SLP Essentials for Non-SLPs, in partnership with RIT/National Technical Institute for the Deaf

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Thank you so much for joining us today on continued. We're so delighted to have our guest speaker today with us, Kristen Staron. This course is in partnership with RIT, the National Technical Institute for the Deaf. And if you haven't seen the other courses in partnership with RIT and TID, they are all in the course library for you to watch on demand. If you'd like to learn more about our guest speaker today, Kristen, you can read her bio on the course registration page.

But today, Kristen's going to present to us SLP Essentials for Non-SLPs. We hope you enjoy it. Over to you, Kristin. Thank you so much. Thank you, everybody, for joining us today.

I'm excited to give this presentation. Here we go. This first slide here is my disclosures, both financial and non-financial. And on the next slide here, we have limitations and risks that are inherent to taking this or any other course or webinar online. Next, we have our learning outcomes for this course.

You can take a moment to read through those and get familiar with what you should be able to do by the end of this course.

I'd like to start with a little bit of background about NTID and our institution. So NTID is the National Technical Institute for the Deaf. It's one of the nine colleges of RIT, which is the Rochester Institute of Technology. We're located in Rochester, New York, and we also have many global campuses as well. the nine, one of the nine colleges, was established by the Congress in 1965 specifically to provide higher education opportunities for deaf and hard of hearing students.

So our school does serve deaf and hard of hearing students. Within that population, we have a wide variety of both technology use and communication modalities. So on this slide, you can see a pie chart of the breakdown of both of those things. Our students have a wide variety of technology use, as you can see here, about 35% 24% use hearing aids, either one or two, and about 27% of our students use cochlear implants, either one or two. A small percentage of our students, 13% have both, which is what

we call bimodal.

They might be using a hearing aid and a cochlear implant. And then we also have a large group of students who prefer not to use any listening technology. Along with that, for expressive communication modalities, how our students communicate, we are an institution that embraces all communication we do not have a specific communication modality that is standard. So as you can see here, 38% of our students do use American Sign Language. 30% prefer to use spoken language and listening.

And excuse me, 30% use a combination of spoken language and sign language, and that might be switching back and forth between the two, or it might be using them at the same time, which is what we call simultaneous communication. 25% use exclusively spoken language and listening. And then a small percentage, seven, uses other, and that might account for international sign language or maybe somebody who just recently became deaf. They don't use sign language yet, but they're no longer comfortable using spoken language. They may use writing or like an AAC device to communicate.

Within our department, We have both audiology and speech language pathology. We are all certified by ASHA, and we also provide a full service clinic for both speech and audiology on campus, primarily to our students. We strive to meet the needs of our students, so we are able to communicate with them in whatever their preferred communication is. As you saw in the last slide, that's very diverse. All of us are fluent in American Sign Language, so we can meet the student where they are and help them to feel comfortable and confident with the services they're receiving.

If you'd like to learn more about our department, we've included a link here that you can check out and will also be included in the handouts for this presentation.

Here we have a list of some of the services that we provide on campus. I'm not going to go through the entire list and be exhaustive with that, but you can certainly pause and read and take a look at all the

things that we offer to the students.

As for this course today, this course is meant for non-SLPs to have a bit of a crash course as to what speech language pathology is as a field and help you to have some background and understanding of what a speech pathologist might do. And I'll be emphasizing a lot about our interaction with the deaf and hard of hearing population, as that is what our school specializes in.

Goals for this course, by the end of this course, you should be able to understand and list the qualifications for becoming a speech language pathologist, including the education required, the certification, and the licensure required. You should be able to describe the different areas of focus that a speech language pathologist can provide therapy in, and also the roles that an SLP may have in both an educational setting and a healthcare setting. And then lastly, you should be able to define communication concepts, including speech, language, voice, fluency, and pragmatics. So I want to start out today with the qualifications. What is required to become a speech-language pathologist?

It begins with your education. So SLPs must hold a master's degree or a doctorate degree from an accredited university. They must complete a minimum of 400 hours of supervised clinical experience, meaning hands-on experience working with clients, students under the supervision of an already licensed and certified speech language pathologist. You must pass a national competency exam, which is called the Praxis exam. And then after graduation, you must complete a one-year supervised clinical fellowship.

So again, you've already graduated, you've done your clinical service hours, but you're still not done yet. You have one year of a clinical fellowship with somebody who's already practicing in the field. and then even after that and you apply for your license, sure and certification, you still have to maintain currency, which I'm sure is what all of you are doing here today, maintaining currency in your field by taking continuing education. SLPs have to do this as well. As far as licensure, an SLP must hold a

license for any state in which they are practicing, and this includes telepractice.

So I'm currently in New York State. I hold a New York State license, but if I wanted to provide telehealth or teletherapy to anybody outside outside of the state of New York, I would have to apply for and hold licensure in whichever state that person is residing. So there are some limitations to telehealth in that capacity. The requirements for obtaining and maintaining a state license will vary state by state, and each state will have a website that details what those requirements are.

Some additional qualifications. Most SLPs hold certification, although this is not a requirement legally. Most SLPs do, and many employers may require this as well when hiring an SLP. The certification board is through ASHA, which is the American Speech-Language-Hearing Association. If you're an audiologist, you're already familiar with this agency.

And what we get is the CCC-SLP, and the CCC stands for the Certificate of Clinical Competence. In order to maintain this certification, an SLP must complete a minimum of 30 hours of continuing doing education every three years.

Let's talk a little bit about the roles and settings where an SLP may work and what their role might be depending on their workplace. You may have heard many different names, labels, or terms for an SLP in the past. One of the most common is a speech therapist or a speech teacher, a speech pathologist, a speech language pathologist, a speech instructor, SLP, SLPA. There's a lot of importance with how we name and label this. What we prefer is speech language pathologist because this is reflective of our degree.

A speech therapist may be a title that somebody could hold, but typically it means that they only have a bachelor's degree. Not all states allow this, but some do allow SLP, a speech therapist to practice with their bachelor's and not their masters under the supervision of a fully licensed master's degree holding

SLP. This is the same for SLP-A, a speech language pathology assistant. Some states permit this, some do not, and there are certain restrictions on what they can and cannot do as far as their roles and responsibilities. But we really do prefer speech language pathologist or shortening that to SLP because it's reflective of all of the certifications and qualifications that I mentioned on the previous slide.

So that's something to keep in mind if you're seeing speech teachers, speech therapists, there really is a little bit more to it.

Thinking about the settings where an SLP might work, this data is from the ASHA member and affiliate profile. So ASHA surveyed its members to find out where they work, and this was the results. 53%, so more than half of SLPs do work in education. This is the most common setting for an SLP, and that would include early intervention, which is birth to five. It might include preschool age, and it might include a K through 12 school or a college and university.

And then the second largest demographic for where an SLP may work is in a healthcare setting, and that's 39.6%. This would include working in a hospital, a skilled nursing facility, a residential or non-residential facility, home healthcare, or private practice or speech and hearing center. And when I go more in depth into the areas of focus, you will see which areas of focus fit into each of these roles. Lastly, we have other employment, and that might include administration or they've taken some other role not including speech language pathology, even though they do hold that certification.

So what do SLPs do all day? What is their job? SLPs work with the full range of human communication and swallowing disorders across all ages of the lifespan. So as I mentioned, with early intervention, we can start working with humans as soon as they are born, depending on their needs. And that continues all the way up through elderly, aging, and dying population.

Our scope of practice will fall into either professional practice or service delivery, and I will clarify what both of those mean. And the specific scope of practice will vary depending on where that SLP is working and what they tend to specialize in.

Taking a deeper look at professional practice versus service delivery, I've broken those down a little bit further on this slide. And this data is also based on that ASHA member affiliate profile information. Professional practice, that's 15.9%, so a much smaller percentage of where SLPs may choose to focus. That would include being a college or university professor, so educating the next generation, next generation of SLPs. It might include being a researcher, so researching areas of communication and language, but not necessarily providing any therapy.

They may be an administrator, a consultant, or some other role that is not providing services. The vast majority of our field do service delivery, and that's 84.1%, and that's typically either a clinical service provider or a special education teacher.

what's included in professional practice. This might include advocacy and outreach, so advocating for either individuals that have communication disorders or advocating for other SLPs. This might include supervision of undergraduate and graduate student clinicians. So as I mentioned, in order to obtain your licensure and certification, you have to complete 400 hours of supervised clinical practice. This is where the supervision might come in.

Education and teaching, as I mentioned, they might be a college or university professor. Administration and leadership roles, things like coordinating CEU events, the one that you're attending today, is something that might be an administrative role for somebody who is an SLP. And lastly, research and dissemination. I am involved in some research here at RIT and NTID, and then I also do service delivery as well. So thinking about so some people who may have their foot in both the professional practice world and the service delivery world, that is possible as well.

For service delivery, this might include collaboration with other professionals either within or outside of the field of speech language pathology. This might include counseling individuals about their communication disorders. This might include prevention and work to prevent people from acquiring communication disorders. Screening, this might be in a school or another community area where we're screening to see if somebody needs a deeper further assessment of a communication disorder. Assessment is a more formal process to determine what, if any, communication disorders an individual may have.

Treatment of those communication disorders, so helping the person to improve their communication. and lastly, technology and instrumentation, which I will touch on a little more later.

Today we're going to go through all of these different service delivery areas. This is more related with that scope of practice, and I will touch on each of these individually, but we're going to go through speech production, language, fluency, voice, resonance, cognition, feeding and swallowing, and audition.

First, I want to talk about some common communication disorders, and then we'll talk about how those different areas of service delivery would be related to these common communication disorders.

Communication itself is a very broad term, and it is separate from speech, separate from language, and separate from voice. Communication as a whole refers to how we send and receive messages and how we exchange information and ideas with others. Sometimes we use speech, language, and voice to do this, but other times we do not. So one of the examples I like to give is if I'm teaching in the classroom and I have a student that arrives 10 or 15 minutes late to class and I stop teaching, I look at the student, I look down at my watch, and I look back at the student, and then I continue teaching, I have communicated a message, I have shared an idea, I have exchanged information with that student. The

student hopefully has received and understood that message, which is, you're late, I noticed you're late, I'm not pleased that you're late, have a seat.

So I did not use speech or language or voice to send that message, and the student did not use any of those things to receive the message either. So when we think about communication disorders, we want to think about communication as a global term and not just related to speech.

As I mentioned previously, SLPs do support people across the lifespan from birth to end of life, and anybody in that age spectrum who's experiencing a communication disorder, we can provide support to. ASHA defines a communication disorder as an impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal, and graphic symbol systems. So it's really touching on all those areas of communication. Sending messages, receiving messages, understanding messages, reading, writing, verbal, nonverbal. There's a lot of things in here.

So there's a lot of things that could potentially go wrong with communication. And then there's a lot of areas that SLPs can provide support to try to alleviate the pressure or the distress of experiencing a communication disorder.

the usual labels that are used when diagnosing a communication disorder are according to the severity of how it impacts the person's communication. Typically, these are categorized into mild, moderate, severe, and profound. So again, if any of you are audiologists out there, these terms and labels are probably pretty familiar. Communication disorders may be developmental or acquired. So for developmental, this might be a speech delay, an articulation error, something that we typically see developing in children.

Something that's acquired may be as a result of a brain injury, a stroke, or another traumatic life event that would impact communication. This also could be for somebody who experiences head and neck

cancer and they have difficulty with their voice afterwards. A communication disorder may be permanent or it may be temporary. If a child has an ear infection, this may create a temporary communication disorder. It's impacting their ability to receive communication through their ear, but it's not going to last forever.

A permanent communication disorder could be deafness. This is something that the person may have from birth and it is not going to go away. They might use a listening device or a tool to help them receive audition, but it's not going to cure or remove their deafness. Communication disorders may be co-occurring, meaning that there might be more than one present at a time. And a communication disorder can be a primary disability, meaning it's the most impactful thing on this person's life, or it may be secondary to other disabilities.

So speaking specifically to deafness, often we have students who have a congenital disability or other issue happening, and the deafness is more a symptom of that rather than their primary disability. And communication disorders can be related to hearing, language, and/or speech. So it could be one of the three or all three happening at the same time.

Breaking that down into hearing, language, and speech, let's look at some common communication disorders that could occur in any of those areas. the first one, deafness. And I want to point out that I have a capital D and a lowercase d. This is identity-based language. If somebody considers their deafness to be part of their cultural identity and they're a member of the deaf culture, they would use a capital D to identify themselves as deaf.

Somebody who considers their deafness to be more of a medical diagnosis, maybe they're from a hearing family, they grew up in a hearing world and use spoken language and listening, they may use a lowercase d and indicate that more of their medical identity than their cultural or personal identity. Hearing loss would also be included in this, meaning if somebody has hearing and then that hearing is

lost over time, that could be included here as well. And while being deaf or hard of hearing does impact somebody's ability to receive communication through that specific channel or sense of hearing, it does not always require intervention from a speech or language standpoint. if an individual is using ASL, if they have beautiful, intact language, they do not automatically require intervention from an SLP. And we want to make sure that we are respecting language choice, cultural identity, and not trying to impose spoken language and listening on somebody who may not want or need that in order to have a full language and communication in their life.

Second category, language. This is categorized into the form of language, which would include phonology, morphology, and syntax, or the content of language, which would be the semantics of the language, or lastly the function of the language, and that is pragmatics and social use of language. And I'll be going more in depth into social language and pragmatics a little bit later on in this presentation. And then lastly, speech. That could be an articulation disorder, meaning that an individual struggles producing specific speech sounds.

One of the most common ones that we think of is children who have a frontal lisp or struggle to say their R. And again, some of those are developmentally appropriate and may naturally resolve as the child grows, and others may require intervention to resolve. A fluency disorder, So although speech and voice are separate, this is considered part of a speech communication disorder. Fluency is how fluid and smooth a person's spoken voice and communication is. I'll be going more in depth into that a little bit later as well.

And then lastly, a voice disorder. If an individual experiences issues with their voice itself, which again, I will go more in depth into that would be categorized under a speech communication disorder.

I'd like to take a minute to emphasize the difference between a difference and a disorder. And this is one of the ways where we at NTID really emphasize that deafness may not be the person may not

consider themselves to have a disorder. They just consider themselves to be a deaf individual. So we know that there is significant diversity in the way that humans communicate, and that is a wonderful thing. It's a good thing.

there are regional, social, cultural, and ethnic influences on communication, and this contributes to this diversity. So if we think about the fact that some people say soda, some say pop, and some say Coke, that's a regional difference that everybody accepts as normal. But sometimes when a person has a different neurotype or a different hearing status, that may impact their communication, and people are often quick to label that as disordered rather than just a difference. So It's important to understand when an individual truly has disordered communication versus just a difference in their communication. It's really important to be culturally aware and culturally sensitive, not only to deaf culture, but to all different cultures of the individuals you may be working with, so that we're not trying to change something that is not truly a disorder.

SLPs need to maintain their cultural sensitivity and awareness, and it's always a wonderful part of continuing [Speaking of which,] now we're going to get more in depth into that scope of practice and areas of focus like I promised. We're going to start off with the big one, speech production. This is the area that almost everybody associates with an SLP or a speech therapist working on speech production. So this refers to how we use our body to produce speech sounds. That includes our lungs, our larynx, our tongue, our lips, our nose, all of that is included in producing a speech sound.

This could include articulation. So I had mentioned the lisp or the r sound. It might be something like that. It might be the phonology of a speech sound. And this is understanding the sound system related to the spoken language.

So if we look at a letter, we know what sound it should make, especially in English. We have some really confusing and tricky combinations that don't always sound the same. And those phonological

issues can difficult for some people. Motor planning and execution. Sometimes an individual may have a neurological impact that impacts their ability to motor plan.

So they may know exactly what they want to say, but they're not able to plan out the specific motor movements required to make those speech sounds come out of their body. And then also accent modification. And I've added an asterisk there because, again, this is not related to a disorder. but sometimes there are individuals who want to modify or reduce the influence that their first language has on another language. If we have an individual coming from another country and wanting to speak American English, they may find that they're struggling to be understood because their first language is influencing their pronunciation in English.

They might choose to seek out accent modification or accent reduction services from an SLP, but this is for a difference in communication not a disorder in communication. Speech production might be found in both education and healthcare settings. It's most often in educational settings, but it can be certainly found in a clinic or private practice as well.

Next up we have language. This is the second half of our title, Speech Language Pathologist, and this really encompasses a very significant portion of our scope of practice and what we do. Language includes both spoken and written language. It includes expressive and receptive language. So expressive being how a person sends messages through language and receptive being how a person receives processes and understands communication through language.

It might include the rules of language. So if a person struggles with phonology, morphology, syntax, semantics, pragmatics, pre-linguistic and paralinguistic communication, or with literacy. With literacy, we're thinking about reading and writing and the ability to understand language through the reading and written form. Paralinguistic communication, we're thinking about non-verbal communication, things that impact our communication. If I change my tone of voice, it changes the meaning of the message, even

though my words may be the same.

tone can have a significant impact. I think one of the great examples for that is the you good, those two words can mean so many different things depending on how you say it. If you're asking somebody you good versus telling someone you good, or my kids, if they look like they're about to fall apart, you give them the quick you good, you're good, you're good. So all of that can be included in the rules of language and things that might need some service delivery to support. We might have developmental language delays where a child is late in developing language and they may need intervention to catch up and have age-appropriate language similar to their peers.

They may have an acquired language impairment. So this again could be if somebody has a brain injury, a stroke, or other traumatic event that impacts the language centers of their brain, their ability to understand language, express language that might require intervention. And then lastly, touching on pragmatics and social use of language. This has been a changing topic in our field. This refers to how people use language socially to communicate with one another, and often it's most connected with the autistic and neurodivergent community.

A lot of people in the past thought that it was very important to have neurodivergent individuals communicate like neurotypical individuals, and we were teaching them scripts and masking and ways to sound more neurotypical. And in recent years, there's been so much research coming out where people are being much more supportive and accepting and recognizing of different neurotypes and the importance of individuals to have their own unique and personal communication. So this may really fall under difference and not disorder, and it may or may not actually require intervention. And again, language intervention, we may find this in an educational setting or a healthcare setting. This is one that we could certainly find in both.

Next up, we have fluency, which I briefly mentioned before. Fluency refers to smooth, effortless spoken communication. So I've had a few small missteps so far in the presentation where I've corrected myself. That's found in very typical speech. None of us are perfect.

But if an individual experiences stuttering, which may consist of repetitions of words. So they may say, I, I, I, I want to go to the store today. There may be prolongations of a word. So I want to go to the store today. Or blocks where they are not able to get a word out.

I want to go to the store today. If that's something that's happening all the time when a person has spoken communication, that may require intervention for this individual to feel that they have smooth, effortless spoken communication. They may also experience cluttering, which could be categorized by either extremely rapid speech or extremely irregular speech. And again, people may or may not choose to have intervention for these things, but if they're feeling that it's impacting their ability to have daily interactions and communication with others, this would be an area that we can provide support. if we're seeing this in small children, likely it's going to be in an educational setting.

If we're seeing this in older individuals or adults, it may be in a healthcare setting.

Next we have voice. And as I mentioned before, this is completely separate from communication and from language and from speech. Voice refers to how air moves from the lungs through the vocal tract and the vibration of the vocal folds themselves. so we've included this diagram here where you can really see the whole system working. Our diaphragm muscle controls our lungs, the airflow in our lungs controls how much is moving up through the trachea into the throat, vibrating the vocal folds, and it also includes the vocal folds themselves.

This could be the phonation quality. If somebody is experiencing a glottal fry, that would be a phonation quality issue. if somebody has very high pitch or very low pitch or what we call faulty pitch pitch breaks

that they do not intend to have pitch fluctuations they do not intend to have that would be included in voice therapy volume and loudness. This would be if somebody is struggling to project their voice. They have very, very soft voice or they have very, very loud voice tension.

This is how tight the muscles are in and around the vocal tract, which could lead to a very harsh voice or a very tense voice. Gender affirming voice care. This is again not a disorder. This would be related to a difference. So if we have an individual who is trans, non-binary or any other gender identity and they feel that their voice does not match their identity or it's leading them to be misgendered or giving them gender dysphoria issues, they can seek out gender affirming voice care.

And this would help them safely and effectively modify different parts of their voice, including their pitch, their phonation, all of that to better reflect who they are on the inside through their voice as well. And then voice may also include physical issues. So if somebody is born with a cleft palate, which would be a either complete or partial separation or hole in the soft palate, the roof of the mouth, that's going to lead to voice and resonance problems, and that person may require intervention from an SLP. Vocal fold paralysis. Sometimes individuals will experience one or both vocal folds being completely paralyzed and unable to vibrate or to achieve closure together.

That would require intervention. I mentioned briefly before head and neck cancer patients. If they have surgery or radiation, it to some stiffening or damage of the vocal folds and also the vocal tract in general, and they may require some voice therapy to get them back to a comfortable voice. Physical disabilities, if a person has any sort of physical disability impacting their lung capacity, their diaphragmatic ability to use their diaphragm muscle, any physical issues impacting their trachea, this also could include what we call VPI, velopharyngeal port insufficiency. This is when the very, very, very back of your mouth flaps up to close off the nose.

When this doesn't happen, a voice can sound extremely hypernasal unintentionally, and the person may require therapy to fix the insufficiency with that closure. And then, of course, deafness. So voice therapy is a huge part of what I do from day to when an individual is not able to hear their voice, they don't have that feedback loop of being able to continuously monitor and modify what is coming out of them. And it often leads to something called cul-de-sac resonance, where the voice may sound like it's coming from the bottom of the well. This is something that people may describe as a deaf accent, but it is not actually an accent.

It's just a difference in resonance caused by the person not being able to hear what their voice and resonance sounds like. And voice may be treated in either an educational or a healthcare setting, depending on the age of the individual and the type of voice disorder that they are experiencing.

I touched on this a little bit, and the last one, resonance. This is related to voice. It's kind of a subcategory of voice. This refers to above the larynx, how sound is traveling through the vocal mechanism, the balance of resonance between the nose and the mouth, the cul-de-sac resonance that I mentioned. So this could include a person who's extremely hypernasal, meaning all of their speech sounds are coming through their nose, a person who has hyponasality where none of their speech sounds are coming through their nose, and some of them should be.

Cul-de-sac resonance, which I mentioned, is that kind of hallmark deaf accent, even though it is not an accent. This is something that we see hear very often and we treat frequently, and we will have within this partnership a voice specific course coming out. So take a look at that if you're interested in learning more. This might also include forward Focus, where a person's resonance is really centered at the front of their mouth. They may have tongue Carriage that's too far forward, and it's impacting the quality of their resonance, gender affirming voice resonance.

There are natural resonance differences that we perceive to be more feminine or more masculine. And so an individual seeking gender affirming voice care may want to work on their resonance to sound more close to the gender that they identify with, or to achieve a more neutral resonance that's more non binary. And then there may be physical issues that impact resonance. Like I mentioned in the previous slide, a cleft palate, Velopharyngeal Port Insufficiency. All of those could lead to a resonance disorder.

And just like voice, because it is a subcategory of voice, this might be treated in an educational setting or it might also be treated in a healthcare setting.

Next up we have cognition, and this is the involvement of our brain on speech, language, and communication. This might include attention, memory, problem solving and decision making, executive function skills, theory of mind, or acquired brain injuries. Executive function skills is a popular topic right now. We're learning so much more about it. This is our ability to make decisions, problem solve, organize our tasks, remember what we have to do, execute those things, understand what we should or shouldn't do, suppress inhibitions when we need to not alert out in class.

And so this is an area that the brain is involved in with our communication and SLPs can provide support with this. Theory of mind includes understanding that every individual has their own unique brain and therefore their own unique thoughts and knowledge. This is something that goes hand in hand with language acquisition. They have done research that has found that deaf individuals who experience language deprivation, perhaps their family is not able to sign, does not use ASL, and so they have delayed language. They may also have a delay in developing theory of mind.

They struggle to understand that not everybody knows what they know. And this can really lead to a lot of communication disorders and issues. So this is an area where we can provide support as this can be treated across settings, but again, it will really depend on what you're treating. So a healthcare facility is much more likely to focus on an acquired brain injury such as stroke or an anoxic brain injury, a

traumatic brain injury from an accident, and a school setting or a educational setting would be much more likely to focus on attention, memory, problem solving, executive function skills. So it depends on the individual, what their goals and needs are.

what their age is, all of that might be included.

This is an area where many people who are not familiar with the field are really surprised to learn that we are involved, feeding and swallowing. So SLPs can be involved in this process of feeding and swallowing, and that includes the phases of feeding and swallowing, the oral phase where food is in the mouth, the pharyngeal phase where food is being swallowed down the throat and the esophageal phase where it is traveling down to the stomach. There might be issues in any three of those phases. This might be related to atypical eating. So often this is associated with children and often neurodivergent children.

They may experience food selectivity, food refusal, sensory issues where they're not able to tolerate certain textures or temperatures of food and also oral motor. They may struggle to coordinate the act of biting, chewing, moving food with their tongue, transitioning it to the back of their mouth to swallow. So all of that might be included in an atypical eating disorder. And then lastly, any physical causes or issues. I've mentioned cleft palate a few times.

When babies are born, they obviously need to immediately begin feeding to thrive and survive. And if they have a hole in the roof of their mouth, that's really going to impact their ability to suck, swallow, breathe to receive nutrition. And they may require intervention or therapy to improve that process of eating. This could also be related to brain injury, to head and neck cancer, again causing stiffening or problems, physical structural problems with the throat and the esophagus, or if an individual has a feeding tube. So this is almost always in a healthcare setting, and SLPs are able to provide diagnostic assessments to figure out where the issue is occurring.

And then they can also provide therapy to alleviate these issues and help an individual have safe eating where they're able to enjoy and eat the foods that they want and need to and to maintain their nutrition. This typically focuses on the two opposite ends of the lifespan. So with babies, and again, that might an infant or a newborn with a cleft palate, and then often elderly individuals or older individuals who have experienced a brain injury.

This falls into the technology piece that I mentioned way back at the beginning. This is augmentative and alternative communication. So sometimes using spoken communication is not an option for an individual. And so in this case, they may require AAC and I want to highlight the difference between augmentative and alternative. Augmentative communication adds or supplements to an individual's spoken communication that they do have, whereas alternative communication replaces an individual's spoken communication.

It is used instead of spoken communication. AAC can be high tech or low tech. so an example of a high tech might be something like an iPad, a tablet, there may be a specific app that they have that replaces their communication, like a communication board, or even a voice generator that will speak for them. And a lot of people think of Stephen Hawking having this built into his wheelchair to help him communicate. A low tech could be something as simple as pointing or drawing.

or writing something out. There's also a very low tech option called PECs, Picture Exchange Communication System, where the individuals may have small pictures that they can give to other people that indicate if they need something to drink, something to eat, they want something, they need something. So there's low and high tech. Individuals might use AAC full time, so if it's somebody who's using alternative communication, they may need it all the time to communicate for them. Or it may be temporary or occasionally.

So if an individual has some sort of physical disability where they may tire easily, they may be able to start a conversation using their own spoken communication, and then they may need to transition into using augmentative or alternative communication as they tire something I really want to highlight here. ASL, American Sign Language, is not considered AAC. ASL is its own language. It is not something that we use to supplement or replace spoken communication. It is its very own language.

Sometimes we might use ASL for individuals who prefer not to use spoken communication or they may need it to supplement, but because it is its own language, we really prefer to keep this separate from the concept of AAC.

Next we have auditory habilitation and rehabilitation. And it's another one I'm gonna really emphasize the distinction between the two. This includes teaching the brain to associate meaning with sound input. So when the brain receives a sound signal, it can make sense of what that is. Is there a car speeding toward me?

Is my doorbell ringing? ringing? What does it mean when my doorbell rings? All of that is included in this. The difference between habilitation and rehabilitation for an individual who's receiving habilitation, it is a brand new skill.

So this might be somebody who is born deaf and they choose to receive a cochlear implant. It's the first time that their brain is experiencing this input and so they need that help associating meaning with the signal reaching their brain. brain. Conversely, if a person has already had this skill, and then maybe they become deaf and they choose to get a cochlear implant, their brain needs to relearn the skill. Their brain is used to receiving this information through the channel that's built into our body, through the ear up to the brain.

And if they receive a cochlear implant, it's a different input. So their brain might need some help to relearn how to associate meaning with different sounds. this would be for individuals who have deafness or hearing loss, but it also can include auditory processing disorders. Sometimes individuals can have completely typical hearing, but their brain really struggles to associate meaning with the sounds that are coming into the brain. So that's something we can screen for, assess for, and help the person associate meaning with the sounds that they're hearing.

hearing. This is something that we do here at NTID, and I'm going to again emphasize the importance of cultural awareness, cultural sensitivity. Deaf and hard of hearing individuals have the option to use assistive listening devices like a hearing aid or cochlear implant, but it's certainly not something that is required to have full, complete, normal language development. So we want to make sure that we are not forcing this or requiring this of individuals who really have no interest or need in using an assistive listening device. This might be found in an educational setting or a healthcare setting.

Again, depending on the age of the individual, the goals of the individual. Auditory habilitation is one of the areas in this scope of practice that's really highly specialized. It's not something that every SLP is comfortable or confident doing, and it's not something that every SLP is culturally competent in providing. So that's where things like continuing education are really, really helpful in understanding how to provide appropriate culturally responsive services to the people that we see.

Let's move into the summary for today, and hopefully we've met all of our learning outcomes and goals for this course. To summarize, speech language pathologists work in a variety of settings, but primarily in educational and healthcare settings. Communication disorders in general impact an individual's hearing, language, and/or speech, and they might be developmental or they might be acquired. The SLP's scope of practice includes a wide variety of communication-related disorders and also varies depending on their workplace. Thank you all so much for coming today.

I'm going to turn it back over to Christy. Thank you, Kristin. We're going to go ahead and open up the floor for any questions or comments that we have. Feel free to type them in at any time down in that bottom right-hand corner in that chat box. And Kristin will go through as many as she can before we run out of time.

Kristin, I think there is one question there in the queue if you wanted to go Yes, I see it here. I have a question from Jessica about working with SLPs that have limited or no knowledge about working with deaf and hard of hearing students. And are there any easy to access resources that I could include for SLPs during an annual in-service? Jessica, great question. And I'm going to do a little shameless self-promotion here.

Our department does have a website that we run called SLPro. those. I believe the link is included in the handouts. And on that website we have case studies, we have tutorials, we have tips, strategies, different ways for SLPs to familiarize themselves with working with deaf and hard of hearing students and individuals. So that's a great resource.

We also have a contact us on there. So if people have specific questions or they find themselves with a deaf or hard of hearing person on their caseload, they don't know what to do, they can reach out to us and we will respond by email. We can set up a video conference with them to give them some tips and strategies. So that's one resource. And then another is Language First.

So Language First is an organization that is run by SLPs and also teachers of the deaf, deaf individuals themselves. And they have just a phenomenal library of resources, networking. They're also on social media. A lot of great information for SLPs who are less familiar with working with deaf and hard of hearing, individuals. So thank you for that question.

And I have another one here going back to the common communication disorders part of the presentation, expanding on form content and function of language. I used a couple terms in there that I'm realizing now are probably more SLP terms. So let me expand on phonology, morphology, syntax, and semantics. So with common communication disorders, when we're thinking about language disorders, they're often categorized into form content or function. Form, as I mentioned, is phonology, morphology, and syntax.

Phonology specifically is the sound system. of a language. So this might be something where a child or student struggles with the sound system. So they might have speech errors related with this, but they impact their language and their spoken language. Morphology is going to be more the units of language that come together to have meaning.

So if they struggle with past tense or they struggle with verb tense agreement, and this could be spoken or written, that would be a morphological issue with their language. And then syntax is the grammatical rules, how things go together in a sentence, what you can and can't do in the English language. So that would all be under form. And then for content of the language, that's semantics. So that's choosing the right word for the sentence and the meaning that we associate with words.

And we know that sometimes children will misuse words, that they just are trying to learn, they don't know them yet, but if it's persistent and That's when they really struggle with word meaning and it's impacting their language, that would be an example of semantic communication issues. And then that function again is that social use often labeled as pragmatics. And I went a little more in depth than that into the presentation about the current views on that current research on that, making sure that we are aware and sensitive of neurodivergence and differences, natural differences in communication. There is one correct way to use language socially. So just ensuring that we are being respectful of differences and not labeling everything as a disorder.

And I don't see any extra questions right now. If there's anything else I can expand on, I'm very happy to do so. Thank you all so much for coming to this presentation, and I hope that you enjoyed it. I hope that you were able to learn a little bit more about what SLPs do in our day-to-day lives. And thank you for attending.

Thank you so much, Kristen. I'll have you advance to that very last slide. This is just to remind our participants to take the exam should they wish to earn CE credit. And it should populate shortly after this exam, or shortly after the course concludes. And we hope you all enjoyed this presentation.

Have a great day, everyone. Thank you.