

ROSALIND FRANKLIN UNIVERSITY OF MEDICINE AND
SCIENCE SCHOOL OF PHARMACY STUDENT WRITING CLUB:

Hear Us Out - Addressing Communication Needs of Those with Altered Hearing Ability

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Imagine: You are a pharmacist working in a community setting. It is a Tuesday at four in the evening, and there is a line seemingly out the door. The telephones are ringing nonstop and prescriptions that need verification are piling up. Suddenly, you are standing before a patient, ready to discuss their new antibiotic, who does not say a word but motions to you that he is deaf. You try your best to communicate by pointing at the bottle and speaking with diction. The patient appears to understand and you part ways.

Many pharmacists have seen days like this. Counseling patients is arguably the most important aspect of the job. It might be a little more mechanical and less personable than preferred when days get busy, but counseling patients is a critical aspect of ensuring medication safety and increasing adherence; however, there are times when pharmacists cannot implement best practices. When presented with a patient who may be deaf or hard of hearing (DHH), what are best practices? What resources are available? This article hopes to shed some light on how to communicate with and assist DHH patients in the practice of pharmacy.

The Problem

DHH patients are at higher risk of nonadherence due to barriers in communication. According to the National Institute on Deafness and Other

Note

Throughout the paper, you may see us interchange deaf and Deaf with a capital “D”. Although often associated together, deafness and hard of hearing are two different human experiences and each comes with its own challenges.¹ When referring to the audiological condition of individuals with very little, if any, hearing, the term “deaf” with a lowercase ‘d’ is often used. In contrast, when referring to the community of people with hearing loss or deafness, Deaf with a capital “D” is used. This symbolizes a group of similar people who share experiences and values. People who are HH can range anywhere from mild to moderate hearing loss. Any person, deaf or HH, may wear hearing aids. Hearing aids should never be assumed to compensate for sound completely and how each person wishes to communicate is their choice.

Communication Disorders (NICDC), hearing loss was reported by up to 15% of United States (U.S.) adults, with nearly 50% of adults 70 years and older having disabling hearing loss.^{2,3} It is also challenging to determine what proportion of the DHH population uses sign language to communicate in the United States. This stems from the United States Census not listing American Sign Language (ASL) as a language on surveys.⁴ In addition, not every person with hearing loss or deafness utilizes sign language; they may utilize speech, read lips, or have other ways to communicate. This makes it difficult to accurately account for the number of DHH people we may interact with every day. According to the U.S. Census, between 2011 and 2015,

about 190,000 people in Wisconsin reported hearing difficulty.

Additionally, patients with low health literacy experience poorer adherence.⁵ Understanding how to read labels and how to obtain health information is vital for making proper medical decisions. However, only 12% of all Americans are health literacy proficient. When a communication barrier is added, assessment of whether a patient fully understands their medications becomes more difficult; this can lead to increased adverse events. A qualitative study evaluating DHH patients’ experiences at their local pharmacies found that nine out of the twenty participants had experienced an adverse event related to their medications due to a misunderstanding.^{6,7}

TABLE 1. Resources Available for DHH Patients

<i>Resource</i>	<i>Description</i>
Office for the Deaf and Hard of Hearing (ODHH) https://www.dhs.wisconsin.gov/odhh/index.htm	The office provides community/referral services, consultations, and technical assistance for Deaf, Deaf-Blind, or Hard-of-Hearing patients as well as free in-service trainings/presentations for those interested in improving their understanding of deafness related issues.
Hearing Loss Association of America- WI https://www.hlaawi.org/	Organization that provides information, education, support, and advocacy for people with hearing loss.
Wisconsin Educational Services Program for the Deaf and Hard of Hearing (WESP-DHH) http://wesp-dhh.wi.gov/about/	Provides comprehensive services to children who are deaf, deaf-blind or hard-of-hearing as well as deaf mentoring programs for their parents/families/providers.
Speech to Speech Relay Services https://www.fcc.gov/general/speech-speech-services-access-numbers	Services that provide communications assistants (CA) for people with speech disabilities. CAs can contact the provider back and inform of any missed information from the patient. WI phone number: 1-800-833-7637.
Wisconsin Speech-Language Pathology and Audiology Association (WSHA) https://www.wisha.org/	Organization that provides leadership and support for speech pathologists/audiologists. Offers access to additional links to find information regarding assisting deaf/ hard of hearing patients.
Pharmacy Pictogram Software https://www.fipfoundation.org/pictograms-support/pictogram-software/	Software that allows you to access various pictograms including labels, medication information sheet/storyboard, and prescription calendars to provide visual assistance for the patients.
TapSOS app https://www.tapsos.com/about-us	Non-verbal way to communicate with emergency services that is designed in a visual manner. The app stores the individual's medical history/ and pertinent personal information delivering this directly to the selected emergency service. GPS is used to pinpoint the user's exact location.
Live Transcribe app	App available for download on the android that offers real-time transcription of speech into text.
Smartphone apps https://www.hlaawi.org/smart-phone-apps.html	Various apps available for android/iPhone users that could be recommended for patients with hearing loss.

For instance, one patient did not know his medicine could cause dizziness and had to pull over to the side of the road for 20-30 minutes for the dizziness to pass. Another patient said she was taking two pills at once before she knew she was supposed to take her medication twice a day. Discovering how each patient prefers to communicate and what resources are available will help increase understanding.

Some Solutions for Improving Care for DHH Patients

As medication experts, pharmacists play a critical role in helping patients navigate the complex world of pharmaceuticals. Even the most experienced pharmacists can find themselves in situations where poor communication impacts patient safety and understanding. We do our best to create equitable and attainable healthcare for all; it is what makes pharmacists among the most trusted healthcare professionals. A pharmacist's time is valuable. Community pharmacies, especially, are seeing a high volume of patients. In a survey of 73 pharmacists, they felt a significant

barrier to communication with the Deaf community was the lack of accessibility to an interpreter.⁶ To these pharmacists, written material was the best method to communicate with deaf patients. Although the utility of written material is there, remember that low health literacy is a big concern for adherence for many patients. Becoming aware of resources for patients of all different backgrounds and abilities is critical not only to ensure medication understanding but also increases confidence for both pharmacy staff and patients when confronted with these circumstances.

It is important to understand the term "disability" as a culture, not just as a medical term. Since there is no way to accurately assess just how large this community is, it can be useful to research state resources online and see what resources may be available for DHH patients (see Table 1). It is also important to be aware of which individual patients have hearing loss. Some charting systems, such as EPIC, have a section that indicates if the patient is deaf. Knowing if someone is DHH is the first step to preparing for better communication. Some pharmacies,

such as the Gunderson Hospital Pharmacy Counter, have loop systems that allow for patients equipped with hearing devices with telecoil technology to connect directly for better hearing.⁸ More commonly, interpretive services through a phone call can allow the patient to interact with a live interpreter of ASL and allow for effective communication. For patients at the counter, use of video relay services can be helpful via a phone application or pharmacy tablet for clear communication.⁹ Becoming familiar with the interpreting services offered in your pharmacy and making the information clearly visible for pharmacy staff can help pharmacy staff serve DHH patients better.

Integrating education on how to successfully interact with people who have altered abilities should become a mainstay in curriculum for preparing future pharmacists. Ensuring that student pharmacists have experience with patients who have altered abilities before getting into practice may increase cultural sensitivity and inclusion. Change can often be implemented by students. Such communication simulations can

About Robert Radtke



Robert is a physician assistant who graduated from Rosalind Franklin University of Medicine and Science (RFUMS) in May 2019. He received his bachelor's degree at the University of Illinois at Urbana - Champaign and his master's in pharmacology at Rush University in Chicago. He has a strong passion for science which developed in high school while researching hemophilia at Rush and working as an emergency room technician and volunteer at Advocate Christ Hospital. Robert also identifies as Deaf and dedicates his time to increasing disability or "differently-able" awareness at RFUMS and wherever he goes. He is a founder of the organization, RUAware, which promotes disability awareness on campus. He is currently in the process of establishing a network of healthcare providers to ensure better services for those who are deaf and hard of hearing in the Chicagoland area.

be implemented in pharmacy school curriculum as well. Currently, there are schools that already utilize innovative teaching.

A study first established by medical students at the University of Rochester

School of Medicine and Dentistry looked at role-reversal exercises as hearing students playing the role of a deaf patient to instill empathy and awareness in a hospital staffed by deaf volunteers.¹⁰ Called Deaf Strong Hospital, professional students (i.e. doctor, dentist, and pharmacist) simulate illness scenarios in a clinical setting and role play as deaf patients. The Wegmans School of Pharmacy at St. John Fisher College adapted such simulation activity as a requirement in a Diversity course taken by first-year pharmacy students. Faculty facilitators and deaf volunteers played the roles of receptionist, physician, and pharmacist in a hospital setting and the students would move from station to station. Small-group debriefing followed afterwards to engage student experiences and provide feedback. During the pharmacy scenario, the pharmacist educated students on proper medication use and side effects associated with that medication; however, the students portraying a deaf patient would not be able to use their voice and only utilize finger-spelling and bits of ASL they were given two days prior. In a survey of the students who participated, they overwhelmingly (97%) agreed or strongly agreed that this exercise was important for increasing cultural competency and found this as a valuable experience to modify their future behaviors with any patients who do not speak English.¹⁰

Students mentioned that they experienced frustration due to inability to communicate their concerns to the pharmacist¹⁰ and this is a feeling many DHH patients may experience when they come to the pharmacy. Additionally, this exercise also demonstrated that if patients walk away not understanding any information about their medication, it can pose life-threatening danger to their well-being. In a panel-discussion with deaf volunteers, many students were surprised to find that their opinions of pharmacists were very low and that they all had negative experiences in a pharmacy. A suggestion for these future pharmacists was to come out from behind the counter and speak to them face-to-face, advice we can all follow.¹⁰ The role-reversal activities described in the article can be implemented in pharmacy schools as well as other healthcare programs

in Wisconsin.

An article, written by Dr. Steven Barnett highlights important aspects and tips for working with DHH patients.¹¹ This article discusses three categories of patients that pharmacists may interact with. These include HH people, deaf people who communicate orally, and deaf people who communicate primarily with sign language. The article then gives succinct guidelines on how to interact with each type of patient. No matter the patient, it is always professional to ask the patients how they prefer to communicate and enlist help or other resources when needed. Another important highlight from this article is the emphasis on how "louder" communication is not always best for DHH patients. In older populations especially, higher frequencies are more difficult to hear, so speaking with lower frequencies can help reach the "threshold", the volume needed to hear a certain sound that patients need to hear rather than simply speaking louder. Keeping background noise to a minimum and speaking clearly but normally can also help. Finally, this article recommends simply listening to the patient's story to provide better assistance.

Tips for Working with DHH Patients

From Robert Radtke, a graduate of Rosalind Franklin University's Physician's Assistant program

In addition to researching this topic, we video-interviewed Robert and asked for his opinions and tips on how pharmacists can better communicate with DHH patients. Robert identifies as Deaf and communicates through a combination of speech, lip-reading, and sign. He promotes disability awareness on campus. We talked about various themes related to healthcare currently being provided for DHH patients. We have showcased quotes of the most commonly discussed themes. First, Robert mentioned although the number of DHH patients is smaller compared to the greater population, it is still significant. These patients experience the same health conditions as any other person. However, DHH patients may not be aware of opportunities available. As a result, it is important to organize events that would

help improve these patients' education and health literacy and involve as many health professionals as possible.

"There are about 1,500 to 2,000 deaf patients being served in the Chicago Clinic (where Robert volunteers). Currently, I work with Dr. David Ebert who is a, now, retired physician, and we are planning on starting a health fair to gather deaf people and promote health literacy regarding diseases such as hypertension, diabetes, hyperlipidemia. There are health fairs that serve the deaf community all over the country. If you find one, we would want pharmacists to be involved! Gauge where the community is to help it."

Next, Robert talked about how communication with DHH patients has improved over time with more technological advances utilized that make it timesaving, productive, and convenient for both patients and pharmacists.

"Education for patients who are deaf is getting better in the pharmacy setting. There is more use of video interpreting with an iPad where the interpreter on the screen can mediate the conversation between the patient and the pharmacist. Back in the day patients would write back and forth to get information and education about medications -not great! Especially with ASL patients since there may be a loss in translation."

A lot of students may not be aware of the prevalence of the DHH population and, therefore, may not have proper knowledge or skills to take care of such patients. Robert has held medical sign language workshops for the past two years and plans to continue offering them as long as he can. Robert is also working with medical schools in the Chicago area to add scenarios regarding communication with deaf patients into simulation labs where students will be able to practice and adapt to various situations that may arise, similar to the article mentioned previously.

"Even if these sessions are just one hour, it is already an exposure that future providers have to provide to the needs of the Deaf community. They will be able to communicate more effectively and provide service to these patients. It is possible to save a patient's life even knowing only a couple of words or sentences in medical sign language."

For those who are interested in knowing more about the DHH community in Wisconsin, we have included a table of

resources that can be used to find more information. The following are a few, but not an exhaustive, list of resources that may help guide Wisconsin pharmacies in the direction for better helping those with hearing loss.

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References

1. Deaf Community Definition. Department of Modern & Classical Language Studies | Kent State University. <https://www.kent.edu/mcls/deaf-community-definition>. Accessed February 18, 2020.
2. DiMatteo MR, Giordani PJ, Lepper HS, et al. Patient adherence and medical treatment outcomes: a meta-analysis. *Med Care*. 2002;40(9):794-811.
3. Quick statistics about hearing. National Institute of Deafness and Other Communication Disorders. U.S. Department of Health and Human Services. www.nidcd.nih.gov/health/statistics/quick-statistics-hearing. Updated December 15, 2016. Accessed February 10, 2020.
4. US Census Bureau. "Frequently Asked Questions." The United States Census Bureau. www.census.gov/topics/population/language-use/about/faqs.html. Updated October 1, 2019. Accessed February 10, 2020.
5. Cuddahee J. Health literacy is a growing problem for all Americans. Literacy New York. www.literacynewyork.org/news/article/current/2016/10/10/100005/health-literacy-is-a-growing-problem-for-all-americans. Accessed February 10, 2020.
6. Ferguson MC, Shan L. Survey evaluation of pharmacy practice involving deaf patients. *J Pharm Pract*. 2016;29(5):461-466.
7. Ferguson MC, Liu M. Communication needs of patients with altered hearing ability: informing pharmacists' patient care services through focus groups. *J Am Pharm Assoc*. 2015;55(2):153-160.
8. Sterkens, J. Hearing loops help hearing aid users hear speech clearly and without

background noise. *Loop Wisconsin*. <http://www.loopwisconsin.com/>. Accessed March 23, 2020.

9. Lutz R. How pharmacists can better assist deaf patients. *Pharmacy Times*. <https://www.pharmacytimes.com/news/How-Pharmacists-Can-Better-Assist-Deaf-Patients>. Published April 27, 2015. Accessed March 23, 2020.
10. Mathews JL, Parkhill AL, Schlehofer DA, Starr MJ, Barnett S. Role-reversal exercise with deaf strong hospital to teach communication competency and cultural awareness. *Am J Pharm Edu*. 2011;75(3):53.
11. Barnett S. Communication with deaf and hard-of-hearing people. *Acad Med*. 2002;77(7):694-700.
12. Robert Radtke, personal communication, November 27, 2019