



# Improving communication between healthcare providers and patients with hearing loss

*Research overview and considerations for  
practice and policy*

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# Overview

We are a team of audiologists, speech-language pathologists, geriatricians and other specialist physicians, nurses, social workers, occupational therapists, people with lived experience of hearing loss, researchers, and health system leaders. Our goal is to make healthcare more equitable for people with hearing loss by improving communication access in health services.

Effective communication is imperative for healthcare. The Alberta Human Rights Act and the Accessible Canada Act establish a duty to ensure that people with hearing loss can fully participate in healthcare conversations. If not properly supported, people with hearing loss can and will experience barriers to communication that adversely affect the care that they receive.

Our team is leading several projects to better understand how the health system can address this opportunity. Using provincial health data, we determined that hearing loss is common in Alberta, and that people with hearing loss are more likely to have multiple comorbidities and worse health outcomes compared to otherwise similar people who have normal hearing. We also evaluated hearing level and communication difficulty among patients in hospital and outpatient settings. Nearly half of patients had hearing loss and reported more difficulty understanding their healthcare providers.

Focus groups and interviews with people with hearing loss identified significant communication gaps in health services. Better provider training, expanded access to simple and inexpensive communication tools and strategies, and clear institutional policies are all needed. To learn more about how hearing loss can be identified, we measured the performance of common hearing test apps and simple questionnaires to inform how they may be used in practice. Options are available, depending on the testing goal.

Our work has identified that hearing loss is common, yet often neglected in healthcare. Although effective tools and strategies are available to close this gap, they are presently not being used to their full potential. This report offers recommendations based on our findings.

## **Marcello Tonelli MD SM FRCPC**

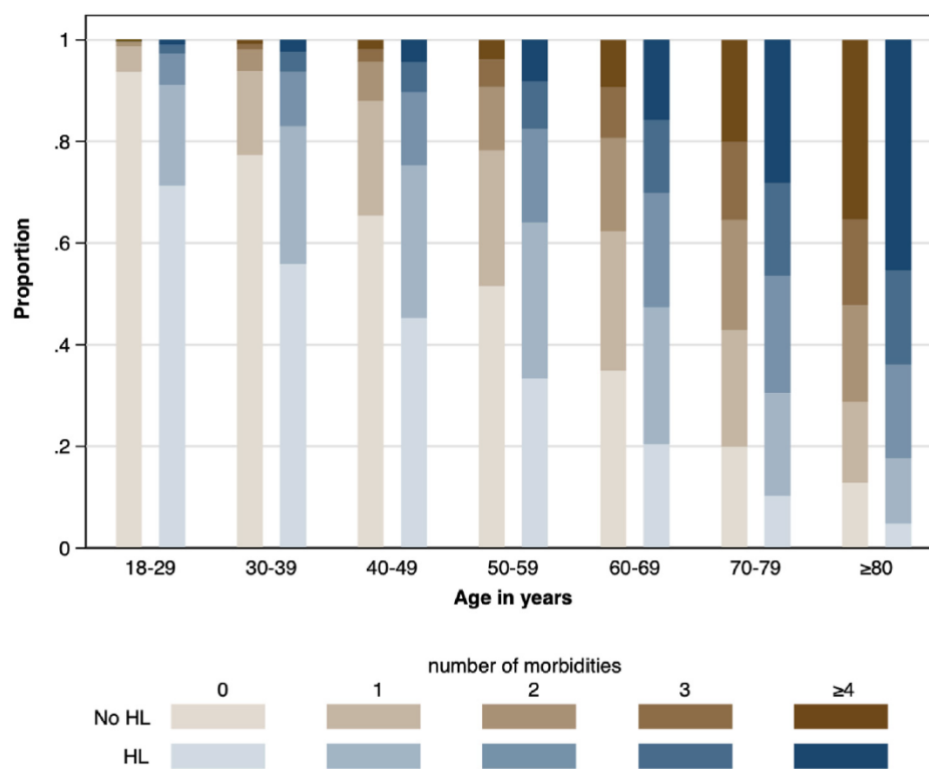
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## People with hearing loss have high comorbidity and greater risks of worse health outcomes

To learn more about how hearing loss affects Albertans, we conducted a population-based cohort [study](#) of over 4 million adults. Using provincial health data, we found that 150,000 adults had hearing loss. However, the **true number is likely much higher**, as hearing loss is often missed or not reported. Hearing loss was associated with **substantial comorbidity** and an increased risk of **adverse outcomes** including myocardial infarction, stroke, dementia, depression, and long-term care placement.



We also found that people with hearing loss had **higher rates** of days in hospital, falls, adverse drug events, and emergency visits compared to people without hearing loss.

**Key takeaways?** Hearing loss is common in Alberta. There is a high burden of serious illness associated with hearing loss. Increased investment is needed to prevent and identify hearing loss and additionally to improve health care for those already affected.

For more information, read the full article: Tonelli M et al. Associations between hearing loss and clinical outcomes: population-based cohort study. *eClinicalMedicine*. 2023 Jun 29;61:102068. doi: 10.1016/j.eclinm.2023.102068.

# Hearing loss is common among patients in Alberta

To appropriately equip health systems with tools and strategies to support patients with hearing loss, we need to know **how prevalent** hearing loss is among patients and how to best identify those with communication needs.

We tested the hearing level of 372 patients receiving care at inpatient medical and surgical units and outpatient hemodialysis units at Alberta Health Services. **Nearly half** (46.0%) of patients had hearing loss.

Patients with hearing loss were more likely to report **difficulty understanding their healthcare providers** (18.1%) compared to those with no hearing loss (5.6%). Regardless of hearing level, patients who had difficulty communicating felt their care was impacted as a result. For example, concerns being misinterpreted (25.0% of patients), not feeling informed (22.5%), not understanding treatment options (22.5%), and not being involved in decision-making (10%).

**Strategies to improve communication** included asking patients if they have hearing difficulties (60.0%), involving support persons (60.0%), using body language and speech strategies (54.3%) and rephrasing what was said (48.6%), among others.

Only 47.0% of those with hearing loss had been previously diagnosed by a hearing health professional, suggesting that **many people with hearing loss are not aware**. In this study, we measured hearing loss either by self-reported use of a hearing device (e.g., a hearing aid) or through the World Health Organization's [hearWHO](#) digits-in-noise app.

We also asked patients a single question (rating their perceived difficulty with hearing on a 5-point scale): 63.7% reported at least some difficulty and 12.0% reported regularly or almost always had difficulty. Among people classified as having hearing loss using the app (or using hearing aids), 22.6% reported no difficulty with their hearing. Among those classified as having no hearing loss, nearly half (52.0%) felt they had some difficulty hearing. Therefore, **different testing options** (including apps as well as a no-tech option: the single question) are available to identify patients with hearing loss in clinical settings.

**Key takeaways?** Hearing loss is highly prevalent in the patient population in Alberta: nearly half are affected. People with hearing loss have more difficulty communicating with healthcare providers, which can impact their care and experience. Different options are available to test patients' hearing to identify those with hearing loss, depending on what is feasible in practice. Patients had mixed perspectives on which communication tools and strategies are helpful.

**Promoting access to communication tools** and strategies during health encounters for people with hearing loss will help ensure good communication and equitable care.

# How accessible are health services in Alberta for people with hearing loss?

## Online community survey

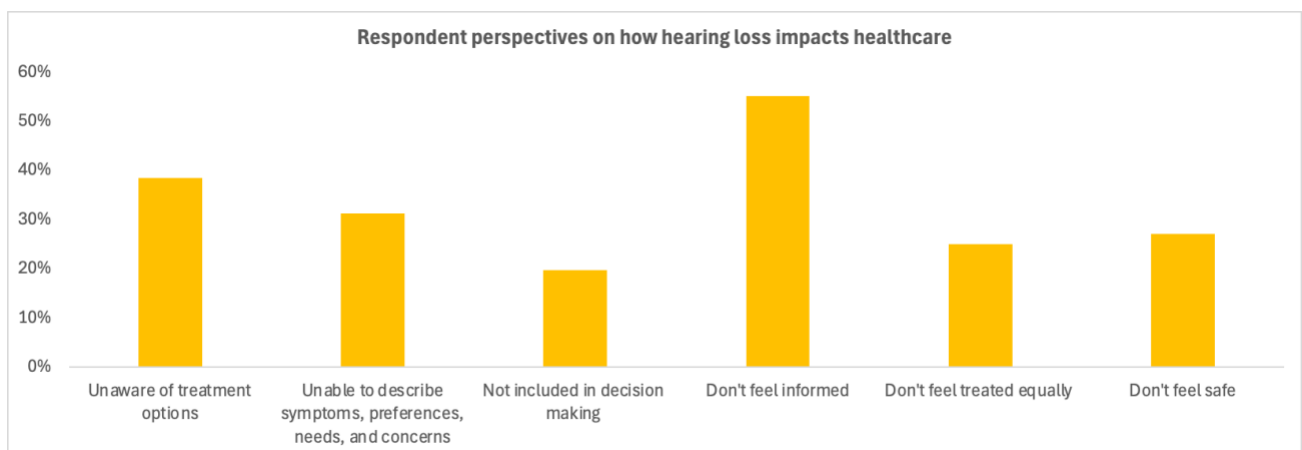
We distributed an online questionnaire to community groups in Alberta. 112 people who either had hearing loss or were a support person of someone with hearing loss responded. Only 26% found **health services in Alberta to be accessible** for people with hearing loss. 22% felt communication between patients with hearing loss and healthcare providers was easy.

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*“If we cannot communicate effectively, we cannot get the best care.”*  
- Survey respondent

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Most respondents (77%) felt their healthcare experience or outcomes were affected by hearing loss and the **lack of accommodation** (Figure). Many agreed that simple strategies such as staff training and offering a variety of communication tools (e.g., assistive listening devices, captioning, visual aids) will help people with hearing loss during their care. 96% felt these would improve communication access, 92% agreed they would improve the overall healthcare experience, and 85% felt they would improve the health of people with hearing loss.



**Key takeaways?** Many Albertans with hearing loss do not feel that health services are fully accessible. Solutions such as provider training, visual aids, and assistive listening devices, among others, would significantly impact communication accessibility, the patient experience with care, and health outcomes.

## Qualitative discussions with people with a recent hospital experience

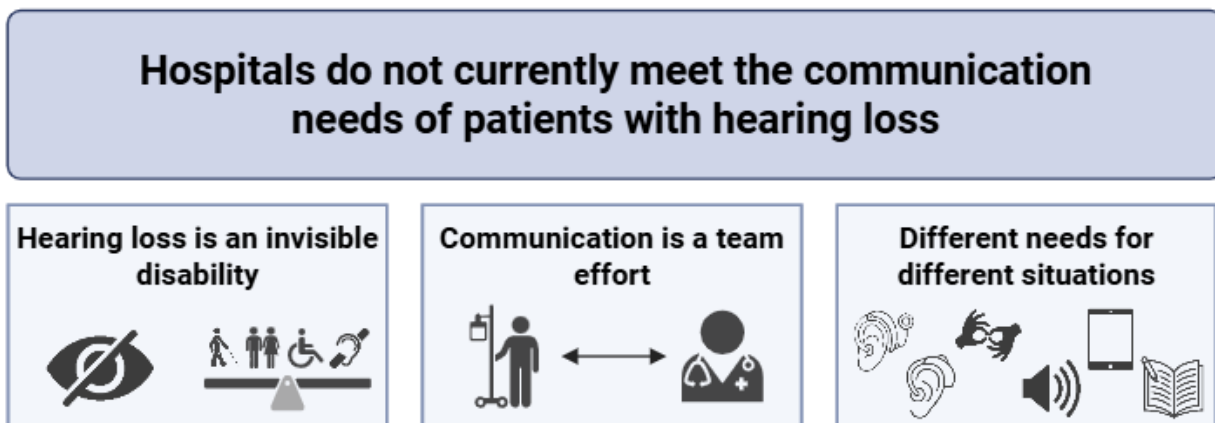
To build on the survey findings, we interviewed 14 Albertans with hearing loss in 3 focus group discussions (11 participants) and 3 individual interviews. We focused on their **experiences with hospital stays**, as this setting may be especially problematic due to loud background noise, busy healthcare providers, and stressful situations for patients and families.

Participants agreed that communication in hospitals can be challenging for patients with hearing loss, and that accommodations are needed to make care equitable and safe.

*“When you can't understand instructions, information, it is **life threatening** and that is not satisfactory.” Focus group participant*

*“How can a person with hearing loss who doesn't understand what's going on at the hospital, how can they give **consent for a procedure**?” Focus group participant*

We identified 3 overarching themes: hearing loss is an invisible disability, communication access is a team effort, and every patient has different needs in different situations.



**Key takeaways?** Hearing loss isn't always apparent to others and communication challenges can go unnoticed. Healthcare providers should be trained to recognize hearing loss, understand the impact it may have on health and communication, and be better equipped to accommodate communication needs. Patients should be encouraged to inform their providers of their communication needs, which should be documented in medical charts so that the healthcare team can respond accordingly. A variety of communication tools and strategies should be easily accessible to accommodate different needs and preferences.

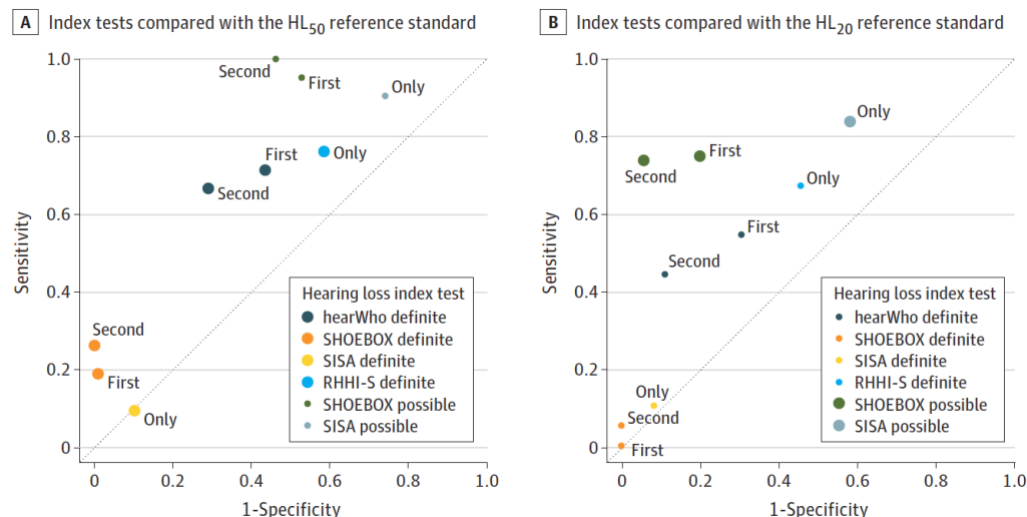
# What can the health system do?

## Detect hearing loss early

Early identification and appropriate management are critical to reduce the burden of hearing loss and risk of adverse outcomes. While a complete audiological examination is the gold standard, access to audiologists is not always feasible or practical. Therefore, **hearing test apps or simple questionnaires** may help prioritize further testing or help people self-monitor their hearing. However, the accuracy of these tools has not been well studied.

We evaluated the validity and reliability of two common hearing test apps ([hearWHO](#) and [SHOEBOX](#)) and two low-tech questionnaires (single item [questionnaire](#) [SISA], 10-item questionnaire [[RHHI-S](#)]), compared to a standard audiology examination.

In the [study](#), we included 130 adult patients referred for routine audiology testing at an outpatient Alberta Health Services clinic in Calgary. We evaluated the performance of the tests to detect moderately severe (A) and mild (B) hearing loss. We considered performance both in terms of avoiding missed cases (sensitive) and avoiding false positives (specific). hearWHO and SHOEBOX were administered twice to evaluate reliability of the apps.



**Key takeaways?** If an app is desired, SHOEBOX may be superior to hearWHO. Different response options may be used depending on if the goal is to avoid missing cases or avoid false positives. If a low-tech questionnaire is preferred, the single item question may be preferable.

For more information, read the full article: Lunney M et al. Performance of Hearing Test Software Applications to Detect Hearing Loss. *JAMA Network Open*. 2025;8(3):e61:252166. doi:10.1001/jamanetworkopen.2025.2166

## Implement tools and strategies in healthcare to improve communication for patients with hearing loss

To help patients with hearing loss communicate with their healthcare team, two key actions are needed. First, **healthcare providers need to be more aware** of hearing loss, including how to identify it and how to accommodate. Second, a variety of easy-to-use **tools and strategies to facilitate communication** (e.g., assistive listening devices, picture boards, captioning) should be accessible to patients and providers at all times to accommodate individual patient preferences and circumstances.

The Alberta Health Services [Communication Access](#) team is a group of hearing and speech professionals within the organization focused on improving communication access for patients in the Alberta health system, including those with hearing loss. The Communication Access team has developed resources for AHS providers and staff to use, including an online learning module.

In September 2024, the team launched an initiative for facilities across AHS. Participating sites will receive a “**Communication Accessible Designation**” if they complete staff training and use a variety of communication tools on their site.

Twelve early adopters have participated in the Designation pilot. We are currently evaluating the implementation and impact on healthcare staff, patients, and families. Through surveys and interviews, we will learn what aspects of the Designation have been going well, how the various components have improved care delivery or the patient and family experience, and what changes are needed for future to inform scale and spread across the organization. Additional sites will join the program in fall 2025.



## Summary

Hearing loss is common yet often neglected in healthcare settings. Our research shows that **people with hearing loss are more likely to have multiple comorbidities** and worse health outcomes, including higher rates of hospitalization, emergency visits, adverse drug events, falls, and long-term care placement. Among patients hospitalized in Alberta, **nearly half had hearing loss** and were more likely to report **difficulty understanding** their healthcare providers—impacting their ability to feel informed, understand treatment options, and participate in decision-making.

Many patients with hearing loss have not received a formal diagnosis. While a complete audiological examination remains the gold standard, **hearing test apps and simple questionnaires** may help to identify hearing difficulties and support timely intervention. Our work identifies several opportunities to use these tools either to help determine who may require more comprehensive audiological examination or potentially at point of care to identify patients with communication difficulties that may require support. A single-item questionnaire or the widely available SHOEBOX online test may be suitable for most circumstances, depending on what is feasible.

Focus groups and surveys identified **significant communication gaps in health services** among patients treated in Alberta hospitals. Respondents indicated that better provider training, expanded access to simple and inexpensive communication tools and strategies, and clear institutional policies are all needed. In part to close these gaps, AHS has launched a Communication Accessible Designation for participating sites, requiring staff training and use of communication tools. A pilot implementation is underway and will be expanded to additional sites in the fall of 2025.

Based on these findings, we recommend the following strategies:

- (1) Update professional school curriculum (e.g., medical and nursing school) to better train future healthcare providers about hearing loss and appropriate communication tools and strategies
- (2) Provide hands-on and online training for existing healthcare providers to improve how patients with hearing loss are identified and supported in practice
- (3) Equip healthcare facilities with a variety of communication tools that are accessible and easy to use
- (4) Develop institutional policies and programs to identify and document hearing difficulties and patient communication preferences to promote good communication access

These strategies may collectively help Alberta's health facilities better support people with hearing loss. Improving communication access for this equity-deserving population is expected to improve patient care and outcomes, healthcare provider experience, and health system quality, efficiency, and safety.