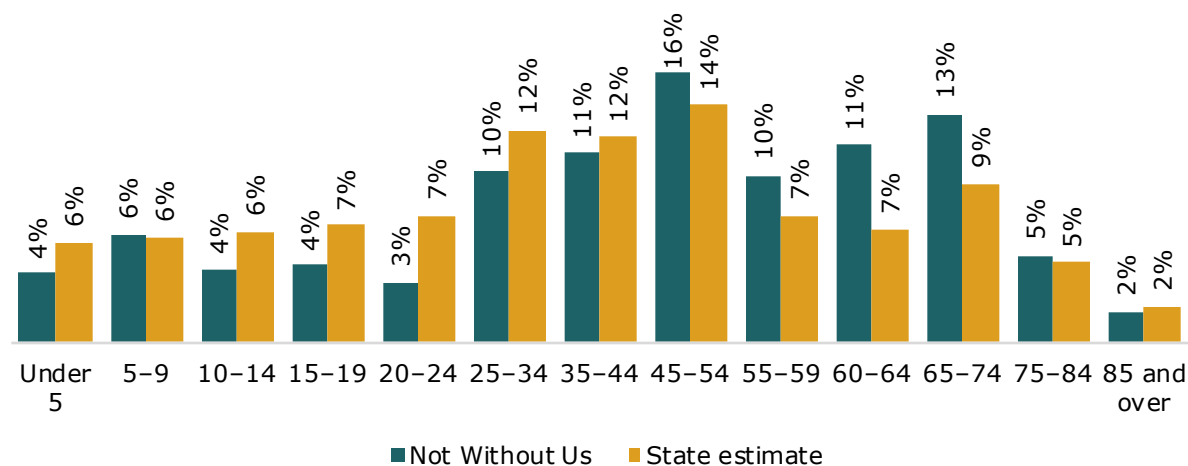
Age	Not Without Us	State Estimate
Under 5	4%	6%
5–9	6%	6%
10–14	4%	6%
15–19	4%	7%
20–24	3%	7%
25–34	10%	12%
35–44	11%	12%
45–54	16%	14%
55–59	10%	7%
60–64	11%	7%
65–74	13%	9%
75–84	5%	5%
85 and older	2%	2%

N = 851

Source: U.S. Census Bureau. n.d. "2013–2017 American Community Survey Five-year Estimates." *American Community Survey*. Accessed July 25, 2019. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

The sample was not representative of the state as a whole in terms of the respondents' self-identified gender, with 60 percent of responds identifying as female and 39 percent identifying as male compared to a nearly even split when considering statewide information. Around 1 percent of the sample identified as transgender. All other respondents chose "other" or skipped this question.

The Deaf/deaf and DeafBlind and Hard of Hearing samples were similar in their proportionate racial distribution makeup.

Exhibit 7. Gender Distribution of Survey Respondents as Compared to the State

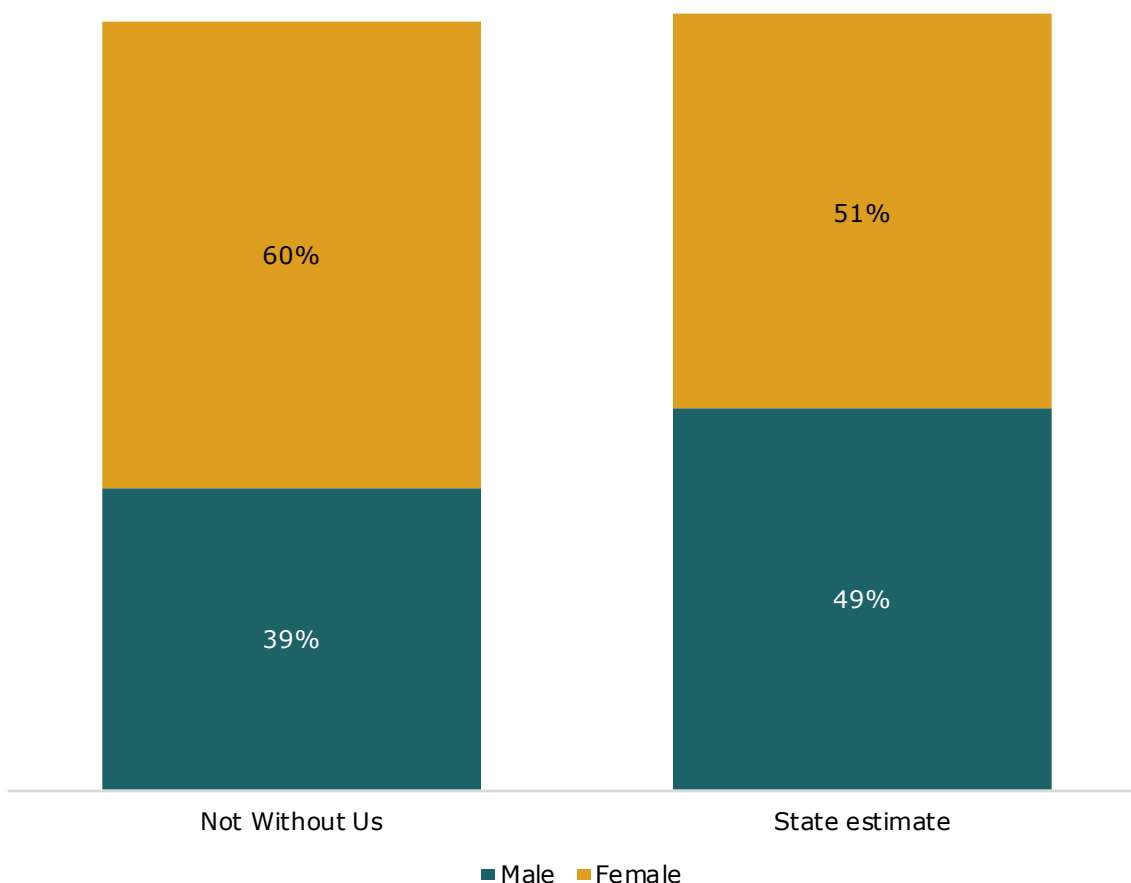| Gender	Not Without Us	State Estimate
Female	60%	51%
Male	39%	49%

N = 860

Source: U.S. Census Bureau. n.d. "2013–2017 American Community Survey Five-year Estimates." *American Community Survey*. Accessed July 25, 2019. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

The percentage of the sample that identifies as white is 88 percent and overall the needs assessment sample is not representative in terms of race and ethnicity when compared to the full state population. The percentage of the needs assessment sample identifying as black, Native American, or Hispanic was lower than the percentages of these groups in the statewide population. This under sampling is evident in the graph, which includes statewide population estimates for these racial and ethnic groups. For example, the percentage of black respondents in the sample is 10 percentage points lower than the percentage of black Michiganders in the state population. In social science research, race is consistently shown to have an effect on outcomes related to educational attainment, income, housing, and other factors. Given the relatively small sample size of people of color in the needs assessment, the opportunities to examine the impact of race on the experience of an individual who is also a member of a DDBHH community is limited. This under sampling could be caused by a number of factors, but points to an opportunity for focused outreach to these communities in the future.

Exhibit 8. Comparison of Minority Racial and Ethnic Distribution of Survey Respondents Against State Estimates

■ Not Without Us ■ State estimate
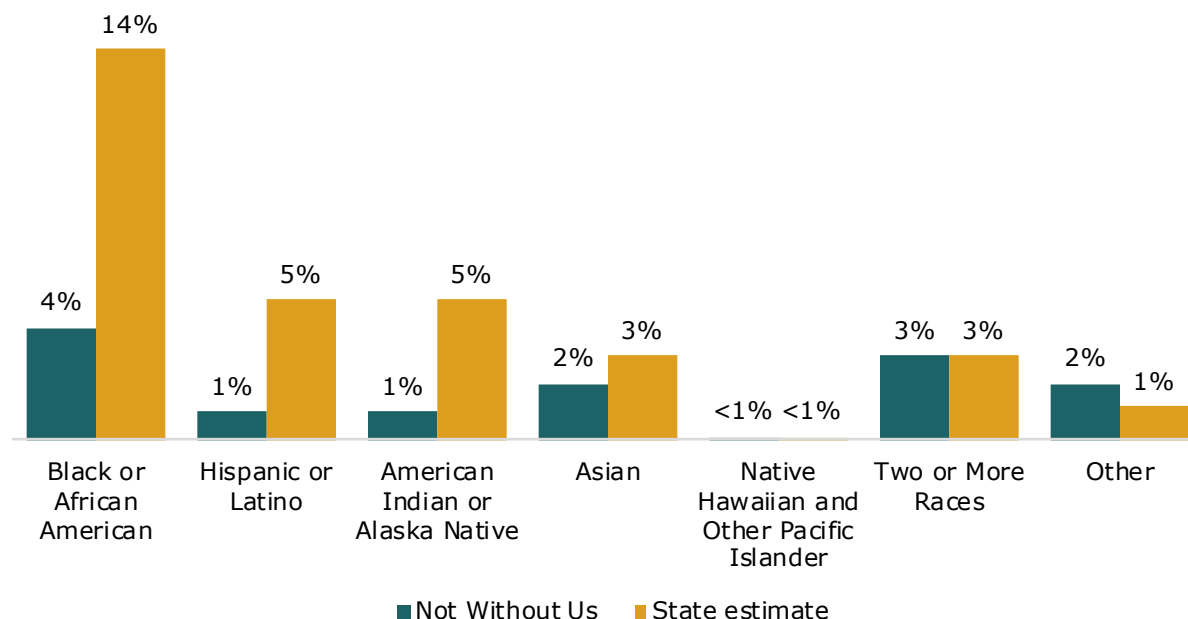
| Race and Ethnic Distribution	Not Without Us	State Estimate
Black or African American	4%	14%
Hispanic or Latino	1%	5%
American Indian or Alaska Native	1%	5%
Asian	2%	3%
Native Hawaiian and Other Pacific Islander	Less than 1%	Less than 1%
Two or More Races	3%	3%
Other	2%	1%

N = 851

Source: U.S. Census Bureau. n.d. "2013–2017 American Community Survey Five-year Estimates." *American Community Survey*. Accessed July 25, 2019. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

Demographic Characteristics: Deaf/deaf and DeafBlind and Hard of Hearing Identity

The needs assessment was not representative of the ratio of DDBHH community members estimated in the census. The majority of respondents identified as Hard of Hearing at 49 percent of the total sample, followed by Deaf/deaf and DeafBlind at 44 and 5 percent respectively. Nearly 1 percent of respondents self-identified as not fitting into a specific DDBHH community and were grouped as "Other". This group included individuals with unilateral hearing loss, central auditory processing disorder, and many others.

Exhibit 9. Types of Hearing Identity Statewide Based on Census Results

Other 6%
Deaf/deaf 6%
DeafBlind 2%
Hard of Hearing 86%
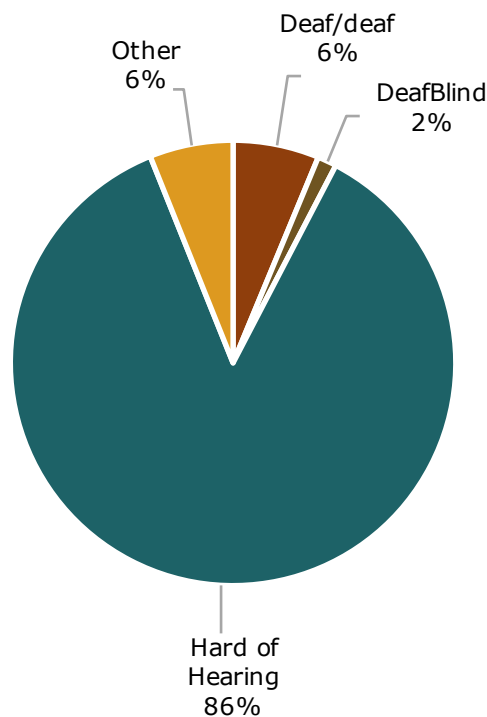
DDBHH Identity	Percentage
Hard of Hearing	86%
Deaf/deaf	6%
DeafBlind	2%
Other	6%

N = 3,600

Exhibit 10. Hearing Identity of Needs Assessment Respondents

DeafBlind 5%
Other 1%
Skip 1%
Hard of Hearing 49%
Deaf/deaf 44%
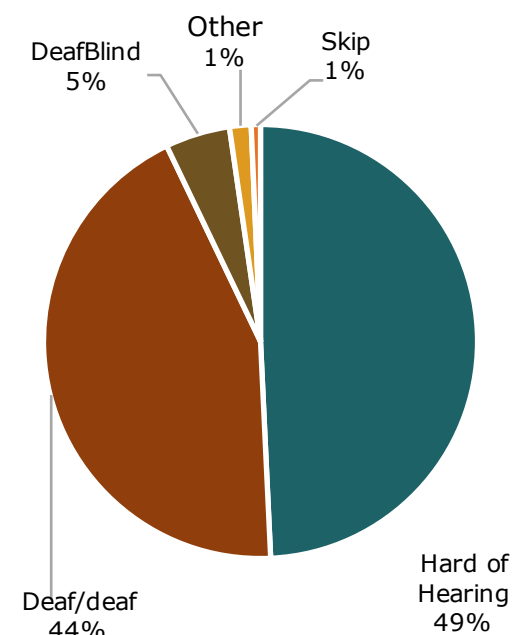
DDBHH Identity	Percentage
Hard of Hearing	49%
Deaf/deaf	44%
DeafBlind	5%
Other	1%
Skip	1%

N = 871

Communication: Language and Use of Communication Services and Technologies

The DDBHH communities use a variety of communication methods and tools to understand what is being communicated to them and to share their own thoughts and feelings. An individual who identifies as DDBHH may use multiple communication methods and tools in a given day or week depending on their interactions. In fact, the majority of Deaf/deaf and DeafBlind respondents identified as bilingual, with nearly 60 percent reporting using two or more languages, most often English and American Sign Language. Additionally, just under 20 percent of Hard of Hearing individuals use sign language, including ASL, in addition to English (or other languages or modes of communication). In the needs assessment sample, other languages used by survey respondents include Spanish, Arabic, and other forms of sign language besides ASL.

Exhibit 11. Languages Used by Survey Respondents

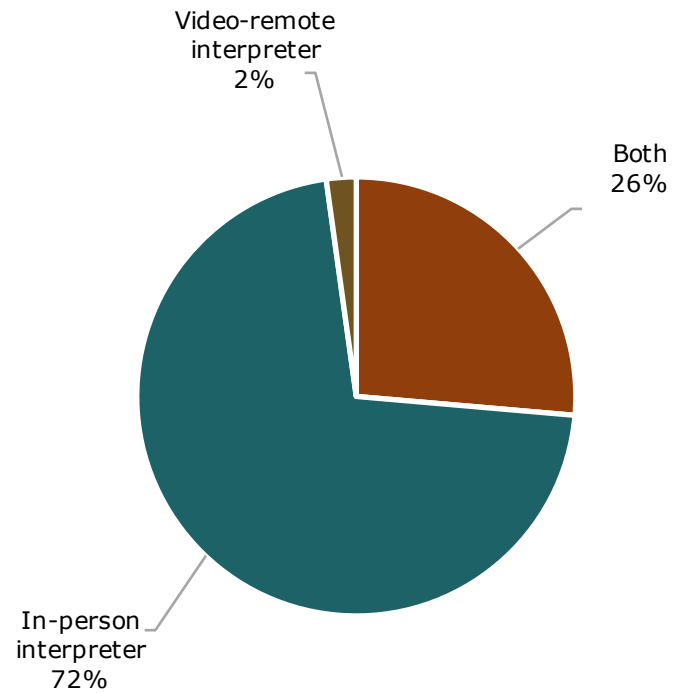| DDBHH Identity	Percentage English	Percentage ASL	Percentage Both ASL and English	Multilingual
Deaf/deaf	80%	77%	57%	5%
DeafBlind	81%	71%	55%	5%
Hard of Hearing	99%	19%	19%	4%
All	90%	47%	37%	4%

Communication: Use of and Availability of Interpreters (Emphasis on Deaf/deaf and DeafBlind)

While DDBHH individuals can communicate using a variety of methods, many of the individuals and institutions that they interact with do not. In these situations, it is critical that DDBHH community members have quick access to professional interpreters that can meet their communication needs and allow them to participate fully in society.

Interpreting services are provided in two primary ways: in person or with a video-remote interpreter (VRI) which uses video conferencing technology to connect users with a professional interpreter. In-person interpreting was the most commonly used form of interpreter services with 72 percent of respondents reporting using in-person interpreters, 2 percent of respondents had used only VRI services, and 26 percent of respondents had used both. Concerning preferences between the two, 73 percent of respondents preferred to use in-person interpreters and 4 percent preferred VRI, 20 percent said that their preference depended on the specific situation and 3 percent had no preference for either in-person interpreting or VRI.

Exhibit 12. Type of Interpreter Used

Video-remote
interpreter
2%

Both
26%

In-person
interpreter
72%

Exhibit 13. Preference for Interpreter Type

No
preference
3%

Depends on
situation
20%

Video-
remote
interpreter
4%

In-person
interpreter
73%

Interpreter Type	Percentage
In-person interpreter	72%
Video-remote interpreter	2%
Both	26%

N = 368
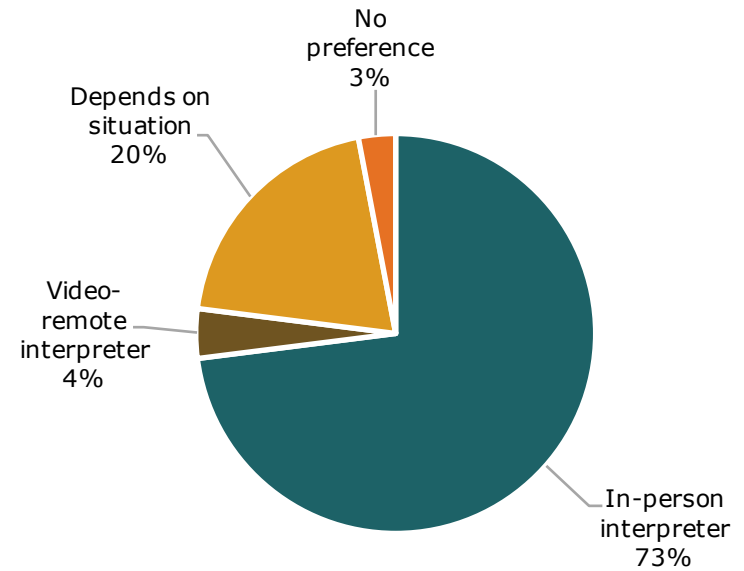
Interpreter Type	Percentage
In-person interpreter	73%
Video-remote interpreter	4%
Depends on situation	20%
No preference	3%

N = 90

Respondents were asked to rate their experiences with interpreters both in terms of quality and timeliness.

Survey respondents indicated that in a variety of settings, including school, work, medical appointments, and legal appointments, their experience with interpreters was positive. For interpreters provided during medical appointments, 65 percent of respondents said that they have had good experiences. Across all setting types, only a minority of respondents considered the quality or interpreter services to be poor.

Exhibit 14. Experience with Interpreters in Various Settings
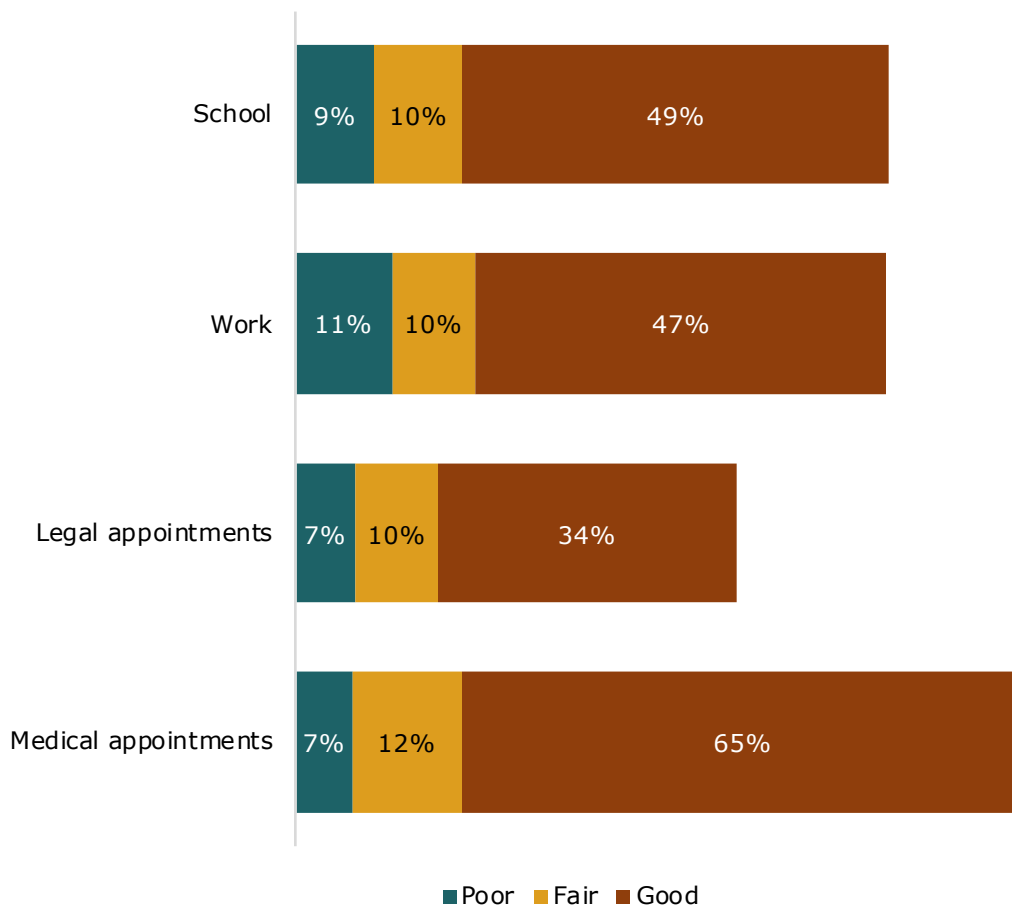
Setting	Poor	Fair	Good
School	9%	10%	49%
Work	11%	10%	47%
Legal appointments	7%	10%	34%
Medical appointments	7%	12%	65%

N = 694

Respondents reported some difficulty in quickly booking an interpreter. Nearly 30 percent of respondents said that their experience was poor when booking an interpreter two weeks ahead of time. When trying to book an interpreter 24 hours in advance, the percentage of respondents with a poor experience rose to 36 percent.

Exhibit 15. Experience with Scheduling Interpreters
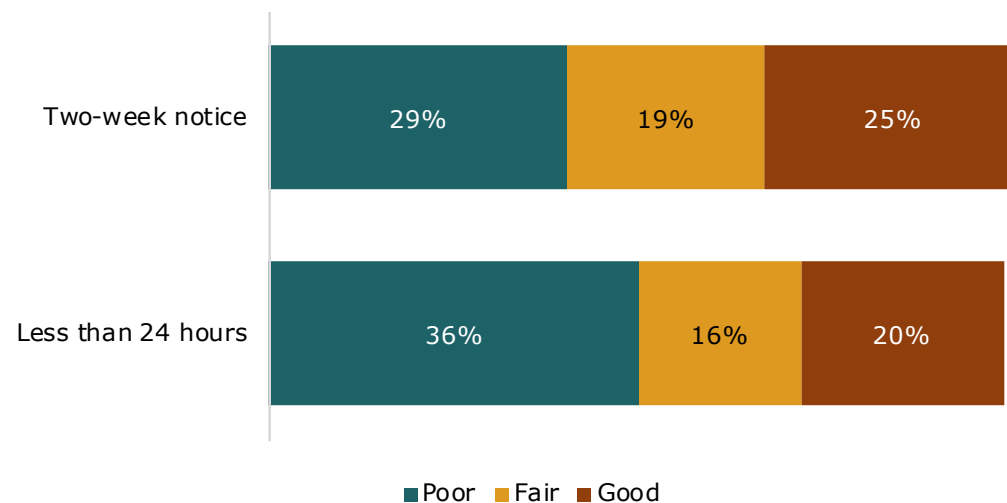
Scheduling	Poor	Fair	Good
Two-week notice	29%	19%	25%
Less than 24 hours	36%	16%	20%

N = 164

Captioning

Another communication tool frequently used by DDBHH communities is live captioning services, in which a captioner is present in the room or connected via conference line and provides a running transcript of the conversation to be projected in the room. Of the needs assessment sample, 28 percent of respondents reported using captioning services. Respondents identified settings in which they want to have captioning available, including public meetings, events, conferences, work, and school. However, the availability of captioning services in these settings is low according to respondents. Roughly 70 percent of respondents said that the availability of captioning services was low for public meetings, events, work meetings, and K–12 classrooms, 61 percent said that availability was low for conferences, and 50 percent said the same for postsecondary classrooms.

Exhibit 16. Percentage of Respondents Who Perceive Low Availability of Captioning Services in Various Settings
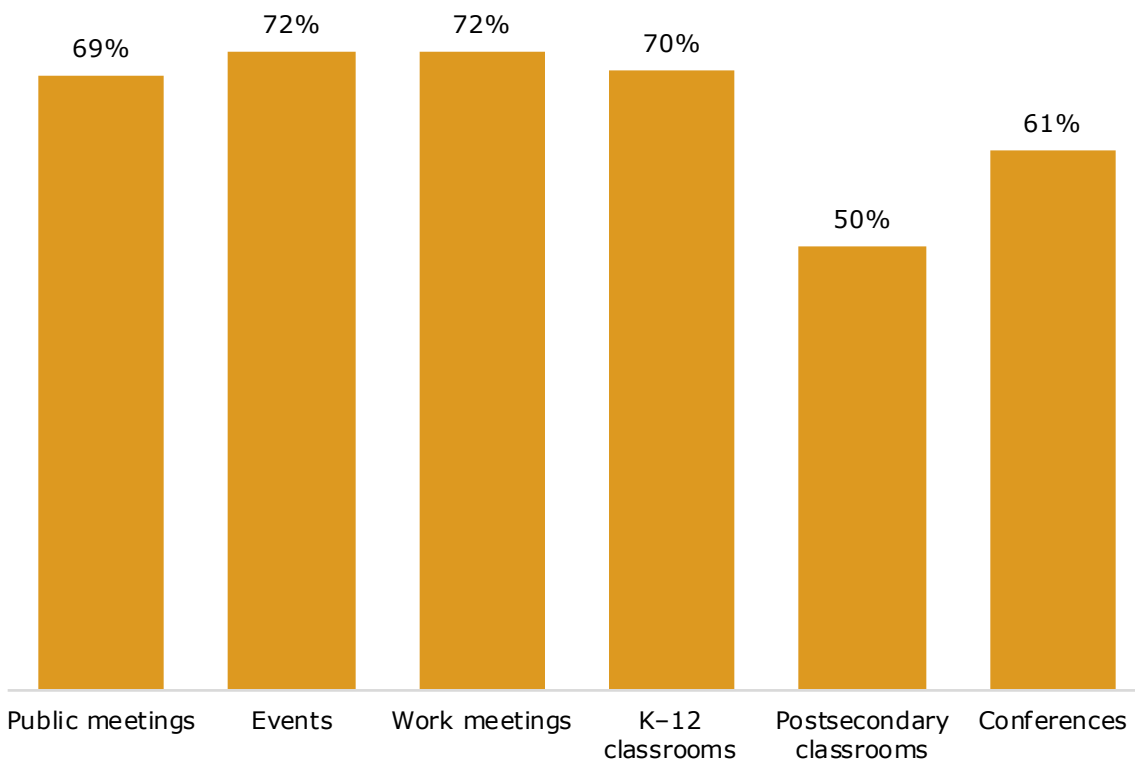
Setting	Percentage
Public meetings	69%
Events	72%
Work meetings	72%
K–12 classrooms	70%
Postsecondary classrooms	50%
Conferences	61%

N = 231

Education: Comparing Rates of Attainment, Deaf/deaf, DeafBlind, and Hard of Hearing

Education is a key predictor for a multitude of lifelong quality of life indicators, including income and health, with higher educational attainment being correlated with better outcomes. For individuals who identify as DDBHH, accessing high-quality education can be a challenge when many institutions are not designed to meet the needs of individuals with hearing loss.

Overall, needs assessment respondents reported higher levels of high-school diploma attainment than the statewide average. Around 3 percent of the needs assessment sample do not have a high-school diploma or the equivalency compared to 10 percent of the state population, aged 25 and older. Deaf/deaf and DeafBlind participants had slightly higher percentages of individuals without a high-school diploma or equivalent credential, with 5 percent and 4 percent respectively not reaching that attainment level, and Hard of Hearing respondents fared best with just 1 percent reporting attainment below high school.

The needs assessment sample reported similar levels of associate's and bachelor's degree attainment as the statewide population across all DDBHH identities. In regard to graduate and professional degree attainment, Hard of Hearing respondents reported attainment levels of 28 percent, more than twice the statewide rate, while 9 percent of Deaf/deaf respondents reported reaching that education level, lagging the state average by two percentage points. However, no DeafBlind respondents reported attaining a graduate or professional degree.

Exhibit 17. Educational Attainment of Survey Respondents as Compared to the State

Educational Attainment	Deaf/deaf	DeafBlind	Hard of Hearing	State Estimate
Less than high school	5%	4%	1%	10%
High-school diploma or equivalent	22%	16%	8%	29%
Some college	16%	16%	16%	24%
Associate's degree	10%	12%	8%	9%
Bachelor's degree	17%	12%	17%	17%
Graduate or professional degree	9%	Not applicable	28%	11%

N = 640

Source: U.S. Census Bureau. n.d. "2013–2017 American Community Survey Five-year Estimates." *American Community Survey*. Accessed July 25, 2019. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

Note: Survey respondents age 25 and over.

Educational Supports and Attainment

An Individualized Family Service Plan (IFSP) is a document outlining early intervention services that will be provided to a child and family for eligible children from birth to age three to help them develop and learn on pace with their peers.[1] Early intervention services, such as an IFSP, were passed in 1986 as part of an expansion of the Individuals with Disabilities Education Act (IDEA).

[1] Michigan Alliance for Families. 2019. "Individualized Family Service Plan (IFSP)." _Michigan Alliance for Families_. Accessed July 22, 2019. https://www. michiganallianceforfamilies.org/ifsp/

Within the needs assessment sample, the percentage of respondents who had an IFSP established is higher for younger respondents than older respondents. In the sample of respondents under age 18, 63 percent had an IFSP, more than twice the rate of 27 percent reported by respondents age 18 and older. For the older age groups, more than a third of respondents did not know if they had an IFSP in place at any time. It is possible that some older respondents had IFSPs but, due to their young age at the time, do not remember. Also, it is important to know that parents took the assessment on behalf of children under 14, and would have been involved in the creation of the IFSP.

Exhibit 18. Percentage of Respondents with an IFSP

■ Yes, I did/do have an IFSP   ■ No, I don't/didn't have an IFSP
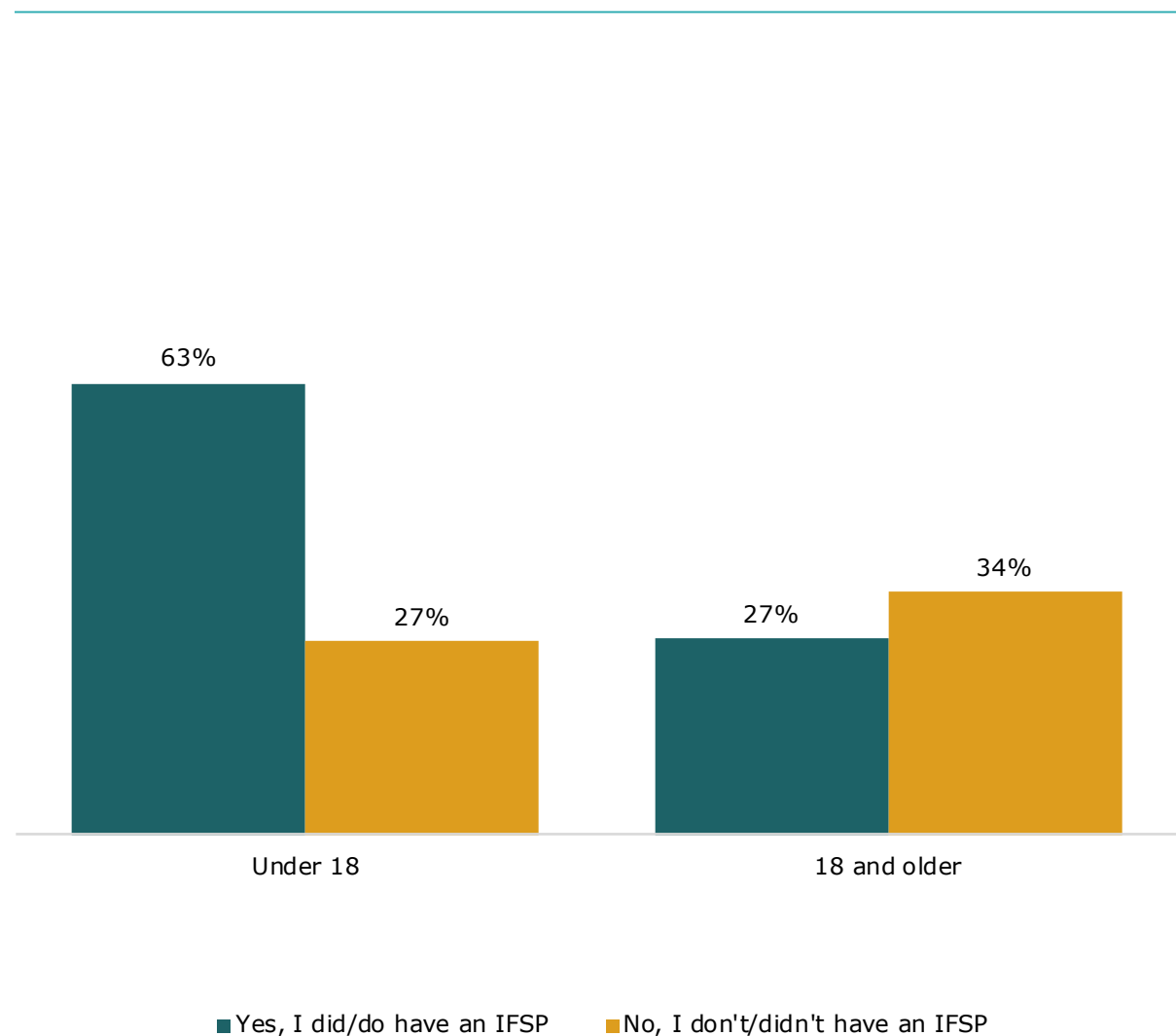
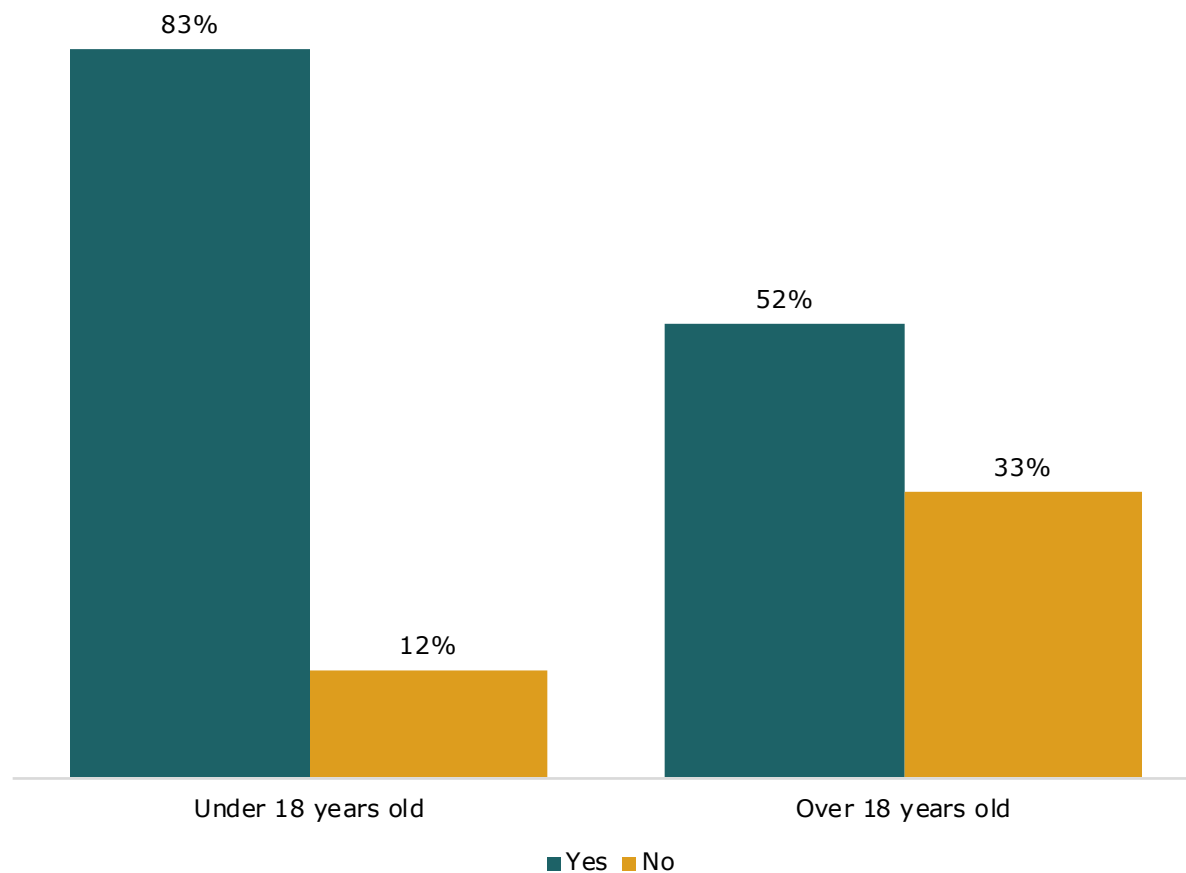| Age Range	Yes, I did/do have an IFSP	No, I don't/didn't have an IFSP
Under 18	63%	27%
18 and older	27%	34%

N = 238

An Individualized Education Program (IEP) is a written document for differently abled students ages three through 25 that outlines the student's educational needs, goals, and any required programs and services to be provided.[2, 3] The prevalence of IEPs is high for all age groups but follows a similar trend as IFSPs with greater usage among younger cohorts. Of respondents under the age of 18, 83 percent reported having an IEP, and the prevalence drops to 52 percent for respondents over age 18.

Ensuring that students of all abilities have the supports and resources to excel is critical for long-term academic success. IEP usage is higher with younger cohorts, and of the needs assessment respondents who indicated having an IEP, 54 percent are current students, which is relatively high given that current students only made up 20 percent of the needs assessment sample.

[2] Michigan Alliance for Families. 2019. "IEP Topics." *Michigan Alliance for Families*. Accessed July 22, 2019. https://www.michiganallianceforfamilies.org/iep/

[3] Michigan Department of Education. 2019. "Individualized Education Programs (IEPs)." *Michigan Department of Education*. Accessed on July 22, 2019. https://www.michigan.gov/mde/0,4615,7-140-6598_88186_88204---,00.html
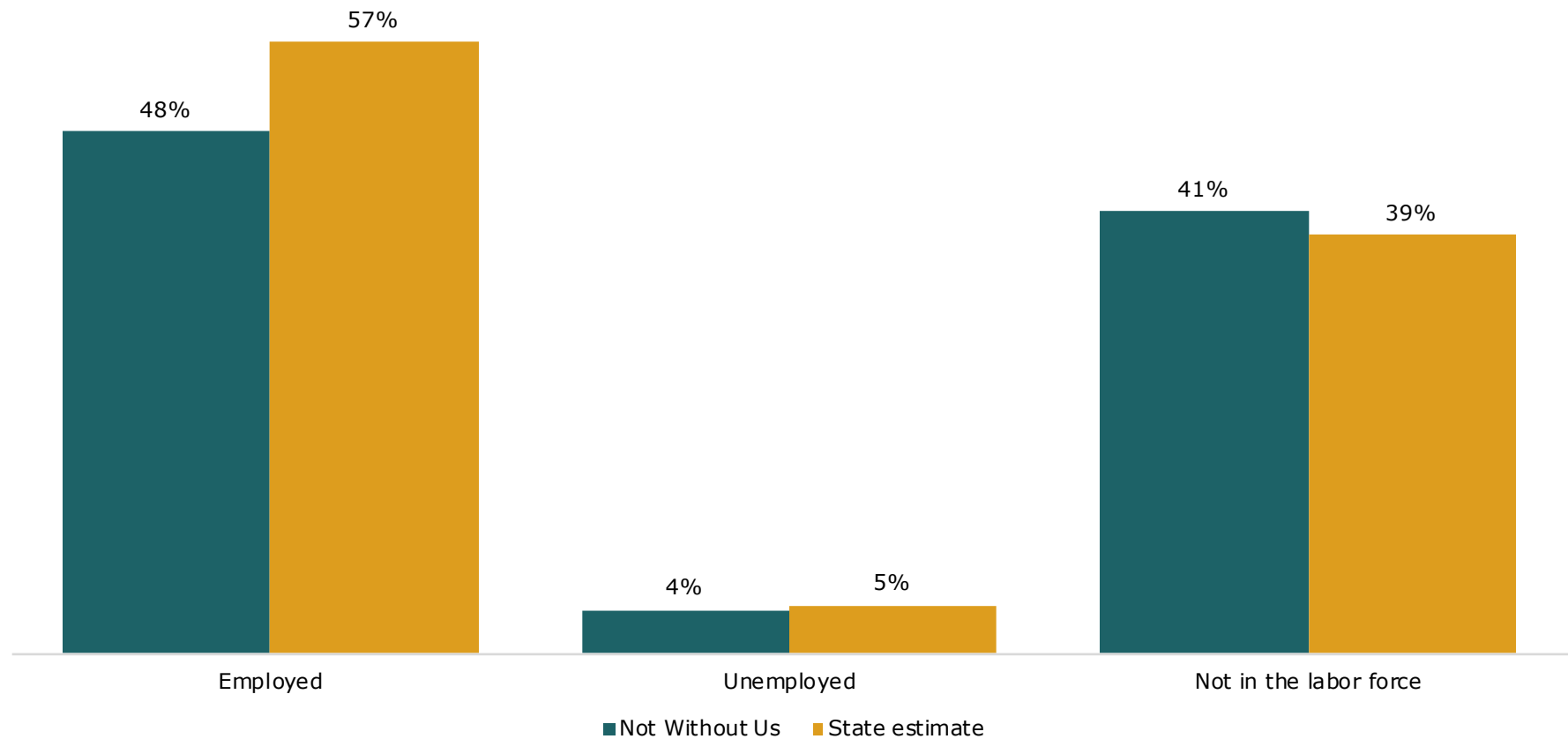
Exhibit 19. Percentage of Respondents with an IEP

Age Range	Yes, I did/do have an IEP	No, I don't/didn't have an IEP
Under 18	83%	12%
18 and older	52%	33%

N = 488

Employment: Employment, Unemployment, and Comparison to General Public, Relationship to Education Level

Similar to schools, the processes and culture of a workplace are not always fully accessible to people with different hearing levels, despite laws barring discrimination on the grounds of disability. In the needs assessment sample, 48 percent of respondents are currently employed, nearly ten percentage points lower than the statewide average of 57 percent. This difference could be due to a number of factors, including the relative oversampling of older Michiganders who identify as Hard of Hearing and are also more likely to be retired and therefore out of the labor market. Additionally, respondents to the needs assessment across all age cohorts identified themselves as unable to work due to a disability, which is also included in the percentage of individuals out of the labor force. However, when looking at individuals who are unemployed (currently not working, but seeking employment), the needs assessment respondents had a lower unemployed rate than the state, with 4 percent of the sample identifying as unemployed compared with 5 percent statewide. The percentages shown may not sum to 100 percent due to rounding and/or respondents skipping this question in the needs assessment.

Exhibit 20. Employment Status of Survey Respondents

Chart legend: ■ Not Without Us ■ State estimate

Employed: Not Without Us 48%, State estimate 57%
Unemployed: Not Without Us 4%, State estimate 5%
Not in the labor force: Not Without Us 41%, State estimate 39%

Employment Status	Not Without Us	State Estimate
Employed	48%	57%
Unemployed	4%	5%
Not in the labor force	41%	39%

N = 692

Source: U.S. Census Bureau. n.d. "2013–2017 American Community Survey Five-year Estimates." *American Community Survey*. Accessed July 25, 2019. https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2017/

Employment: Accessing Rehabilitation Services, Communication Supports at Work, Treatment at Work

Michigan Rehabilitation Services (MRS) provides specialized employment- and education-related services and training to assist teens and adults with disabilities in becoming employed or retaining employment.

Exhibit 21. Percentage of Respondents Who Have Received Assistance from MRS
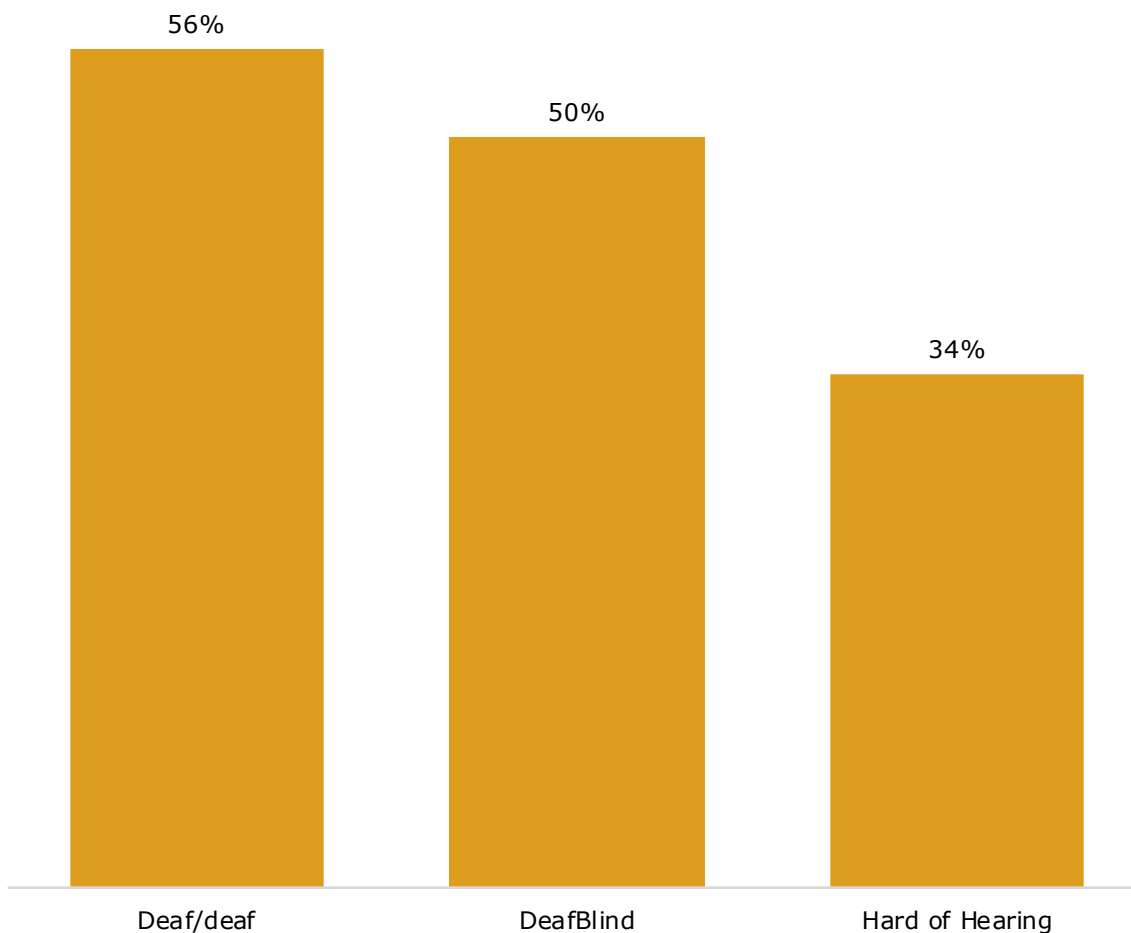
DDBHH Identity	Percentage
Deaf/deaf	56%
DeafBlind	50%
Hard of Hearing	34%

N = 649

In regard to workplace culture, nearly 60 percent of respondents reported positive treatment at work; however, these feelings are not consistent across DDBHH identities. DeafBlind respondents reported the highest rates of feeling mistreated at work with 36 percent of DeafBlind respondents reported being treated worse than others in the workplace, compared to 21 and 22 percent of Deaf/deaf and Hard of Hearing respondents, respectively. The majority of Deaf/deaf and Hard of Hearing respondents felt that they were treated the same as others in the workforce, and 15 percent of Deaf/deaf respondents and eight percent of Hard of Hearing respondents reported being treated better than others.

Exhibit 22. Perceived Treatment at Work of Survey Respondents

■ Worse the others   ■ Same as others   ■ Better than others
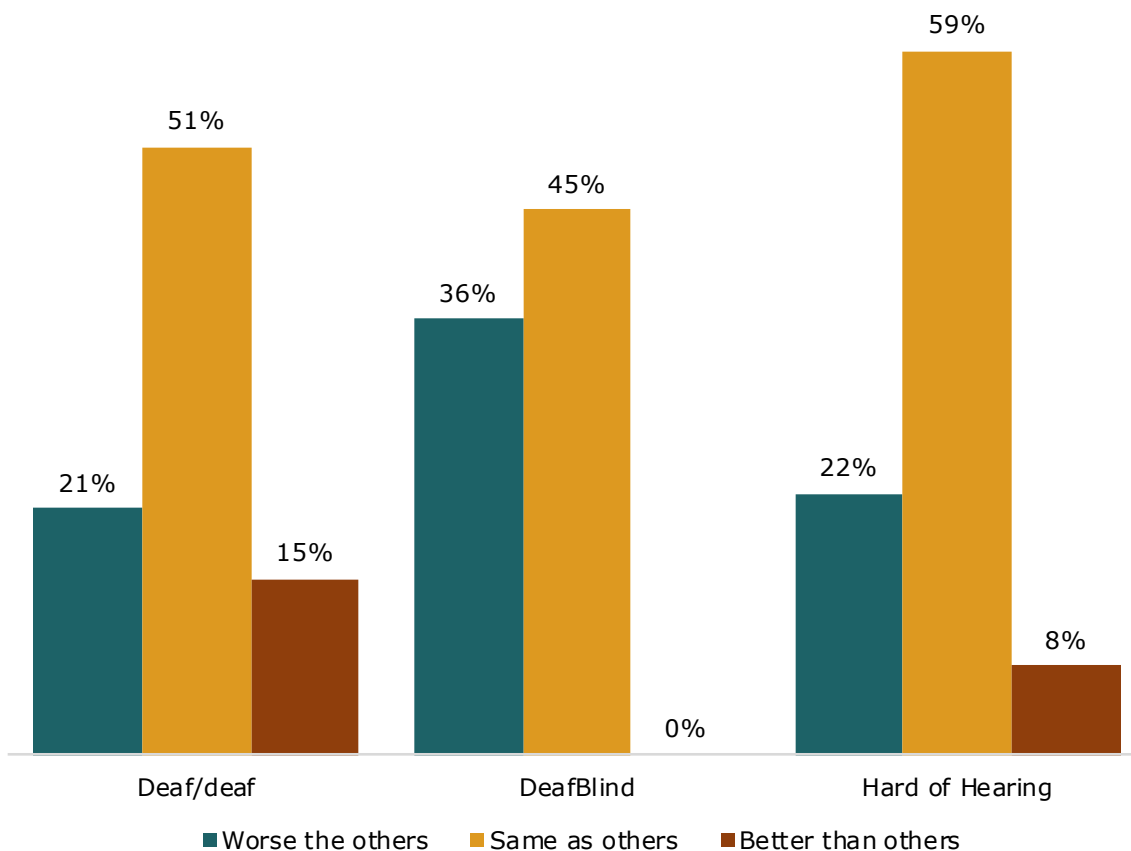
DDBHH Identity	Worse than Others	Same as Others	Better than Others
Deaf/deaf	21%	51%	15%
DeafBlind	36%	45%	0%
Hard of Hearing	22%	59%	8%

N = 307

Household Income: Relationship to Educational Level and Employment Status, Income Disparity

The median household income in Michigan is $52,668, which is measured as the combined income of all people sharing a residence. In the needs assessment sample respondents, Hard of Hearing households make up a larger proportion of the higher household income brackets compared to Deaf/deaf and DeafBlind respondents. For example, 19 percent of Hard of Hearing respondents report an annual household income of $100,000 or higher. In comparison, DeafBlind respondents had significantly lower household income, with 19 percent of DeafBlind respondents reporting an annual household income of less than $10,000.

Exhibit 23. Household Income Distribution

Legend: Hard of Hearing, DeafBlind, Deaf/deaf
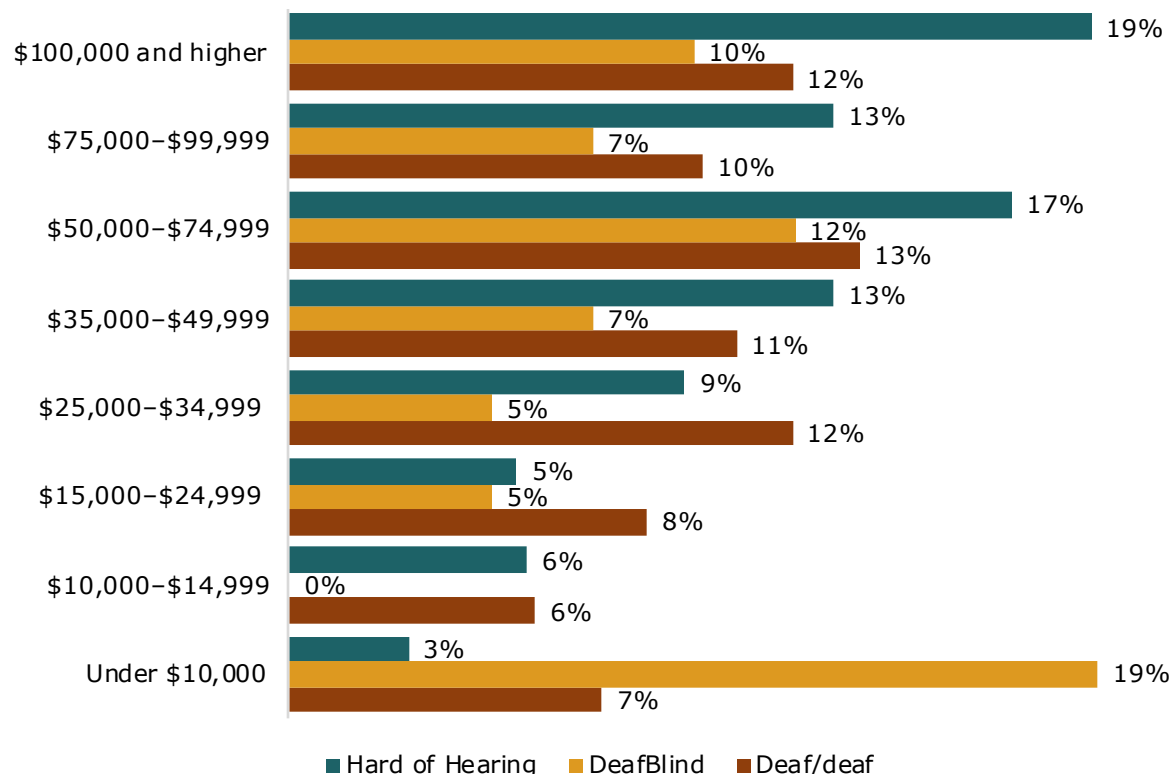
Household Income	Deaf/deaf	DeafBlind	Hard of Hearing
Under $10,000	7%	19%	3%
$10,000–$14,999	6%	0%	6%
$15,000–$24,999	8%	5%	5%
$25,000–$34,999	12%	5%	9%
$35,000–$49,999	11%	7%	13%
$50,000–$74,999	13%	12%	17%
$75,000–$99,999	10%	7%	13%
$100,000 and higher	12%	10%	19%

N = 851

Exhibit 24. Household Income Levels by Educational Attainment for Deaf/deaf and DeafBlind Populations
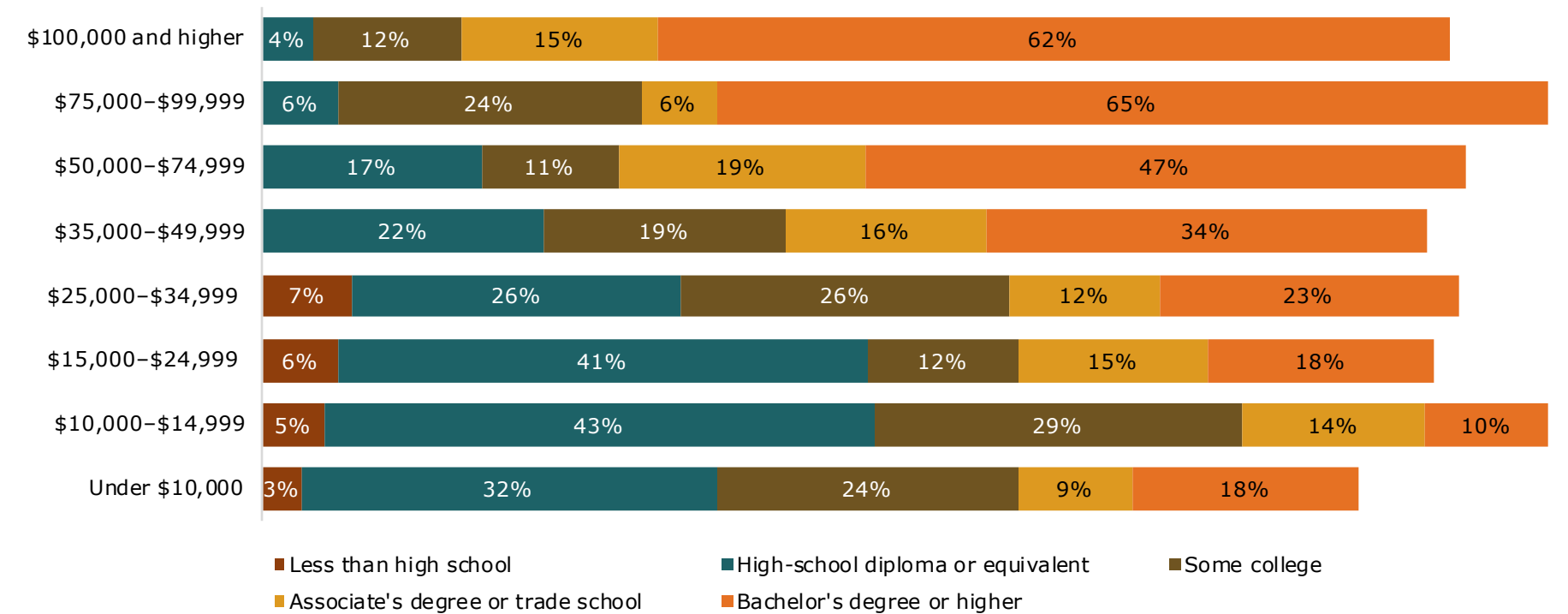
Household Income	$100,000 and higher	$75,000–$99,999	$50,000–$74,999	$35,000–$49,999	$25,000–$34,999	$15,000–$24,999	$10,000–$14,999	Under $10,000
Less than high school					7%	6%	5%	3%
High-school diploma or equivalent	4%	6%	17%	22%	26%	41%	43%	32%
Some college	12%	24%	11%	19%	26%	12%	29%	24%
Associate's degree or trade school	15%	6%	19%	16%	12%	15%	14%	9%
Bachelor's degree or higher	62%	65%	47%	34%	23%	18%	10%	18%

Legend:
- Less than high school
- High-school diploma or equivalent
- Some college
- Associate's degree or trade school
- Bachelor's degree or higher

Household Income	Less than High School	High-school Diploma or Equivalent	Some College	Associate's Degree or Trade School	Bachelor's Degree or Higher
$100,000 and higher	Not applicable	4%	12%	15%	62%
$75,000–$99,999	Not applicable	6%	24%	6%	65%
$50,000–$74,999	Not applicable	17%	11%	19%	47%
$35,000–$49,999	Not applicable	22%	19%	16%	34%
$25,000–$34,999	7%	26%	26%	12%	23%
$15,000–$24,999	6%	41%	12%	15%	18%
$10,000–$14,999	5%	43%	29%	14%	10%
Under $10,000	3%	32%	24%	9%	18%

N = 271

In most population studies, educational attainment and income are positively correlated and the relationship is statistically significant. The question is whether this holds true for the needs assessment respondents, with any statistically significant deviation possibly pointing to an inequity in the labor force.

The median individual earnings for a Michigander with a Bachelor of Science or a Bachelor of Arts degree is $63,534 and $55,920 respectively.[4] However, significant percentages of Deaf/deaf and DeafBlind respondents with bachelor's degrees are earning surprisingly low household incomes. Of Deaf/deaf and DeafBlind respondents earning less than $10,000 a year (as a household), 18 percent have a bachelor's degree. For $10,000 to $14,999, 10 percent have a bachelor's. For $15,000 to $24,999, 18 percent have a bachelor's, and for $25,000 to $34,999, 23 percent have a bachelor's.

Exhibit 25. Household Income Levels by Educational Attainment for the Hard of Hearing Population

| Household Income	Less than High School	High-school Diploma or Equivalent	Some College	Associate's Degree or Trade School	Bachelor's Degree or Higher
$100,000 and higher	Not applicable	2%	7%	2%	83%
$75,000–$99,999	Not applicable	3%	15%	10%	70%
$50,000–$74,999	Not applicable	8%	15%	22%	47%
$35,000–$49,999	Not applicable	10%	27%	19%	40%
$25,000–$34,999	3%	25%	25%	14%	28%
$15,000–$24,999	Not applicable	18%	14%	23%	36%
$10,000–$14,999	Not applicable	9%	55%	14%	23%
Under $10,000	Not applicable	55%	27%	18%	Not applicable

N = 300

[4] Pay Scale. August 3, 2019. "Average Salary by Degree/Major Subject for State: Michigan." Accessed August 7, 2019. https://www.payscale.com/research/US/State=Michigan/Salary/by_Degree

Health Status: Incidence of Disease, Similarities and Differences with the General Population

The DDBHH communities who responded to the survey reported similar incidences of physical health conditions as the general population, particularly when accounting for the slight skew toward older respondents in the data set relative to the state population. One area of potential concern is mental health, with both Deaf/deaf and DeafBlind and Hard of Hearing respondents reporting experiencing depression and anxiety at around twice the statewide rate. In the sample, 48 percent of Deaf/deaf and DeafBlind and 43 percent of Hard of Hearing respondents indicated experiencing anxiety or depression, compared to 22 percent statewide.

Exhibit 26. Incidents of Physical Health Conditions of Survey Respondents
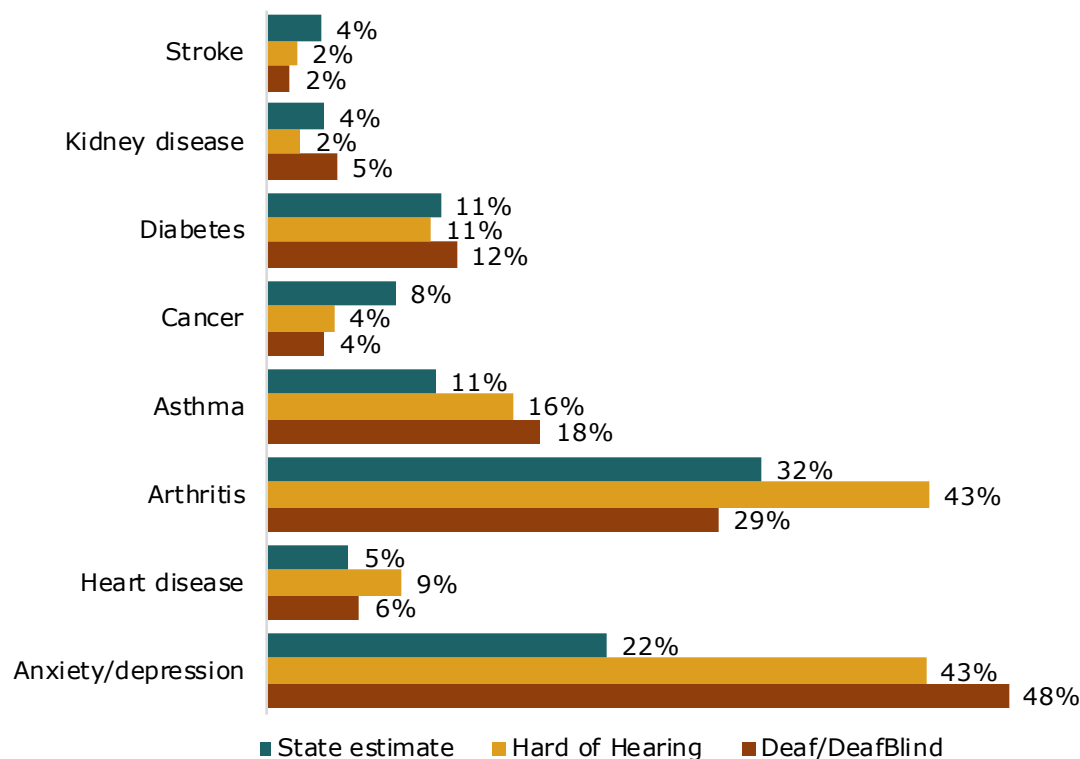
| Health Condition	Deaf/deaf and DeafBlind	Hard of Hearing	State Estimate
Anxiety/depression	48%	43%	22%
Heart disease	6%	9%	5%
Arthritis	29%	43%	32%
Asthma	18%	16%	11%
Cancer	4%	4%	8%
Diabetes	12%	11%	11%
Kidney disease	5%	2%	4%
Stroke	2%	2%	4%

N = 815

Healthcare Status: Health Insurance Coverage, Healthcare Regularity (Doctor/ Dentist Visits), Communication (Interpreter Access), Supports, Treatment

Survey respondents across DDBHH identities reported similar rates of health insurance coverage. The only significant difference being the higher percentage of DeafBlind respondents who qualify for Medicaid and the Children's Special Health Care Services. Overall, 2 percent of the sample said that they do not have any health insurance, which is lower than the state average of 5.2 percent.[5]

[5] Berchick, Edward, Emily Hood, and Jessica Barnett. September 2018. *Health Insurance Coverage in the United States: 2017*. Accessed July 22, 2019. https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-264.pdf

Exhibit 27. Health Insurance Coverage for Deaf/deaf, DeafBlind, and Hard of Hearing Populations
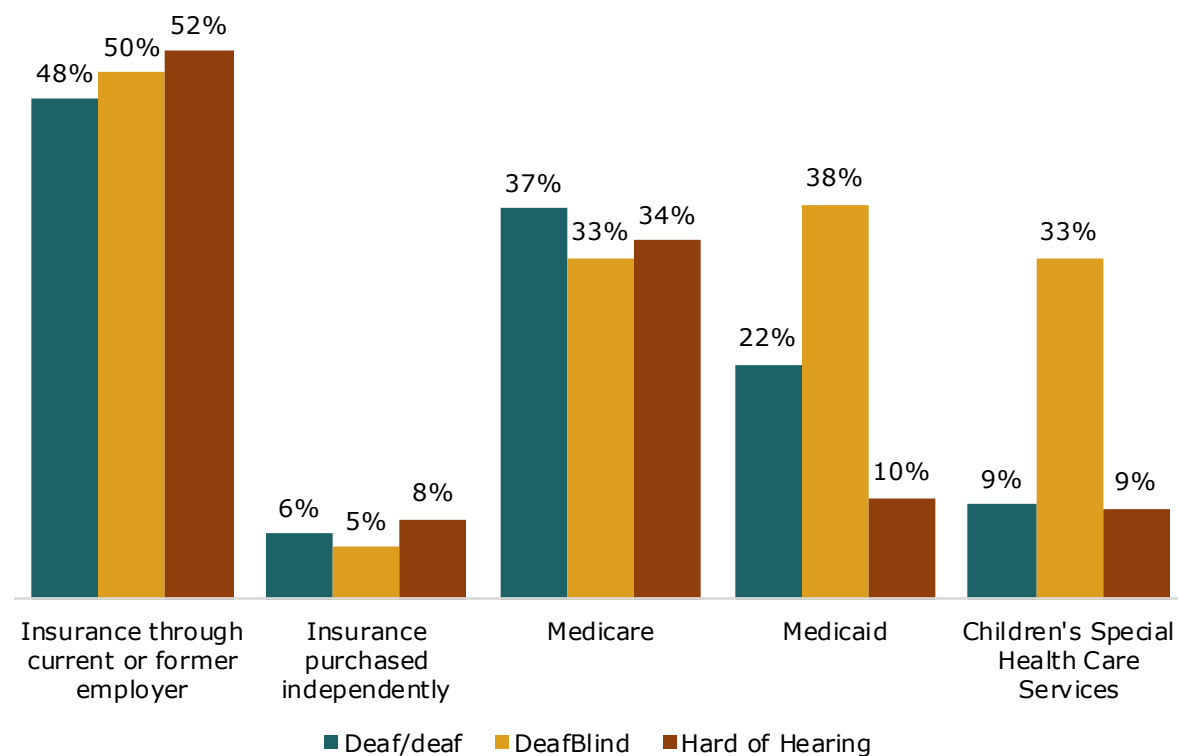
Health Insurance	Deaf/deaf	DeafBlind	Hard of Hearing
Insurance through current or former employer	48%	50%	52%
Insurance purchased independently	6%	5%	8%
Medicare	37%	33%	34%
Medicaid	22%	38%	10%
Children's Special Health Care Services	9%	33%	9%

N = 798

Concerns over the accessibility of healthcare can be a reason for individuals to forgo or put off necessary healthcare visits. Of needs assessment respondents, 24 percent have delayed healthcare access in the last 12 months. Specifically of Deaf/deaf and DeafBlind respondents, 23 percent reported communication needs as why they delayed accessing healthcare. For Hard of Hearing respondents, 40 percent identified the cost of services as a reason to delay access to healthcare, compared to 25 percent of Deaf/deaf and DeafBlind respondents. Other reasons for delaying access include lack of transportation, inability to get an appointment when needed, long waiting times, etc.

Exhibit 28. Reasons Why Respondents Delayed Access to Healthcare in the Last 12 Months

Legend: ■ Deaf/DeafBlind ■ Hard of Hearing
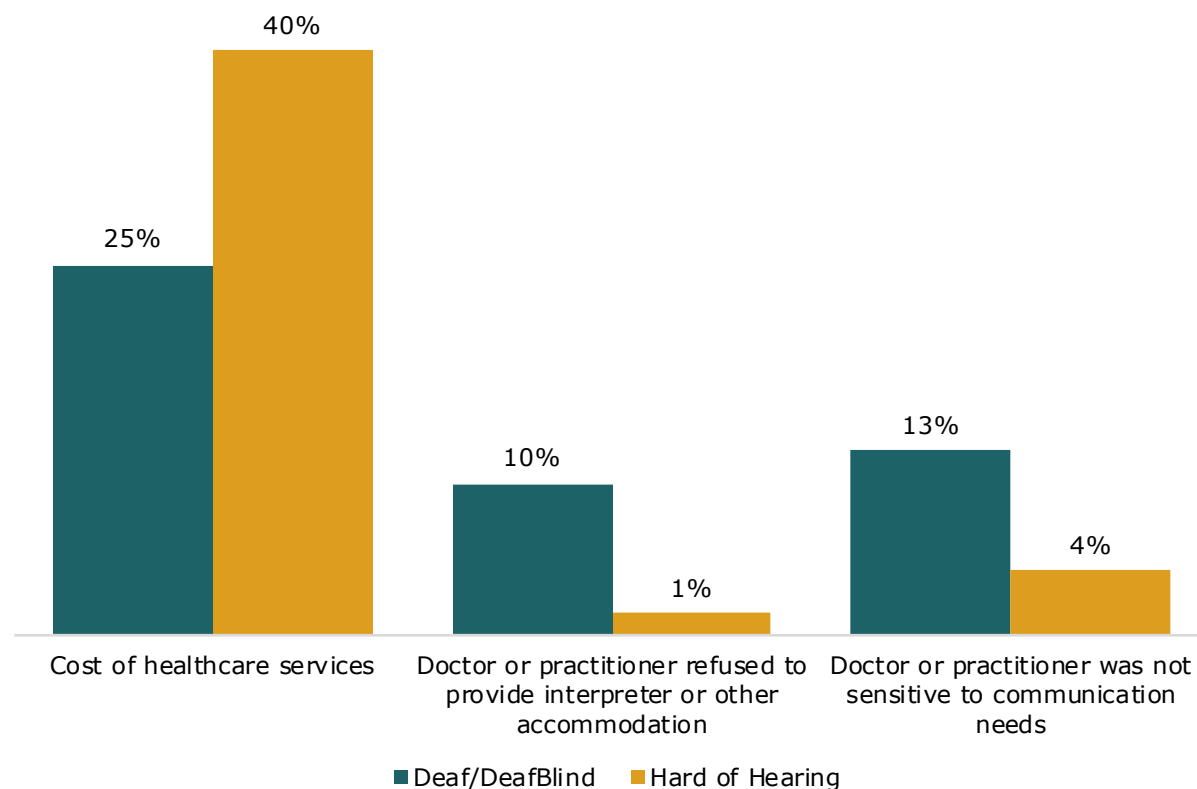
Reason	Deaf/deaf and DeafBlind	Hard of Hearing
Cost of healthcare services	25%	40%
Doctor or practitioner refused to provide interpreter or other accommodation	10%	1%
Doctor or practitioner was not sensitive to communication needs	13%	4%

N = 267

While needs assessment respondents reported significantly higher incidences of depression and/or anxiety, 28 percent have not sought mental health treatment. The most common reason for Deaf/deaf and DeafBlind and Hard of Hearing respondents not seeking mental health treatment was not feeling like their anxiety, depression, or stress were serious enough for treatment, at 32 percent and 41 percent, respectively. However, neither Deaf/deaf and DeafBlind respondents nor Hard of Hearing respondents reported communication barriers as being a significant reason to not seek mental health treatment specifically.

Exhibit 29. Reasons Why Survey Respondents Have Not Sought Mental Health Treatment
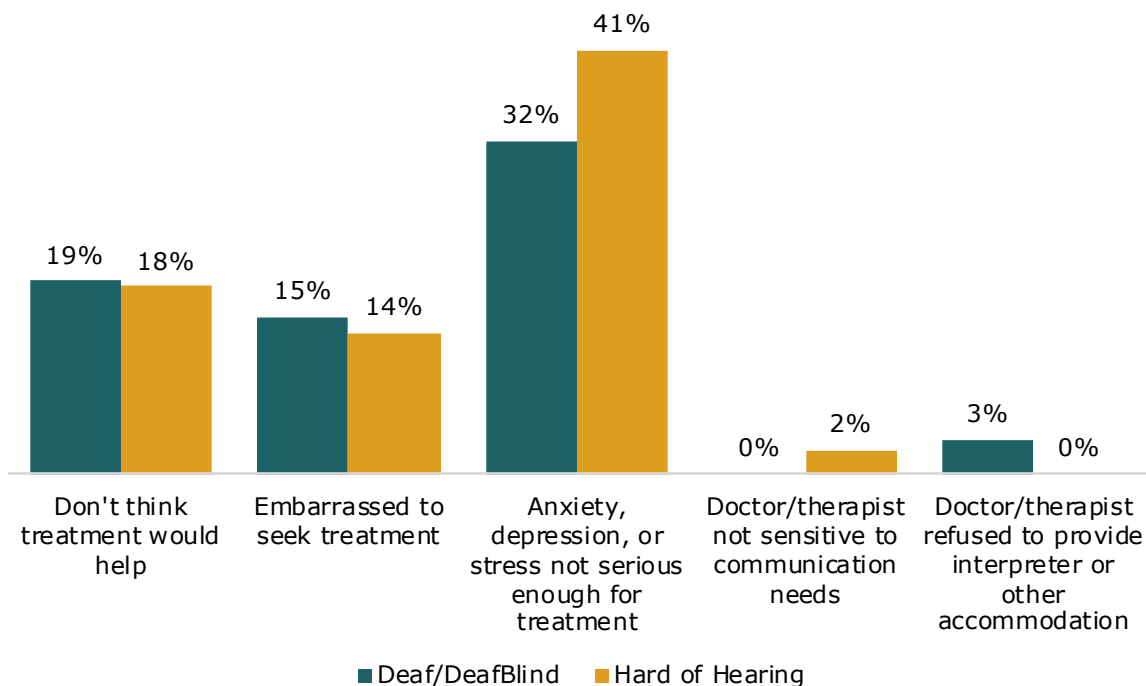
Reason	Deaf/deaf and DeafBlind	Hard of Hearing
Don't think treatment would help	19%	18%
Embarrassed to seek treatment	15%	14%
Anxiety, depression, or stress not serious enough for treatment	32%	41%
Doctor/therapist not sensitive to communication needs	0%	2%
Doctor/therapist refused to provide interpreter or other accommodation	3%	0%

N = 103

Being able to communicate fully and openly with a healthcare provider is an important factor in managing personal health, but individuals with different communication styles from their healthcare provider could face challenges in achieving this communication. Interpreters are a good resource to help facilitate this open dialog between individuals with different communication modes (i.e., ASL versus spoken English). Very few respondents (6 percent) indicated having a poor or very poor experience with interpreters at medical appointments.

**Exhibit 30.** Experience with Interpreters in Healthcare Settings
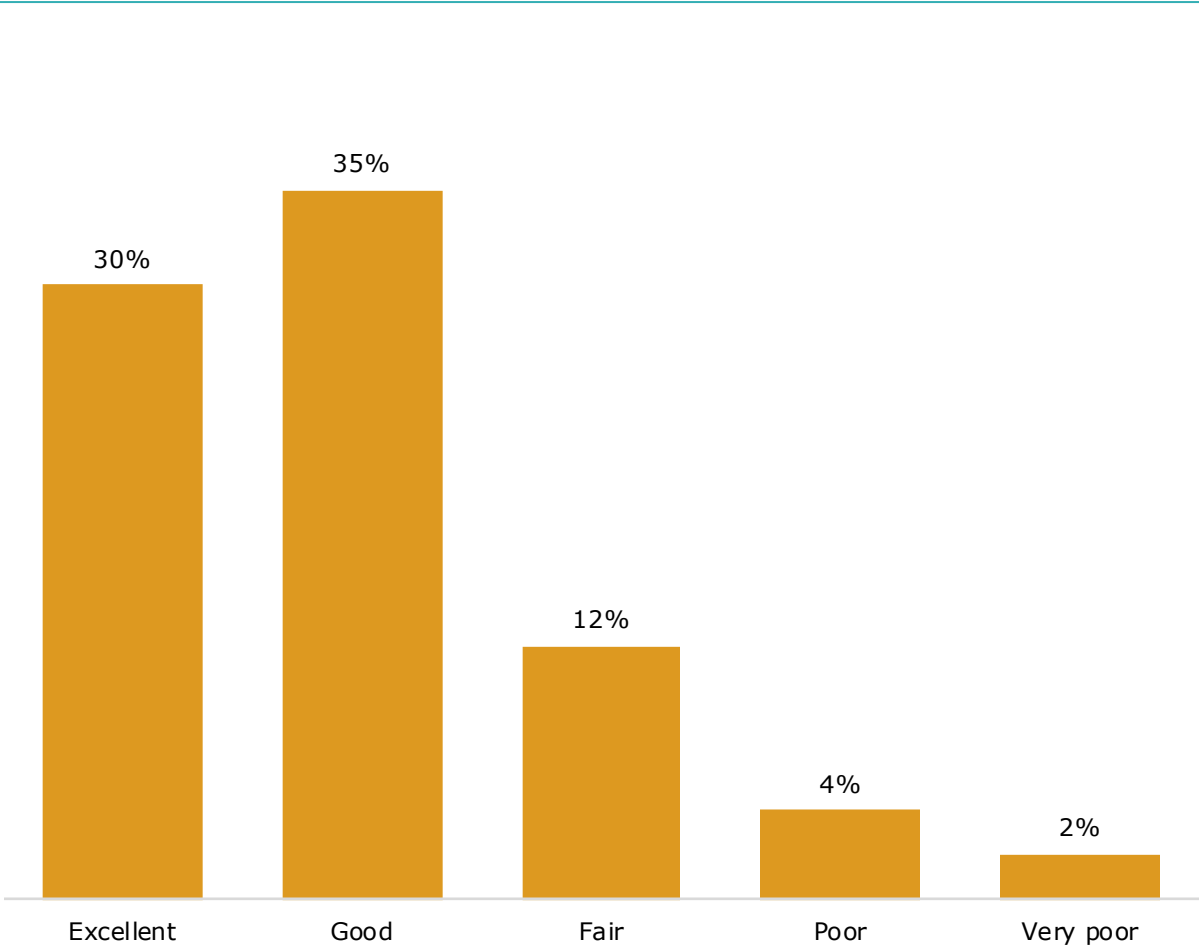
Experience	Percentage
Excellent	30%
Good	35%
Fair	12%
Poor	4%
Very poor	2%

N = 798

Housing and Transportation: Access, Satisfaction, Challenges

Owning property is a significant and stable way to build and hold wealth. Hard of Hearing respondents exhibit similar rates of homeownership as all Michigan residents, both at 71 percent. However, Deaf/deaf and DeafBlind respondents reported higher rates of renting as compared to Hard of Hearing respondents and the state average, at 30 percent.

**Exhibit 31.** Percentage of Homeowners and Renters as Compared to the State
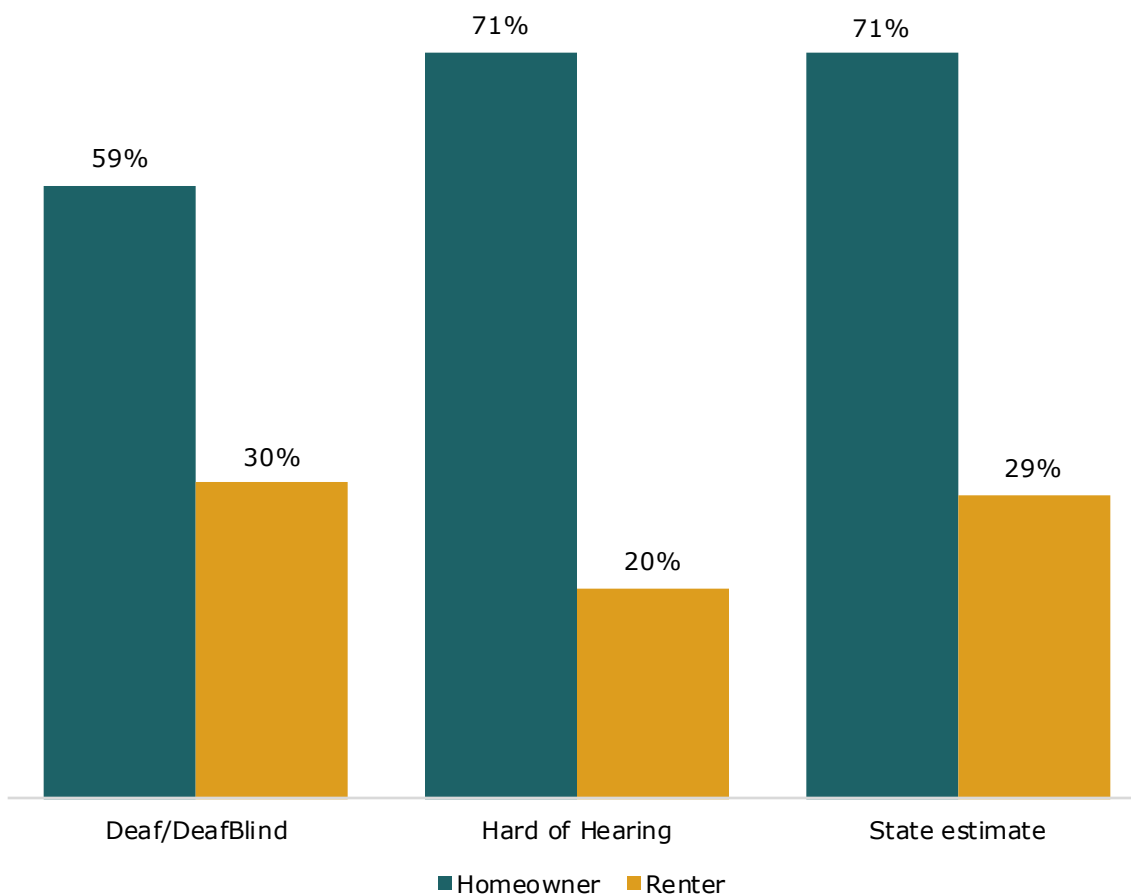
DDBHH Identity	Homeowner	Renter
Deaf/deaf and DeafBlind	59%	30%
Hard of Hearing	71%	20%
State estimate	71%	29%

N = 644

The majority of Deaf/deaf and Hard of Hearing respondents use their own car, at 85 percent and 90 percent respectively. However, DeafBlind respondents often cannot drive and rely on rides from family or friends, public transportation, and ride-sharing apps to get around. Therefore, issues of accessibility for each of these services, and the transitions between services, is an area for further study.

Exhibit 32. Modes of Transportation Used by Survey Respondents

Legend: ■ Deaf/deaf ■ DeafBlind ■ Hard of Hearing
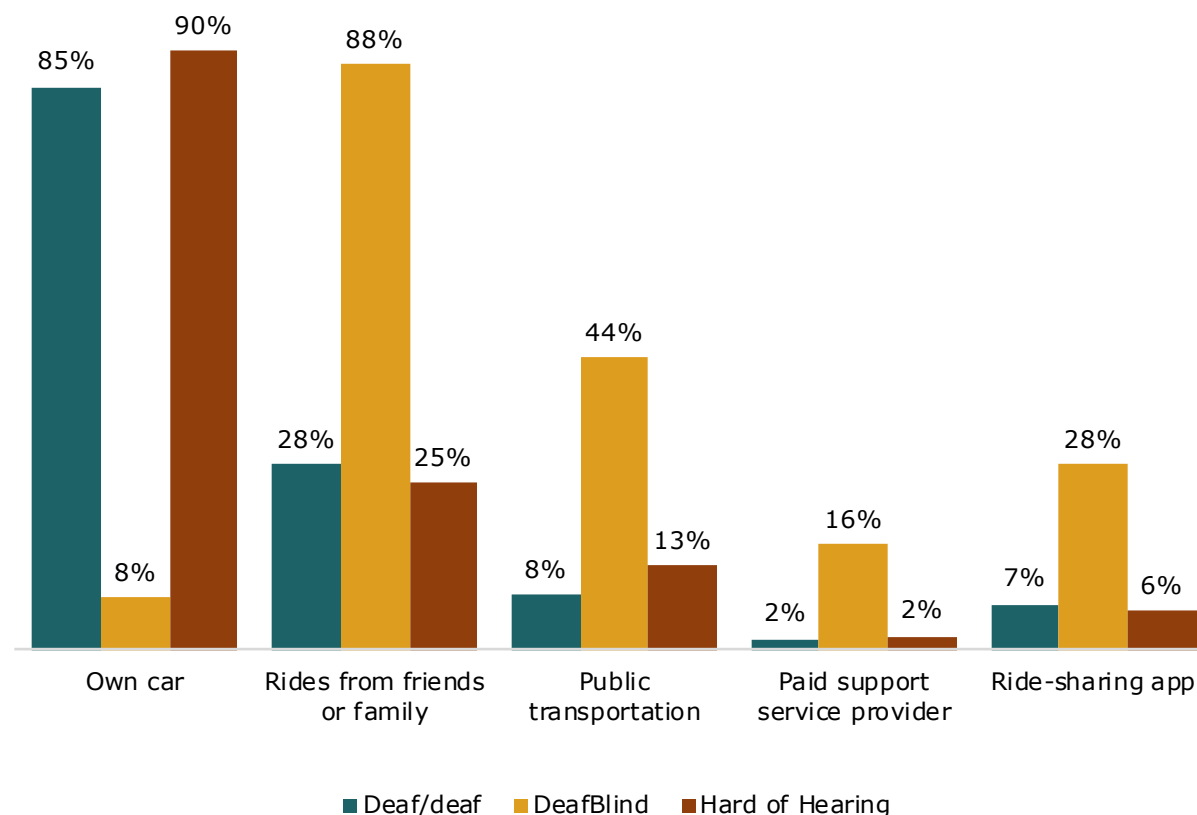
Transportation	Deaf/deaf	DeafBlind	Hard of Hearing
Own car	85%	8%	90%
Rides from friends or family	28%	88%	25%
Public transportation	8%	44%	13%
Paid support service provider	2%	16%	2%
Ride-sharing app	7%	28%	6%

N =668

Service Access: Services Accessed (Supports for Education and Employment, Income-qualified Services, and Other Social Service Access

DDBHH individuals are eligible for specialized services through government agencies, nonprofits, and other organizations to help them access employment opportunities, communication tools, advocacy services, educational opportunities, and other assistance. In the needs assessment sample, 22 percent of respondents reported working with agencies that assist people who are Deaf/deaf, DeafBlind, and Hard of Hearing in accessing services. The most frequently referenced organization was Deaf C.A.N.!, followed by the Communication Access Center.

Exhibit 33. Agencies that Work With Survey Respondents

Pie chart:
- Deaf C.A.N.! 28%
- Other 32%
- Communication Access Center 13%
- Deaf and Hard of Hearing Services 8%
- Michigan Hands and Voices 8%
- V.O.I.C.E. 5%
- Disability Network/Michigan 4%
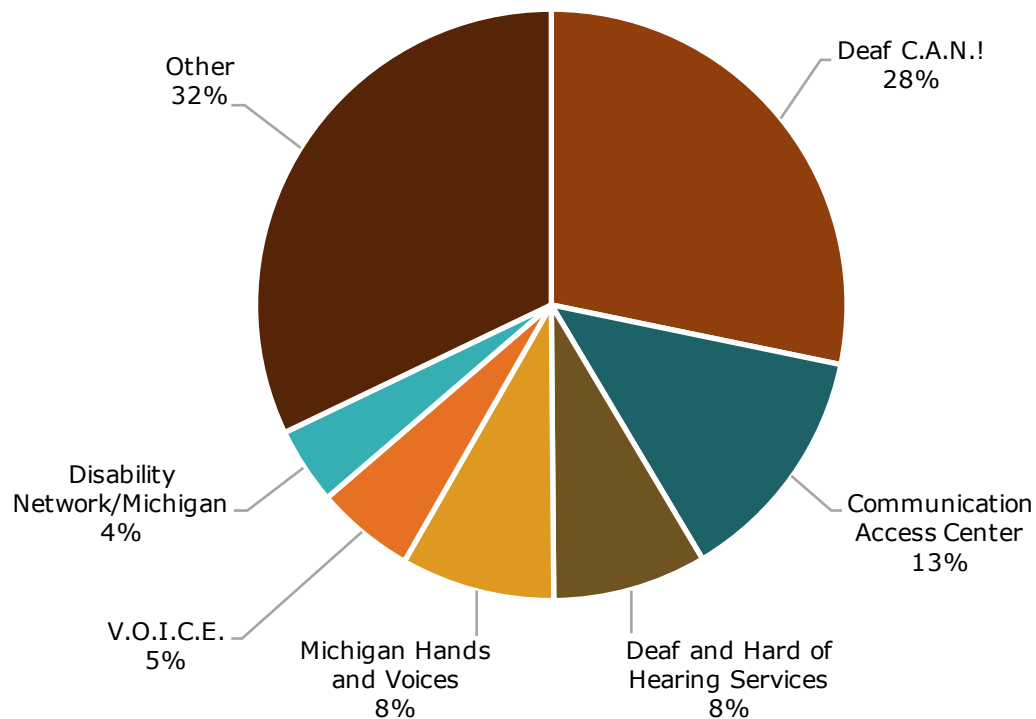
Agency	Percentage
Deaf C.A.N.!	28%
Communication Access Center	13%
Deaf and Hard of Hearing Services	8%
Michigan Hands and Voices	8%
V.O.I.C.E.	5%
Disability Network/Michigan	4%
Other	32%

N = 167

Service Access: Barriers, Emergency Services, Treatment Level

Additionally, members of the DDBHH communities may quality for other services due to many factors, including income, additional disabilities, employment status, and more. The largest percentage of survey respondents currently receive services from Michigan Rehabilitation Services, at 87 percent, followed closely by the Disability Network/Center for Independent Living at 78 percent. Both of these programs help individuals with job training and placement. Other service response options included state unemployment benefits, Medicare, child welfare resources, mental health services, among others.

Exhibit 34. Government Programs or Services Accessed by Survey Respondents

Government Program	Might apply to you, but you have not applied	Applied but not receiving service	Currently receiving service	Received service in the past, but no longer do
Children's Special Health Care Services, or CSHCS	50%	6%	18%	26%
Medicaid, e.g., Healthy Michigan Plan, MIChild, Or MI Health Link	21%	13%	39%	27%
Temporary Assistance for Needy Families, or TANF	8%	9%	59%	24%
Food Assistance, such as Supplemental Nutrition Assistance Program, Bridge Card, or Special Supplemental Nutrition Program for Women, Infants, and Children	23%	9%	50%	18%
Disability Network/Center for Independent Living	11%	3%	78%	9%
Michigan Bureau of Services for Blind Persons, or BSBP	30%	4%	11%	55%
Michigan Rehabilitation Services, MRS	3%	1%	87%	9%

N = 2,229

Services and resources for in-need populations are only as effective as they are accessible. Many programs ask individuals to prove their eligibility, which can be difficult for individuals with different communication preferences and modes. Needs assessment respondents reported difficulties with access to state services. The access issues took different forms for respondents, with 76 percent of respondents reporting difficulties due to agency limitations and 68 percent saying they did not have access to some type of communication assistance, meaning they did not have a qualified interpreter, assistive listening device, or captioning. Other barriers identified by respondents include agency limitations, such as impatient intake staff, automated phone systems that are difficult to navigate, or no option offered for video relay service connection. Application difficulties included issues with the structure or content of the application or in gathering the required documentation to support the application.

Exhibit 35. Reported Barriers to Services Experienced by Survey Respondents
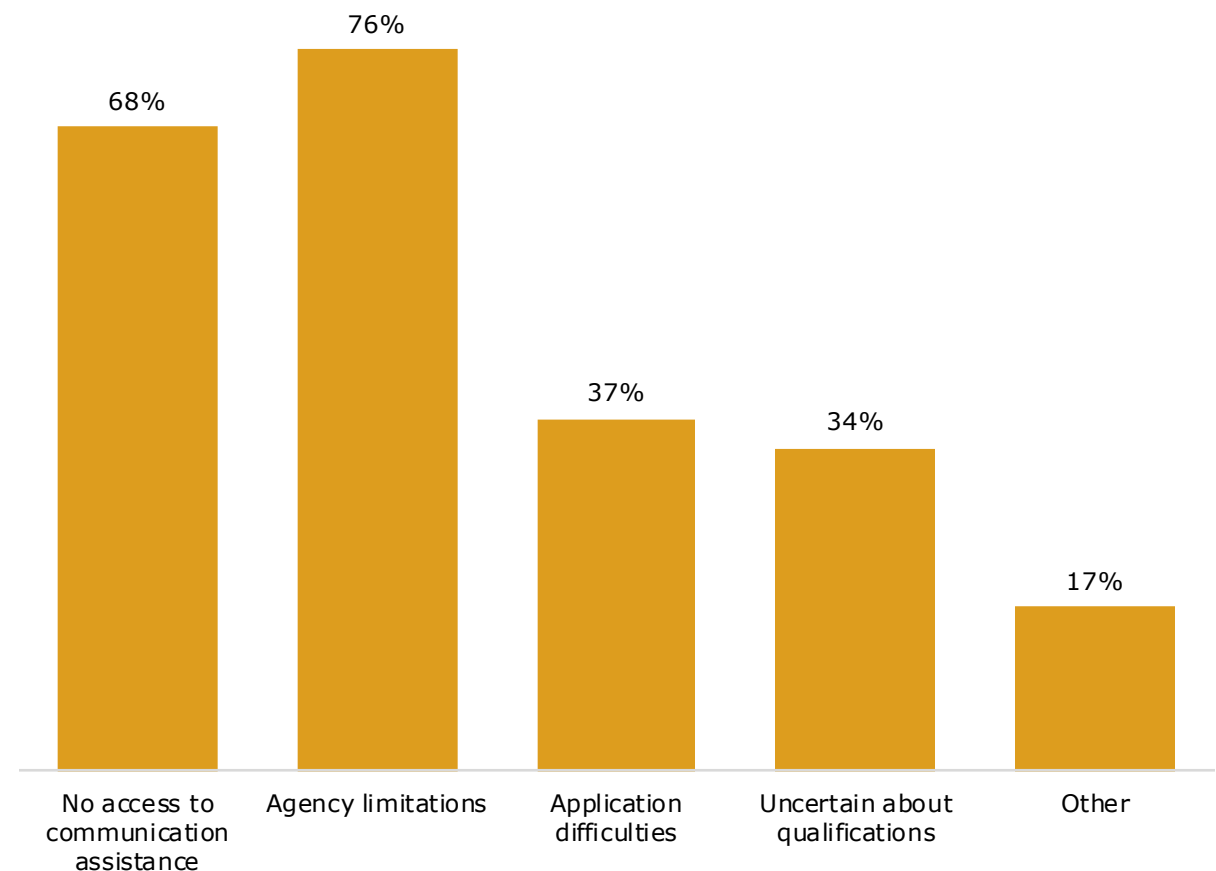

Barrier	Percentage
No access to communication assistance	68%
Agency limitations	76%
Application difficulties	37%
Uncertain about qualifications	34%
Other	17%

N = 358

Overall, survey respondents rate their interactions with service providers as positive. Of respondents, 71 percent indicated that their experiences with fire departments and paramedics are positive; however, 21 percent of fire department interactions are also rated poor.

Exhibit 36. Interactions with Emergency Services by Survey Respondents
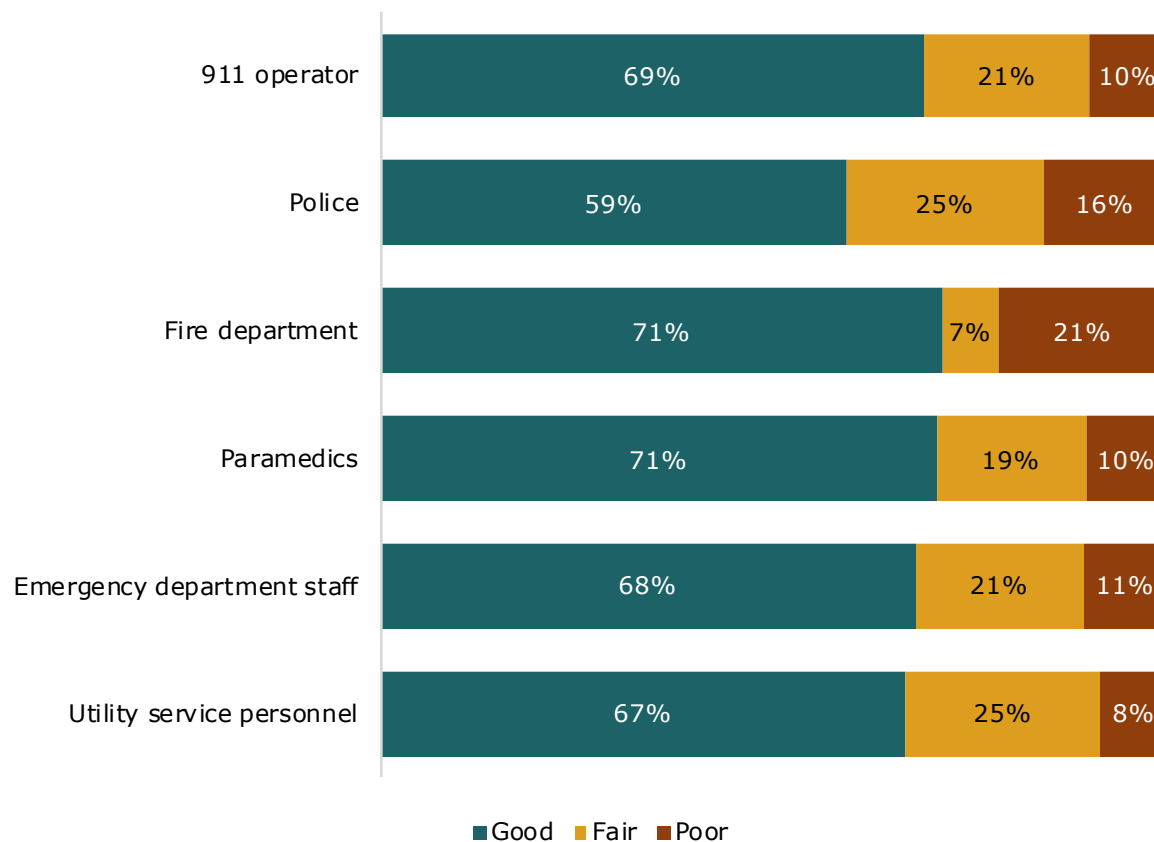
Emergency Services	Good	Fair	Poor
911 operator	69%	21%	10%
Police	59%	25%	16%
Fire department	71%	7%	21%
Paramedics	71%	19%	10%
Emergency department staff	68%	21%	11%
Utility service personnel	67%	25%	8%

N = 633

Priorities for the Division: Deaf/ deaf and DeafBlind

While all policies that promote equality for DDBHH individuals are critical, and respondents indicated high levels of importance for every activity listed in the needs assessment, a z-score analysis was conducted to the rank responses by priority level. The top priorities for Deaf/deaf and DeafBlind respondents are:

- Promote legislation that protects the rights of people who are DDBHH and ensures funding for programs and services
- Improve quality of services and accommodations for people who are DDBHH
- Provide education to state agencies and the public to ensure communication access for people who are DDBHH

These activities scored as above-average importance for Deaf/ deaf and DeafBlind respondents.

The top priorities for Hard of Hearing are:

- Advocate for hearing aid coverage through health insurance
- Promote legislation that protects the rights of people who are DDBHH and ensures funding for programs and services
- Provide education to state agencies and the public to ensure communication access for people who are DDBHH

These activities scored as above-average importance for Hard of Hearing respondents.

Both Deaf/deaf and DeafBlind and Hard of Hearing populations ranked the following activities as low priority:

- Host conferences and workshops to educate people who are DDBHH, service providers, and the public
- Conduct and release an annual report on complaints and investigations of providers who do not offer adequate services and communication access
- Maintain data on the number, age, and degree of hearing loss of people who identify as DDBHH in Michigan

These activities scored as below-average importance for all survey respondents.

Exhibit 37. Priorities for the Division Identified by Deaf/deaf, DeafBlind, and Hard of Hearing Respondents

Activity	Ranked Order for Deaf/ deaf and DeafBlind	Ranked Order for Hard of Hearing
Advocate for persons who are DDBHH for any of their concerns	5	8
Provide information and referral for services for DDBHH persons	9	9
Improve quality of services and accommodations for DDBHH persons	2	11
Increase availability of services and accommodations for persons who are DDBHH	6	10
Sponsor local organizations that offer conferences and workshops to educate DDBHH persons, service providers, and the public	12	12
Host conferences and workshops to educate DDBHH persons, service providers, and the public	13	13
Maintain data on the number, age, and degree of hearing loss of persons who are DDBHH	15	15
Provide information on different technologies or services that could benefit people who are DDBHH	7	4
Provide education to state agencies and the public to ensure communication access for persons who are DDBHH	3	3
Educate providers about their obligations to provide effective communication or accommodation for DDBHH clients or consumers	4	5
Investigate reports or complaints of providers failing to provide effective communication or accommodation for clients or consumers who are DDBHH	8	7
Advocate for hearing aid coverage through health insurance	10	1
Provide support for accessing hearing-assistive technologies	11	6
Provide an annual report on complaints and investigations of providers who do not offer adequate services and communication access	14	14
Promote legislation that protects the rights of persons who are DDBHH and ensures funding for programs and services	1	2

Performance of the Division: Level of Awareness

For each category, roughly a third of respondents do not know what roles or actions the division takes to address the issue, which raises concerns about connectivity and points to a significant need for outreach and education of stakeholders about the roles and services of the division. For most issues, the second most common response is poor, meaning there are opportunities for the division to improve services or improve messaging around accomplishments.

Exhibit 38. Perceived Effectiveness of the Division's Efforts on Identified Priorities

Priority	Don't know	Poor	Fair	Good
Promote legislation that protects the rights of persons that are DDBHH and ensures funding for programs and services	33%	28%	20%	19%
Provide an annual report on complaints and investigations of providers who do not offer adequate services and communication access	36%	31%	16%	17%
Provide support for accessing hearing-assistive technologies	37%	25%	20%	18%
Advocate for hearing aid coverage through health insurance	32%	36%	16%	16%
Investigate reports or complaints of providers failing to provide effective communication or accommodation for clients or consumers who are DDBHH	39%	24%	19%	18%
Educate providers about their obligations to provide effective communication or accommodation for DDBHH clients or consumers	32%	27%	22%	19%
Provide education to state agencies and the public to ensure communication access for persons that are DDBHH	31%	27%	21%	21%
Provide information on different technologies or services that could benefit people who are DDBHH	31%	27%	22%	20%
Maintain data on the number, age, and degree of hearing loss of persons who are DDBHH	35%	28%	17%	20%
Host conferences and workshops to educate DDBHH persons, service providers, and the public	31%	25%	20%	23%
Sponsor local organizations that offer conferences and workshops to educate DDBHH persons, service providers, and the public	31%	23%	22%	24%
Increase availability of services and accommodations for persons who are DDBHH	28%	26%	26%	20%
Improve quality of services and accommodations for DDBHH persons	28%	23%	25%	24%
Provide information and referral for services for DDBHH persons	27%	24%	23%	26%
Advocate for persons who are DDBHH for any of their concerns	26%	21%	25%	28%

Appendix

Not Without Us Steering Team:

- Teddy Dorsette
- Liz Kobylak
- Nan Asher
- Dr. Michael McKee
- Tanya Wyatt
- Matthew Stephens
- Debbie Mitre-Smith
- Sean Forbes