THE COMMUNICATOR

NEBRASKA COMMISSION FOR THE DEAF AND HARD OF HEARING
QUARTERLY NEWSLETTER

NCDHH Creates 'Excellence in Education' Award, Honoring Dr. Frank Turk



Board Chair Jeremy Fitzpatrick announced at the Full Board meeting on Friday, Dec. 13 the creation of the 'Dr. Frank Turk Excellence in Education Award'. This annual recognition award is for educators in the community who have made significant contributions to the improvement of education for students in Nebraska who are deaf or hard of hearing. The award recipient will be named annually during the last week in May.

The award is created in honor of Dr. Frank Turk with nearly half a century of experience in leadership and education roles including Gallaudet University, Superintendent at South Dakota School for the Deaf and state director of the North Carolina Services for the Deaf, before coming to Nebraska and serving two full terms on the NCDHH Full Board of Commissioners. Dr. Turk

is known as the "Father of the Deaf Youth of America" in his work on leadership training activities at schools across America. He co-founded the National Association of the Deaf's famous Youth Leadership Camp (YLC) for teenagers with leadership potential.

Criteria:

- The recipient must be in the education field as a teacher, mentor, supervisor, speech pathologist, and/or training director in the related fields listed;
- The recipient must work in the state of Nebraska, working with Nebraska students;
- The recipient should embrace innovative approaches designed to foster teaching and a dedication to excellence in the deaf and hard of hearing community;
- The recipient is someone who has exhibited outstanding leadership throughout his or her career in the following areas of but not limited to: scholarship, teaching, administration or service;
- More information including a nomination form may be found on our website at:
- https://ncdhh.nebraska.gov/resources

NCDHH Full Board Priority Bills: LB 839

LB 839 is a bill to recognize American Sign Language and provide for the teaching of American Sign Language in schools. This has been a collective mission NCDHH has collaborated with Nebraska Association of the Deaf (NeAD).LB 839, introduced by Senator Anna Wishart, will recognize American Sign Language as a distinct and separate language and will authorize schools to offer courses. By the passing of this bill, it will allow children who are deaf or hard of hearing better access to education and employment opportunities. Another important aspect of this bill is not only to recognize the language, but to recognize the Deaf culture.

"This bill is very important to the deaf and hard of hearing communities we work with and serve," NCDHH Executive Director, John Wyvill, said. "Without recognition of ASL, it can mean lack of resources and acceptance in schools, employment, and society. This bill is a positive step forward in ensuring equality for all."

NCDHH Full Board Priority Bills: LB 965

Legislative Bill 965 was filed on January 14 under Sen. McDonnell in the Nebraska Legislature. The bill, introduced to the Education committee, will establish a language assessment program for children who are deaf or hard of hearing. The NCDHH Full Board has worked continuously with the Nebraska Association of the Deaf (NeAD) and community and deaf education leaders to move forward with legislation. The intent of this bill is to ensure children have a strong language foundation for kindergarten readiness and academic success. Without such foundation and base for language, many children who are deaf or hard of hearing begin their education already delayed. Under LB 965, NCDHH will require an advisory committee to compile data from assessments and a research program. The role of the advisory committee will be to identify existing resources already developed to be made available for use by families, local education agencies, the individual family service program, or individualized education plans. The advisory committee, appointed by NCDHH, is a cross section of educators, administrators, deaf and hard of hearing community organization representatives and parents of children who are deaf or hard of hearing. More information on LB 965 can be found at: https://nebraskalegislature.gov/FloorDocs/106/PDF/Intro/LB965.pdf

Individuals and/or organization representatives who would like to support this bill may send their written thoughts to Sen. McDonnell at:

mmcdonnell@leg.ne.gov or by mail at:

Sen. Mike McDonnell

State Capital Room #2107

State Capitol, Room #2107 P.O. Box 94604

Governor Ricketts Appoints New Full Board Members

Gov. Pete Ricketts has appointed Mr. Jonathan Scherling and Mr. Robert Feit to the Full Board. Their official terms begin Feb. 1, 2020. Gov. Ricketts has also re-appointed Ms. Candice Arteaga for her second term. Mr. Scherling replaces Dr. Frank Turk as a Deaf representative while Mr. Feit replaces Dr. Marc Brennan for a Hard of Hearing representative.



Mr. Scherling is from De Witt, Nebraska. He graduated from Gallaudet University in Washington D.C. with a Bachelors in American Sign Language and Deaf Studies. After graduation, he moved back to Nebraska and is teaching ASL/Deaf Culture at the University of Nebraska at Omaha. Currently, Mr. Scherling is studying several Graduate courses at UNO. Mr. Scherling is a Board member on the Nebraska Association of the Deaf (NeAD), the Iowa School for the Deaf (ISD) Foundation, and is also involved in National Association of the Deaf, Lincoln Association of the Deaf, and Omaha Association of the Deaf.

Mr. Feit graduated from the University of Nebraska at Lincoln with a Bachelor's in Accounting. He is retired from the Beatrice Board of Public Works as Director of Administrative Services and currently is the CEO of RJF Consulting. Mr. Feit has been involved in many community boards and organizations including the Western Region Chair, Board of Directors, Association of Community College Trustees, Board member and former chair of the Nebraska Community College Association. He was also a K-12 school board member for 16 years.





"We are very excited to have Ms. Arteaga on our board for another term along with the wealth of knowledge and experience both Mr. Feit and Mr. Scherling will bring to our Full Board," John Wyvill, NCDHH Executive Director said. "Between their public service and education backgrounds, they will be bringing a lot of positive input. We are also thankful for Dr. Turk and Dr. Brennan for their service in their respective terms on the Board."

The Nebraska Commission for the Deaf and Hard of Hearing was established by the State Legislature in 1979. The Commission consists of nine members who are appointed by the Governor subject to approval by the Legislature. Statute 71-4720 requires that a majority of the commission members who are deaf or hard of hearing shall be able to express themselves through sign language. The commission members shall include three deaf persons, three hard of hearing persons and three persons who have an interest in and knowledge of deafness and hearing loss issues. The Commission was created to improve the quality and coordination of existing services for deaf and hard of hearing people and development of new services when necessary.

Communication in Healthcare: Working Together

John Wyvill, Executive Director



One of the most critical issues facing the deaf and hard of hearing community in Nebraska is communication access in a medical setting. The obstacles we encounter vary, including health care facilities declining to provide a licensed, qualified interpreter and offering only video remote interpreters (VRI); VRI not working due to technology issues; lack of training in healthcare staff to use VRI; lack of assistive listening devices; asking a family member to "interpret"; and pass notes back and forth. This list can

go on and on.

Under the Americans with Disabilities Act, for example, hospitals must provide effective means of communication for patients, family members and hospital visitors who are deaf or hard of hearing. As the United States Department of Justice, Civil Rights Division noted "[e]ffective communication is particularly critical in health care settings where miscommunication may lead to misdiagnosis and improper or delayed medical treatment." Source: https://www.ada.gov/hospcombr.htm

To that end, the Nebraska State Chief Medical Officer, Dr. Gary Anthone, came to the Omaha Association for the Deaf (OAD) Hall on December 10 (seen below with Board Members Jeremy Fitzpatrick and Norman Weverka) to listen and receive feedback and stories regarding communication access in a medical setting in Nebraska. Prior to the meeting, the general consensus in the medical community was that these complaints were isolated in nature. Many did not realize the scope and pervasive nature of our struggles. For those who would like to share their stories or experiences are still encouraged to email Dr. Anthone or submit a VLOG to gary.anthone@nebraska.gov. A big thank you to OAD President, Candice Arteaga, for hosting the town hall as well as efforts of Nebraska Association of the Deaf (NeAD) President, Mark Andersen, to ensure a successful event. We also ppreciate Jonathan Arteaga for recording 'Facebook Live' the meeting for those that could not attend.

In terms of next steps, it is important that all of us work together to support advocacy efforts for better communication access. With this in mind, I would encourage all that have such challenges to contact Cody McEvoy at cody.mcevoy@nebraska.gov or Video Phone (402-682-7129). It is extremely important for all of us that we support each other and encourage one another to let health care professionals know when communication access is not effective. It not only helps you but those that come after you. We are the ones that promote the change to the healthcare system. We need your support to make these positive differences, so please reach out to us.



5 Things to Look for When Hiring Sign Language Interpreters

by Lydia Callis, LC Interpreter Services, LLC via Sharon Sinkler, Interpreter Program Coordinator

Not all sign language interpreters are created equal. But how would a person who doesn't use ASL know that?

The first question an organization can ask a Deaf individual who needs interpreters, "Do you have a preferred agency or interpreter?"



Imagine rushing to the hospital because a family member has been injured, but when you arrive nobody can tell you what happened because you do not speak the same language. Sitting bedside, holding the hand of a loved one who is broken, bleeding and unconscious, you have no idea what occurred, what is going on, or whether they will be ok. Many hours later an interpreter finally arrives to provide communication, but they start interpreting things that don't even make sense. Something about surgery for a basketball ... test ... later friendship? What? The interpreter is not effectively communicating the message from the doctors, which just results in more frustration and confusion during an already stressful situation.

All Interpreting Agencies Are Not Created Equal

Unfortunately it is still common for individuals with hearing loss to endure substandard ASL interpreting services provided by low quality interpreters. Because there is no mandatory national standard for requiring licensure and certification, poor interpreting services continue to deny Deaf individuals the ability to participate in conversations that impact their lives. Hiring unqualified interpreters is ultimately a waste of financial resources, and can open an organization up to potential violation of the Americans with Disabilities Act (ADA).

A person who is hiring sign language interpreters for the first time may not be sure what to look for in a provider or agency. Ensuring quality interpreting services for Deaf individuals can be especially challenging to those who do not know American Sign Language and are unfamiliar with Deaf culture.

Below are 5 things to look for when assessing the quality and capabilities of a sign language interpreting service provider.

1. Look For Agencies That Specialize In Signed Languages

Signed languages are unique because they are visual languages, existing in 3-Dimensions. ASL is a distinct language with its own grammar rules and structure. It relies heavily on facial cues and body language, as well as the use of classifiers to convey meaning. There are signs commonly used within different industries for specific terminologies, and even regional dialects.

There are many large multi-language agencies out there offering sign language interpreting services, but they do not have a vetting process that ensures the quality of their interpreters. Working with an agency that specializes in signed languages can help assure effective communication from interpreters that have the appropriate skills and credentials.

5 Things to Look for When Hiring Sign Language Interpreters

2. Look For Deaf-owned, Coda-owned, or Interpreter-owned Agencies

An agency that is owned by an individual who is Deaf, from a Deaf family, or a seasoned ASL interpreter can offer advantages over the competition. The owners of these agencies will have the first-hand experience to navigate language and cultural barriers, and they will be able to create workability for both Deaf and hearing parties to ensure effective communication.



Individuals who are Deaf, or individuals who were raised in Deaf families – Codas (Children of Deaf Adults) and Sodas (Siblings of Deaf Adults)— have a strong tie to American Sign Language and the ability of this language to empower those with hearing loss. For many of these individuals, ASL is the language of their families and/or their friends. To those involved in the Deaf community, ASL is more than just a language, it demonstrates the importance of connection and the freedom of self-expression.

Interpreters who have a strong background providing reliable services in a variety of settings understand what full accessibility looks like all along the spectrum of hearing loss. Over the years, Deaf consumers will share with interpreters some of the challenges that they face. Interpreters often witness lack of access when in the field, and have experience working alongside both hearing and deaf clients to come to effective resolution.

Agencies that have direct involvement within the Deaf and Hard of Hearing community will have an understanding of current topics surrounding civil rights, technology, and social issues that concern those who are Deaf or Hard of Hearing. Cultural competency at these organizations is likely to be higher among agency staff and interpreters.

3. Look For Agencies that Provide Resources and Support for Their Clients

In the search for interpreting service providers, it's a good idea to look for agencies that emphasize ongoing support for their clients. Seek agencies that provide not only interpreters, but information to help the communication be effective and successful.

Sure, it's great that the interpreter showed up. But does the hearing staff know how to utilize their services? Do they know where the interpreter should sit or stand? Do they know how to address the Deaf individual through the interpreter? Do they know how to follow up if the interpreter was not effective, or displayed unprofessional behavior?

One way to assess whether an agency provides client support is to browse their website and/or social media to see what kind of resources they provide for free. Look for agencies that offer opportunities to make further connections within the Deaf community, as well as current news and events. Another way is to contact the agency directly with any questions to evaluate whether they are generally responsive and helpful.

5 Things to Look for When Hiring Sign Language Interpreters

4. Look For Agencies That Value Their Interpreters

As with any occupation, the way that an agency treats their workers is a reflection of their company values. Interpreters are typically contractors, meaning they are freelancers who have control over their schedule and who they work with. Quality ASL interpreters will flock to agencies that show respect for their time and have a positive reputation among Deaf consumers. How can a person looking from the outside know if an agency values their interpreters? Here are a few simple ways to tell:

- They assign Team Interpreters: This ensures the accuracy of services for the Deaf consumer, and protects interpreters from exhaustion. Due to the physical and mental nature of ASL interpreting, interpreters will begin to experience extreme fatigue after about an hour of interpreting alone. When a request is made for interpreting services that requires over one hour of consecutive interpreting, a second interpreter should always be assigned to work as a team throughout the requested time.
- They assign Deaf Interpreters: Deaf interpreters work as a team with a hearing sign language interpreter to ensure the accuracy of communications when working with Deaf individuals, especially in traumatic or emotionally distressing situations, or when communicating with individuals for whom ASL is not a first language. There are times when the only person who can really understand a Deaf individual is another person who is Deaf. This is true when it comes to language skills, since not everyone uses formal American Sign Language, and it is also true when it comes to recognizing and navigating instances of institutional oppression. Agencies should advocate for the use of Deaf interpreters in situations where cultural barriers and power dynamics can influence the outcome of the communications.
- They have a fair Cancellation Policy: Most Sign Language Interpreters work as contractors, so they are freelancers responsible for filling up their own schedules to generate income. Interpreters will plan their schedules out weeks in advance to line up assignments in a way that makes sense for transporting around the city to different locations. Agencies that value their interpreters will protect the time of their contractors by ensuring they are paid by the client for the time they block off in their schedule if the request is cancelled without a reasonable amount of time to secure another job. Typically, this means at least 2 business days advance notice. Quality interpreters will only work for agencies that demonstrate value for their interpreter's time and respect for their schedules.
- They emphasize ongoing professional development: When reviewing agencies, it's advisable to look for those who work with Nationally Certified interpreters and interpreters who have completed an Interpreter Training Program. Seek agencies that openly advocate for higher interpreting standards, and organizations that offer interpreter mentoring programs for those new to the field.

5. Look for Agencies that Seek Feedback

Customer and client feedback is essential to the development of any organization. Since agency owners cannot be in the field with interpreters at all times, reaching out to both Deaf and hearing consumers can help an interpreting agency maintain an exceptional level of service and to quickly resolve any issues that may arise. Seek agencies that are easy to connect with and consistently responsive to inquiries, both before and after services have been rendered. Interpreting agencies that actively solicit feedback demonstrate commitment to ensuring quality and satisfaction.

EIPA Scores Fluctuate

Jessica Larrison, Education Advocate



In 2015, Nebraska raised the EIPA (Educational Interpreter Performance Assessment) from 3.5 to 4.0. Since, Nebraska has made improvements for educational interpreters to increase their EIPA scores. In the 2014-2015 school year, 14 interpreters were sitting at a 3.0-3.4, 64 interpreters at a 3.5-3.9 and only 23 interpreters at a 4.0 or above. With the requirement changes, interpreters were allowed some time to work to improve their score.

Date obtained from Nebraska Department of Education shows in the 2017-18 year, the number dropped from 14 to 11 interpreters had a 3.0-3.4, there was also a decrease from 64 to 61 interpreters withholding a 3.5-3.9 and lastly, an **increase** from 23 to 33 interpreters at 4.0. Currently, only 29% of interpreters have a 4.0 score or above.

We see the numbers fluctuate every year, some in our favor as more move to that 4.0 and above standard, but we also see a decrease in interpreters who are qualified, for a variety of reasons. There are also 80 interpreters who were grandfathered into the rule change.

Currently in Nebraska we have 892 Deaf of Hard of Hearing children ranging from the age of newborn to 21. That is a lot of students who will need specific accommodations to ensure education access and equality. So, as the year progresses I hope our interpreters will continue to work to increase their scores to a 4.0. If you have questions please do not hesitate to contact me at Jessica.larrison@nebraska.gov

Staying Healthy During Flu Season

Carly Weyers, Deaf Services Coordinator



The flu season is shaping up to be bad, with three states reporting wide-spread and regional flu activity. Nebraska is at the top of that list. The number of reports with Influenza-like illnesses increased and in some states, emergency rooms have been overwhelmed with people suffering from the flu. Nebraska is seeing more numbers of cases with different strains of the flu than the rest of the country. This can make it difficult to avoid flu-like symptoms. With all this going around, here are some common flu symp-

toms and what you should do if you are sick or how to help avoid catching or giving someone the flu:

Fever, chills, cough, sore throat, a runny or stuffed nose, body aches, headaches and fatigue are the most common symptoms of the flu. Many people assume they are less contagious after the first few days, but that is not true. One doctor reported to Times Magazine, explaining you are contagious for as long as you have symptoms. Many cases you are most contagious 24-48 hours before you start showing symptoms. It is very important for people to stay home when any of these flu-like symptoms develop. See a doctor within 48 hours to be treated with Tamiflu or an antiviral medication. Be sure to wash your hands with warm water and soap after every bathroom visit and cover your cough. Flu germs can jump to others when left to linger on door handles, printer buttons, or other shared tools and furniture. Be sure to clean everything to prevent yourself from getting sick or passing out these germs to others. Lastly, it is not too late to get the flu shot. CDC recommended everyone receive a flu shot. However, be aware that the flu shot isn't 100% effective, but you will have less severe cases and symptoms compared to others who did not receive the vaccination.

NSTEP Video Series Project

Kim Davis, Advocacy Specialist

One of my project goals for 2020 involves creating a series of videos regarding the Nebraska Specialized Telecommunications Equipment Program (NSTEP). People often contact our agency with questions about NSTEP and how to go about various procedures involved with this program. The NSTEP video series will aim to allow individuals to select a specific topic of interest, such as:



- About NSTEP
- Summary of NSTEP's Policies and Procedures
- NSTEP Application Guidelines How to Fill It Out
- NSTEP Application Procedure What to Expect After Submitting Application
- I Received my NSTEP Voucher Now What?

Each series will be available in ASL, voice interpreted, captions and script. The first part of the video series, About NSTEP has been developed and will soon be posted on our website. If you are interested, here are some alternative options to receive updates and announcements when the video series become available:

- Check our website occasionally at www.ncdhh.nebraska.gov and click on NSTEP "Learn More"
- Subscribe to our E-News, email NCDHH@nebraska.gov and type "Subscribe E-News"
- LIKE US on our Facebook profile

For those who do not have access to a computer, tablet or a wireless device; our agency can be contacted at 800-545-6244. One of us six available Advocacy Specialists will be happy to answer any questions and provide guidance with this program.

Deaf Verse

Cody McEvoy, Advocacy Specialist



The National Deaf Center on Postsecondary Outcomes released an online choose-your-own-adventure game designed for Deaf teenagers to build confidence, learn their rights, and develop skills to succeed in their transition from high school to adult life. It is the first and only ASL-accessible video game. The game is played in a digital experience where a player awakens from a mysterious organization that is trying to gain knowledge from Deafverse, a collection of ancient, magical comic books. They will meet Justin the Narrator and enter a

virtual reality world where you make decisions throughout the story by selection Option A, Option B, or Option C.

Deafverse present opportunities for Deaf teens to practice:

- Working with Interpreters
- Advocating for greater access
- Understanding Deaf culture
- Identifying and requesting accommodations
- Evaluating assistive listening technology options



While designed for Deaf teenagers, this can be played by people of all ages and also includes script on the right side for those that may miss some of the sign language or perhaps just learning the language! Check it out here: https://www.nationaldeafcenter.org/deafverse/

Newest Omaha Advocacy Specialist

Dillon Curren, Advocacy Specialist



Hello! My name is Dillon Curren and I am your new advocacy specialist from the Omaha Office! I would like to take the time to introduce myself and share my background to my community!

I am Deaf with some use of a cochlear implant. I am fluent in American Sign Language (ASL) and English and I prefer to use ASL as my mode of communication. I am originally born and raised here in Omaha, Nebraska. I went to mainstreamed schools all in

the Millard Public School Districts in West Omaha. I graduated from Millard South in 2013. I attended the National Technical Institute for the Deaf (NTID) in the Rochester Institute of Technology (RIT) in Rochester, New York. I received my Bachelor's and Masters' in criminal justice in 2017 and 2019. My thesis in my Masters' focused on the relationship between the Deaf community and the criminal justice system. I primarily focused on the challenges and the gaps between the Deaf and Hearing communities. I did a study on knowledge of legal rights between Deaf and Hearing college students at RIT and to see if there was a difference; and sure enough, there was a difference. My thesis on this was thought to be the first ever focusing on the criminal justice and the Deaf community in RIT's history of Graduate Studies. It is now published and available to view on the RIT Library site.

The position opened up for the Advocacy Specialist position for Omaha and it fit with my dreams of opportunities. I wanted to bring back what I learned and gathered in knowledge to share in areas and people who may not have had the opportunity to do so. I also wanted to come back to my homeland and work within my Deaf community. I want to collaborate with others and raise the community to new heights and break down barriers. My goals for this position are to help any community member with issues they may have and help them find new opportunities to improve themselves and

their community. I also want to improve the knowledge on your rights and how to interact with the criminal justice system while at the same time, educate the criminal justice officials on barriers and how we collaborate to break them. It takes all of us to achieve in this mission. I am looking forward and very excited to work with you all. Please do not hesitate to contact me or come see me for assistance, to introduce yourself, or to chat! You can reach me via email at dillon.curren@nebraska.gov or by Video Phone at 403-206-2470. Also most importantly; GO TIGERS!





Don't forget to check out NCDHH on Facebook at: www.facebook.com/nebraskacommissionforthedeafandhardofhearing/

We're also on Twitter! @NebCDHH

You can also find information on our website at www.ncdhh.nebraska.gov

It's Time to Count: U.S. Census 2020

Kathy Scusa, Advocacy Specialist

2020! The official start of the second decade of the century. With every new decade, our U.S. Constitution requires that the government conduct a population census in all 50 states, The District of Columbia and the five U.S. Territories: Puerto Rico, American Samoa, The Commonwealth of the Northern Mariana Islands, Guam, and The U.S. Virgin Islands. The Constitution: Article 1, Section 2, mandates that the country conduct a count of its population once every 10 years. The 2020 Census will mark the 24th time that the country has counted its population since 1790.



Participating in the census is required by law, even if you recently completed another survey from the Census Bureau. A complete and accurate count is critical for you and your community, because the results of the 2020 Census will affect community funding, congressional representation, and more. The census provides critical data that lawmakers, business owners, teachers, and many others use to provide daily services, products, and support for you and your community. Every year, billions of dollars in federal funding go to hospitals, fire departments, schools, roads, and other resources based on census data. The results of the census also determine the number of seats each state will have in the U.S. House of Representatives, and they are used to draw congressional and state legislative districts.

April 1, 2020: Census Day is observed nationwide. By this date, every home will receive an invitation to participate in the 2020 Census. When completing the census, you will include everyone living in your home on April 1. Once the invitation arrives, you should respond for your home in one of three ways: online, by phone, or by mail. When you respond to the census, you tell the Census Bureau where you live as of April 1, 2020. During April census takers begin visiting college students who live on campus, people living in senior centers, and others who live among large groups of people. Census takers also begin conducting quality check interviews to help ensure an accurate count.

May 2020: The Census Bureau begins visiting homes that haven't responded to the 2020 Census to make sure everyone is counted.

December 2020: The Census Bureau delivers apportionment counts to the President and Congress as required by law.

March 31, 2021: By this date, the Census Bureau will send redistricting counts to states. This information is used to redraw legislative districts based on population changes.

There is a lot more information regarding the upcoming census on the website: https://2020census.gov/en/what-is-2020-census.html. If you have questions, this website should be a great asset. As Deaf, Deaf-Blind and Hard of Hearing individuals, it may be harder for us to be included in the census. If, by some chance you are unable to complete the census online, by phone or through the mail, sometime around May when the Census Bureau representative contacts you in person, please have a plan in place for communication! They will contact your neighbors in an attempt to get information about your residence. Let them know that you can't hear the doorbell or a knock. It is truly critical that EVERYONE be counted. If I can be of assistance with your census, if you would like to discuss anything hearing related or NCDHH's programs and services, please contact me at my North Platte office phone number (308) 535-6600 or you can email me at kathy.scusa@nebras-ka.gov. I look forward to serving you.

US Census Contact Information:

Website: https://2020census.gov/en/what-is-2020-census.html For general questions: Visit our Frequently Asked Questions (FAQ) page, or call 301-763-INFO (4636) or 800-923-8282.

For information on services for people who are Deaf or hard of hearing: Call the TTY number at 800-877-8339 to reach the Federal Relay Service.

How Do Phones Work?

Aaron Rothenberger, Education Advocate



A lot of the work I do revolves around assisting our clients with hearing on the telephone. This problem has led me to wonder how both landlines and cellular phones work. I am by no means a telecommunications engineer, so I will try to keep this as blue-collar and straightforward as possible. Landline phones have been around since the 1870s, with Alexander Graham Bell receiving the first patent for the working telephone. They have changed an incredible amount since those early years of communication and direct line to line connections. Whereas

early phones used to use switch box operators to connect, we now have phones that connect to towers via wireless transmissions, over the internet, and even through satellite connections.

Current landline phones connect via a network of copper cables or through voice over IP. Voice over IP in its basic form, is a phone call over internet service. VOIP can include wireless and fiberoptic connections. A large number of big businesses use or have switched to voice over IP, but the plain old telephone service, the actual technical name for the copper cable telephone service, remains available for small businesses and residential. This service has been around since the beginning of telephone communications.

We will stick to the plain old telephone service to keep things simple and in our wheelhouse. When you make a call via the service, your voice is compressed into a range of 300 - 3,300 Hz and sent along the line to connect to your caller. Human hearing has a range of 20 - 20,000 Hz. As you can see, this process cuts out much of the voice range to fit a call along the line. This lack of high range frequency could be part of the reason that it is hard to understand certain people on the phone. It also explains why someone sounds different face to face instead of over the phone.

You may also notice that any additional background noise compounds the amount of sound sent along the same frequency. The more matched your voice is to the noise, the harder it will be to distinguish the words from the noise. This could be a reason that it is hard to understand someone who has a lot of background noise going on during their call. It is also considered part of the reason that hold music sounds so wonky. Trying to push an extensive range of frequencies into a much smaller range will cause the music to sound off. Cellphones follow a similar method to the landline phones, whereas they connect via radio transmissions to towers that connect the transmission back to another phone. Cellphones also compress the audio of the voice to the same range as a landline phone, 300 - 3,300 Hz. Older cellphones had antennas that could be pulled out or were easily visible. Today's cellphones have those same antennas inside of the phone. Because of this, a large amount of the radiofrequency energy that sent out of the antenna is lost to the interference of the phone's metal parts, the architecture around you, and even your head. A weaker signal can make a call quality worse.

While we are here, landline calls have direct connections via their cables, whereas cellphones have to share the tower connections between calls. Depending on the call volume and the number of available towers, the audio of the phone could be even more compressed to fit the service. Another thing to consider, manufacturers have been on a quest to shrink phones to smaller and sleeker styles and designs, microphones and speakers on the devices have become smaller and smaller. This also includes the antennas mentioned earlier. These adjustments have required manufacturers to utilize computer algorithms to adjust what sound is sent to the speaker and adjust how much background noise comes into the microphone. For example, most cellphones use three different microphones to compare the incoming voice and filter out any background noises. Although very helpful, algorithms are not a perfect fix for these calls just yet.

Phones are amazing devices. They have helped us connect over long distances and provided opportunities to stay in touch with the people we love the most. For me, I know I couldn't live without my texting and sudoku puzzle device at my fingertips. I hope that this short article has given you some insight into how phones work.

Something to Think About

Brittney Isom, Advocacy Specialist



Have you ever had a conversation with someone, then all of a sudden they start to cover their mouth or turn around and keep talking? To most people, this wouldn't seem like a big deal. However, to some, it's a way to bring up those heavy feelings of frustration and isolation. Content Director for Hearing Tracker, David Copithorne, wrote an article about a deaf woman's experience at the hospital while giving birth to her first child.

Like many people, Dr. Anne McIntosh relied heavily on lip-reading to communicate with her doctor and nurses. However, after more than 25 hours in labor, her doctor determined that a C-section was necessary. When she was moved into an operating room, everyone was required to wear full surgical gear, including face masks that covered up their mouths. McIntosh, who was now filled with anxiety and fear of the unknown, was unable to communicate with the team giving her and her baby care. Luckily, her husband was able to communicate and everything went as planned, but what about the people who are alone at their appointments? What are they supposed to do?

By wearing a standard medical mask, there is an immediate communication barrier between the healthcare professional and the patient, especially those who rely heavily on visual communication like the deaf and hard of hearing communities. The standard mask blocks visual cues, such as, facial expressions, lip-reading and emotions. These visual cues allow people who are deaf or hard of hearing the opportunity to fully communicate and participate in their course of care. Wearing a clear medical mask will give both the healthcare professional and patient a chance to understand each other, reducing miscommunication and potential errors in care. In today's society we are all so busy, going to one thing after another, we



forget that human interaction is an important part of life. Something as simple as a smile can ease the anxiety someone might be feeling.

U.S. Census Bureau Hiring in Lincoln, NE

The U.S. Census Bureau is looking to hire 3,500 jobs in the Lincoln office. Those jobs range from census takers to office personnel and pay anywhere from \$19.50-\$21.50 an hour. Jobs that require travel also offer mileage reimbursement. Most of the jobs will start paid training in March, with work to be done sometime between April and July.

In October, when the Nebraska Area Census Office opened in Lincoln, officials said they planned to hire about 17,000 people statewide to help with the once-a-decade process that attempts to count every person living in the U.S. At the time, Dennis Johnson, the deputy director for the Census' Denver region, acknowledged that filling all those jobs could be tough because of the Nebraska's low unemployment rate.

To learn more about available jobs and how to apply, go to Census.gov.

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