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Ensuring an Inclusive Environment for Deaf and Hard of Hearing Patients

By Joseph Samona, DDS, Michael Korleski, RDH, BSDH, and Stephen J. Stefanac, DDS, MS

The growing awareness in the dental community for diversity, equity, and inclusion must be extended to the Deaf and hard of hearing (DHH) patient population. This article provides insight into what it is like to be a Deaf dental patient. There are few Deaf dentists in the United States. As Deaf dental professionals, we offer this article to provide a unique perspective on how our profession can make the clinical environment more inclusive.

Let's begin by imagining what a DHH patient experiences as they arrive for a dental appointment. After checking in, they wait to be called in for care. Just waiting can be stressful, as most dental offices don't offer sign language interpreters. The patient must constantly look at the door to ensure they do not miss their name being called. Once they are in the treatment room, the dentist or other team member may start talking with a mask covering their face, and the DHH patient must remind them to remove their mask to allow for lip reading or ask them to write down what they are saying.

During the visit, it is common for dentists and team members to turn away to face the computer screen, talking without facing the patient. Dental professionals often fail to provide DHH patients with details about diagnoses and treatment plans or fail to deliver in-depth oral hygiene education. This is perhaps due to a lack of patience by the provider to communicate, or a perceived burden of having to write down a back-and-forth interactive conversation. Although this situation is frustrating for the Deaf patient and the dental provider, it must be overcome to ensure patient safety, informed consent, patient compliance, and optimal outcomes.

We hope this brief article can provide insights into Deaf individuals' challenges and how we, as dental professionals, can provide a more inclusive environment for these patients.

Background on hearing loss

Hearing loss is among the most common physical disabilities in the United States. The threshold of sensitivity to sound, measured in decibels, allows various auditory tests to diagnose hearing loss (See Table 1).[1,2] Several factors cause hearing loss, including age-related degenerative processes, genetic mutations, noise exposure, ototoxic drugs, trauma, and illness.[3]

People with severe or profound hearing loss are commonly referred to as deaf, and those with mild or moderate hearing loss are considered hard of hearing. Some

Most of us will encounter Deaf individuals in our practices. But few of us possess the necessary insights into the challenges faced by Deaf individuals — and how we, as dental professionals, can provide a more inclusive environment for these patients.

individuals describe themselves as "deaf" (with a lower-case "d") because these individuals do not associate themselves as a part of the Deaf community or refer to their deafness as a disability or a medical condition.[5] The term "Deaf" (with the upper-case "D") represents a cultural group of people united by cultural traditions and strengths arising from communicating through sign language.[5] (*For the purposes of this article and for continuity, the upper-case "Deaf" is used throughout — Ed.*)

The Deaf and hard of hearing population is a diverse group of individuals with various degrees of hearing loss, educational backgrounds, communication methods, and cultural identities. Perceptions of deafness can vary among individuals. The hearing population typically views deafness as a medical condition requiring treatment. From that perspective, the inability to hear interferes with a person's ability to sense environmental cues, communicate. and enjoy the mainstream culture, such as music. Additionally, the lay public often believes that hearing loss can be improved or restored with assistive technology such as hearing aids or cochlear implants, and that Deaf individuals must be treated to function in this society.[4]

Disparities in the DHH community

It is estimated that 95% of Deaf individuals in the United States grow up in a hearing family, which can create a language barrier that results in a loss of awareness of personal and family health history.[5] Deaf individuals may experience social isolation when family members and friends converse without the use of American Sign Language. They cannot follow what is said, depriving them of incidental learning opportunities.[6] These opportunities occur not just at the dinner table, but also at school, at work, and in the media.

Figure 1 (See Page 44) shows the role of incidental learning and marginalization on health literacy for Deaf individuals.[6] This isolation and lack of interactions places the DHH at risk of poor health literacy, with Deaf individuals 6.9 times more likely to have inadequate health literacy than hearing individuals.[6]

Compounding access to written health information, the mean reading grade level is 5.9 for Deaf individuals and 9.8 for their hearing counterparts.[6] Lower health literacy can also be due to other factors, such as language utilization, age, gender, race, education, income, and grade level.[7]

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Interpretive services — Dr. Joseph Samona, lead author of this article, is shown here with a sign language interpreter relaying a patient's response to a question during treatment.

The U.S. health care system has often failed to provide accessibility for Deaf individuals. Deaf adults use fewer health care services than other language minority groups due to social isolation and a lack of accessible health information.[8] There are variations in the experiences of the Deaf and their accessibility to health care. Positive experiences can occur where an American Sign Language (ASL) interpreter is available to improve communication between the provider and the Deaf individual.[9] Negative experiences arise from a lack of communication or interpreters, leading to mistrust of providers.

Approximately half of Deaf individuals found their last meeting with their health care provider difficult.[10] During interactions between providers and Deaf individuals, Deaf individuals tend to accept and say "Yes" to providers without asking questions or attempting to better understand.[19] From the health care provider's perspective, it is difficult to know whether the Deaf individual understands what they're told. Many providers incorrectly assume they were understood by their Deaf patients, leading to misunderstandings.[20]

The DHH population is often overlooked in medical and dental educational programs, and as a result health care providers are not well-prepared to effectively communicate with Deaf patients. These disparities in the health care system can be caused by a lack of health providers who use ASL interpreters, personal and financial challenges when using interpreting services, and poor awareness of the Deaf population. It is essential for the health care provider to recognize that some Deaf individuals are embarrassed to ask personal questions in the presence of an interpreter due to privacy issues, further limiting the exchange of health information in even the best of circumstances. Providers must consider these additional barriers to communication when selecting an ASL interpreter.

Several studies have found Deaf children have poor oral health, including increased caries, gingivitis, and a lack of oral health knowledge and preventive behavior[11-13] resulting from poor accessibility to health care, especially oral health care. There is a higher percentage of sound teeth in hearing students than in Deaf students.[14] For instance, when examined for caries, 55.9% of Deaf students exhibited dental caries, compared to 13.8% of hearing children.[14] The hearing students also had greater dental knowledge and oral health behavior, such as frequency of brushing and healthy dietary habits, compared to the Deaf students.[14] This lack of oral health knowledge in the DHH community places them at significant risk of poor oral health and underscores the need to educate and promote oral health in the DHH community.

Table 1 — Levels of Hearing Loss

Level of Hearing Loss	Hearing Level (Decibels)	Common Sounds
Mild	20-40 dB	Rustling Leaves, Birds Chirping
Moderate	41-55 dB	Conversational Sounds
Moderate-Severe	56-70 dB	Vacuuming, baby crying
Severe	71-90 dB	Dog barking, piano playing
Profound	>90 dB	Lawn mower, band playing, police siren

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How to effectively communicate with DHH patients

Most dentists will likely treat Deaf patients during their career. Effective communication is critical to improve accessibility for the DHH patient. Here are some tips for establishing effective communication with DHH patients.

Use proper terminology. DHH patients prefer to be referred to as "deaf" or "hard of hearing." Refrain from calling DHH patients "hearing impaired," because this implies that their hearing is not working properly and their ears are "broken." Other common historical terms that you should refrain from using are "deaf and dumb" and "deaf and mute."

Ask the patient about their communication preferences. Communication preferences vary among DHH individuals depending on their background. DHH individuals may use American Sign Language, spoken language, or both. Some DHH individuals may have been raised in a hearing family with no exposure to ASL, while some have come from a family with other Deaf members where the only communication method is using ASL. Ask the patient what their communication preferences are.

Do not rely only on written English to communicate. American Sign Language is not based on written English and the context and grammar

In conversation – Co-authors Drs. Stephen Stefanac and Joseph Samona converse using American Sign Language. Both photos on these pages were taken while Samona was a student at U-M. (Photos by Leisa Thompson Photography for the U-M School of Dentistry. Used with permission.)

differ significantly. Accommodations may range from lip reading and back-and-forth notetaking to having a certified and qualified sign language interpreter on site. Should a new patient arrive, video remote interpreting services can be used, since writing is often cumbersome for DHH patients as well as dental providers. Many dental offices subscribe to services that interpret foreign languages, and an ASL interpreter may also be available. No matter what method is used, dental offices should have procedures in place to provide reasonable accommodations to DHH patients to ensure they can participate in their dental care.

Know how to obtain an ASL interpreter. There are several interpreting agencies in Michigan, depending on the location. Dentists can search for interpreters and interpreting agencies at https://interpreter.apps.lara.state.mi.us. It's strongly advised not to ask the Deaf patient to bring their friend or a family relative to act as an interpreter. The information received by DHH patients when friends or family members are interpreters can be biased, because the person providing the information may be biased themselves. When arranging for a qualified sign language interpreter be sure that they are familiar with dental terminology.

Always maintain eye contact. No matter what the accommodation request may be, it's essential for the dentist to always maintain eye contact with the Deaf patient. Wait until the patient makes eye contact with you before speaking. It's one way the dentist can develop rapport with the Deaf patient, by helping the DHH patient feel respected and comfortable.

Speak in a manner that facilitates lip reading. If the DHH person relies on spoken language, speak at a normal pace. There is no need to exaggerate mouth movements. Make sure nothing is covering your mouth while speaking. Gestures and expressions can be helpful. Many factors reduce the effectiveness of lipreading, such as lighting, facial hair, accents, or lack of eye contact. The DHH patient will often nod their head in agreement even though they may not understand the provider. Asking the patient to reflect back important

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points can be effective in assessing the patient's level of understanding.

Provide an appropriate environment. Avoid bright light from magnifying loupes or an overhead light. Avoid being backlit by sitting in front of a window, as it can be challenging for the patient to see you clearly. Also, avoid dark lighting, making it harder for the patient to see. Reduce background noises, such as music in the operatory.

Have protocols in place for staff and clinicians to follow when treating DHH patients. Deaf and hard of hearing people often disclose their deafness and/or preferred communication methods when making an appointment with their providers. However, that will not always be the case. The front desk should ask what their communication needs are and document this information in the patient's health record. Dentists can include questions about hearing loss and communication preferences on the health history form. Physical or electronic flags in the dental records can prepare staff and clinicians before they greet the patient. In the reception area, walk up to the patient instead of calling their name. Only have one person speak at a time when multiple people are in the room.

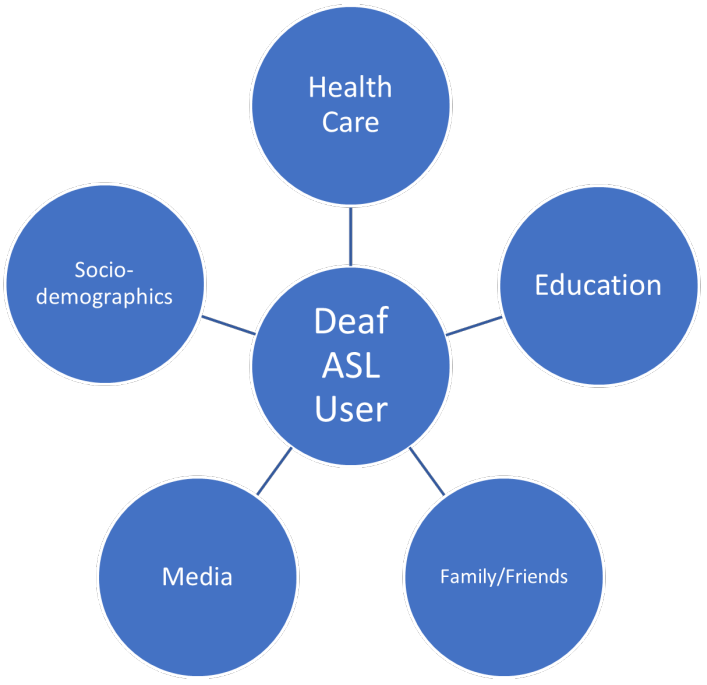
Avoid dental jargon. It is easier for the Deaf patient to understand plain language. Consider using simpler words to explain the context of treatment plans for better understanding.

Use visual aids. Having a picture or model can be highly effective when educating DHH individuals, since most are visual learners.

Use technology. Clinicians can also download certain apps such as Otter.ai (https://otter.ai) or Ava (https://www.ava.me), or a virtual smartphone assistant to translate audio into text. Be aware that the translation may not be accurate. It's also possible to use the phone to text back and forth instead of writing on paper.

Allow for slightly longer appointments. Some additional time will be needed to ensure full communication access with the Deaf patient. For example, when there is an hour-long appointment for oral hygiene care, about 15 minutes should be added for discussion of oral hygiene instructions or examination findings as well as address any questions the patient might have.

Figure 1 — Sources of Incidental Learning



Whether required by law or not, ensuring an inclusive environment for Deaf and hard-of-hearing individuals is essential to provide an equal opportunity to benefit from our services.

The Americans with Disabilities Act of 1990 and ACA Section 1557

Individuals with disabilities are protected from discrimination by the Americans with Disabilities ("AwDA") Act of 1990. This bill was signed into law in 1990 by President George H.W. Bush to eliminate discrimination by providing equal opportunities for all.[15] The act is divided into different categories based on a facility's funding source and payroll sizes.[15] For example, federally funded clinics fall under Title II, which mandates accommodations for those with disabilities.[16,17] Most private dental practices fall under Title III, because they do not receive federal funding,[18] and they must follow the minimum accessibili-

ty standards under the AwDA law.[18] Therefore, any private firm in a public setting, such as a dental office, must provide reasonable accommodations if there are persons with disabilities using the space to receive services.[18]

Regulatory requirements found under Section 1557 of the Affordable Care Act state that a covered dental practice must take appropriate steps to ensure that communications with patients, prospective patients, members of the public, and companions with disabilities are as effective as communications with others. The dental practice must furnish appropriate auxiliary aids and services where necessary to give such individuals with disabilities an equal opportunity to participate in, and enjoy the benefits of, a service, program, or activity of the dental practice.[22] The dental practice must provide appropriate auxiliary aids and services; for example, a Deaf person has the right to receive reasonable accommodation, as defined in the AwDA, by having a sign language interpreter available. All firms are expected to provide reasonable accommodations regardless of the funding and payroll size.[18] There is an exception within the AwDA for "undue burden," defined as significantly changing the nature of service and expense, which makes it impossible for firms to provide reasonable accommodations.[15] The term "undue burden" allows a firm to determine how impacted its service is by providing the accommodations.

AwDA requirements on effective communication provided by the U.S. Department of Justice Civil Rights Division note that if an entity chooses to provide Video Remote Interpreting (VRI), all of the following specific performance standards must be met:

- Real-time, full-motion video and audio over a dedicated high-speed, wide-bandwidth video connection or wireless connection that delivers high-quality video images that do not produce lags, choppy, blurry, or grainy images, or irregular pauses in communication.
- A sharply delineated image that is large enough to display the interpreter's face, arms, hands, and fingers, and the face, arms, hands, and fingers of the person using sign language, regardless of his or her body position.
- A clear, audible transmission of voices.
- Adequate staff training to ensure quick set-up and proper operation.[23]

Whether required by law or not, ensuring an inclusive environment for Deaf and hard-of-hearing individuals is essential to provide an equal opportunity to benefit from our services. Taking measures to implement the highest level of accommodation available to the profession supports access to care. It promotes patient participation and understanding of oral health and care recommendations that will improve health outcomes for those we serve.

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Complying with ACA Rule 1557

The American Dental Association lists effective methods to comply with ACA Rule 1557 to of making aurally delivered information available to individuals who are Deaf or hard of hearing. These include:

- Interpreters on-site or through video remote interpreting (VRI) services
- Note takers
- Real-time computer-aided transcription services
- Written materials
- Exchange of written notes
- Telephone handset amplifiers
- Assistive listening devices
- Assistive listening systems
- Telephones compatible with hearing aids
- Closed caption decoders
- Open and closed captioning, including real-time captioning
- Voice, text, and video-based telecommunication products and systems, text telephones (TTYs), videophones, and captioned telephones, or equally effective telecommunications devices
- Videotext displays
- Accessible information and communication technology

Source: American Dental Association[22]

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About the Authors

Joseph Samona, DDS, was born with profound bilateral sensorineural hearing loss. He completed his dental degree at the University of Michigan School of Dentistry. After graduation, he went on to do a one-year AEGD residency at UT Health San Antonio School of Dentistry. He is currently practicing as an associate in the metro Detroit area. He is a member of the Michigan Dental Association's Diversity, Equity, and Inclusion committee and served as a director of Michigan Deaf Health. To promote oral health education in the Deaf and hard of hearing community, he has created a series of YouTube videos about oral health education in American Sign Language. He is also a member of the MDA's current Leadership Exploration and Development (LEAD) class.

Samona

Michael Korleski, RDH, BSDH, is a fourth-year dental student at the University of Michigan School of Dentistry. He was born with profound bilateral sensorineural hearing loss and mainly uses American Sign Language to communicate. Before dental school, he earned a bachelor's degree in dental hygiene at the University of Michigan. He concentrated on original research about Deaf and hard of hearing Americans' perceptions of oral care behaviors. He has served on the MDA Committee on Annual Session and as a director of Michigan Deaf Health, a non-profit organization.

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Stephen J. Stefanac, DDS, MS, is a clinical professor emeritus at the University of Michigan School of Dentistry. He has served as a mentor for student research projects, including improving dental access to Deaf and hard of hearing patients.

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