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Deafness and Hearing Loss: The Language barrier often overlooked in the
clinical setting

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Language barriers are present outside of the realm of patients we deal with who do not speak English or those for whom it is a second language. Data from the National Institute on Deafness and Other Communication Disorders (NIDCD) National Strategic Research Plan: Hearing and Hearing Impairment report reflected that over 28 million Americans have hearing loss.¹ This number represents 10% of the country's population. The value of 28 million is quite low and reflects those with known hearing loss. In the coming years, the incidence and prevalence of Deafness and hearing loss will increase exponentially due to our love of loud music, use of I-pods with ear-buds, and the use of heavy machinery or other noise exposure without proper ear protection. Whether the hearing loss is mild, profound, it can have a significant impact on the patient's access to and participation in their health care.

How would you provide care for a patient with profound hearing loss or Deafness? What challenges would you encounter with delivery of diabetes education to this individual? What if the patient has vision limitations as well as hearing loss? Deafness and Hearing Loss can result in social isolation of the individual due to communication difficulties. This isolation can impact the patient's health and may result in or contribute to depression. If the patient is stressed by the difficulty expressing and receiving information, this will affect their ability to adhere to their medication regimens and other aspects of treatment. How can we assure the patient will take the proper dose of insulin or oral medication? How can we assure they know the signs, symptoms, and treatment of Hyper- and Hypoglycemia? Devastating treatment errors and risk of poor outcome increase significantly if the information is not properly received or there is lack of understanding of the details. Will finances or lack of insurance coverage affect their ability to access health care and follow their treatment plans? Proper lighting and reduction or limitation of noise is important for both hearing loss and visual limitations.

The best starting point involves assessment of the patient's preferred method of communication and learning – does the patient use hearing aids, do they lip-read, or do they use American Sign Language (ASL)? If the patient does not use or has forgotten his or her hearing aids, your facility may have access to a personal amplifier that can be signed out and used by the patient. An inexpensive improvisation for amplification is to place the ear-buds of a stethoscope into their ears and speak into the stethoscope bell. Don't forget to obtain the stethoscope and remove the ear-buds for cleaning prior to the patient's departure. Use of hearing aids does not guarantee that the person actually hears what you say. Many elderly patients nod and say, "Yes" even if they did not take in the information.

Ask the patient if one ear is better than the other. If they state that this is the case, try to construct the education area so it facilitates communication (sit on the side with better hearing). It is important to face the patient and avoid obstructing the view of your mouth with the position of your hands or the chart. Make sure that you speak normally – over enunciation will only make lip-reading more difficult due to the exaggerated movement of the lips. People with bushy facial hair will be more difficult to lip-read due to the reduced visibility of facial and lip movements. The best approach to counter this information gap is to ask the patient to "Teach-back" or restate what you said or demonstrate a technique such as glucose testing or preparing and injecting insulin. Good lighting and eye-contact is important for people relying on lip-reading. Not all information is available via lip-reading due to the similarities in the mouth and lip movements for many different words or statements. One example of this are the numbers fifty and fifteen, these numbers look the same on the lips and are easily confused if relying solely on lip-reading. If there is a question regarding proper understanding of numbers, especially with respect to dosing instructions, it is easily addressed by modification of the statement. For example, "I want you to inject

fifteen, or 15 (state the digits “one” - “five”) units of insulin at bedtime each night”. Again, ask the patient to teach-back or restate the information or demonstrate the task. The dosing information can and should also be written or typed out, though typed format is preferred due to our notoriously poor penmanship, and given to the patient prior to the completion of the appointment. One caution with respect to information delivery is that we should assess the patient’s preferred style of learning and consider any issues with respect to poor literacy or numeracy skills.

If the patient uses ASL, communication assistance should be provided via a Certified ASL Interpreter who is also a Certified Medical Interpreter. These certification details regarding the interpreter services are important as they will affect the fluency of communication, ensure that proper words and phrases are more likely to be used, and provide an additional comfort level for the patient. Use of a friend or family member for interpreter services is strongly discouraged. If children are placed in that situation, they may not be aware of proper terms in the patient’s primary language. The other issue that can occur with children or family members interpreting is that they may not understand or want to relay the serious nature of the information. Though we want to think that the individual assisting the patient with interpreting has the patient’s best interest at heart, we cannot guarantee that this is the case. Therefore, the preferred approach is to rely on a Certified Medical Interpreter.

What if you do not have access to a Certified ASL Interpreter? One option to address this need is to rely on video phone calls through your state’s Phone Relay Service. Telephone Relay Services (TRS) provide communication options for the Deaf and Hard-of-Hearing by providing TTY-to-Voice Relay or ASL-to-Voice Relay. You may need to use a TRS when making a follow-up call to a patient with communication disorder or rescheduling missed appointments. With use of a TTY Relay Service, the Deaf or Hard-of-Hearing Patient can type their information through a phone with a keyboard. The typed information can then be read by the Relay Interpreter/operator to the individual without hearing loss. TTYs are still in use, though they will likely be phased out soon due to more flexible, user-friendly software or technology. One such technological change for Deaf/Hard-of-Hearing information access is occurring with a process called Voice-Carry-Over, or VCO. The Deaf/Hard-of-Hearing, or Communication Impaired person uses a personal computer, laptop, cell phone, PDA, or television (with text-entry hook-up) to type and send what they want to say to the VCO operator. The VCO operator reads or vocalizes this keyed entry over a phone line. There are two important commands to know when using TRS systems, these are GA, which stands for “Go Ahead” and is the statement letting the other party know it is their turn to speak; the second statement is, “Ready to hang up” for communication of the conclusion of the call. There is even a Deaf/Blind variation of the VCO that allows the Deaf/Blind person to type on a brailled or regular keyboard and receive responses on a refreshable braille display or a Large Visual Display (LVD). The refreshable braille display may be difficult for some braille readers to follow, though the speed of transmission is reduced to adjust accommodate the perception of the “mobile braille”.

If the patient has a Video Phone Option on their Cell Phone, they could use ASL, the interpreter in the Phone Relay would express the patient’s statement vocally. When the Health Care Provider or Certified Diabetes Educator makes a statement or asks a question, the Relay Interpreter signs the information to the patient. Depending on the link and band-width of the phone, this may require more time for the delivery of the details. Just as with non-English speaking patients or those using ESL, delivery of information in sentences followed by pauses is necessary to allow proper time for the interpreter to convey the information to the patient. There are also video interpreter services available through the Internet, these

may require a webcam or you may type the statement into the system and it is displayed in ASL. However, before using either of these systems, it is important that you check your employer's interpreter service guidelines as that may dictate how and where you obtain your assistance. If you are using the Internet, it is important to assure that you are using a secure server to protect privacy of the individual you are educating. The name or identification number of the interpreter or the relay system should be incorporated into your clinical note for proper documentation of information access. It is important to send written and/or pictorial self-care instructions home with the patient so they have information to reinforce the topics discussed in the clinical encounter. Addressing the communication and learning needs of the patient leads to improved understanding of the information and can pave the way to a better health outcome.

1. National Institute on Deafness and Other Communication Disorders (NIDCD). National Strategic Research Plan: Hearing and Hearing Impairment. Bethesda, MD: HHS, NIH, 1996.