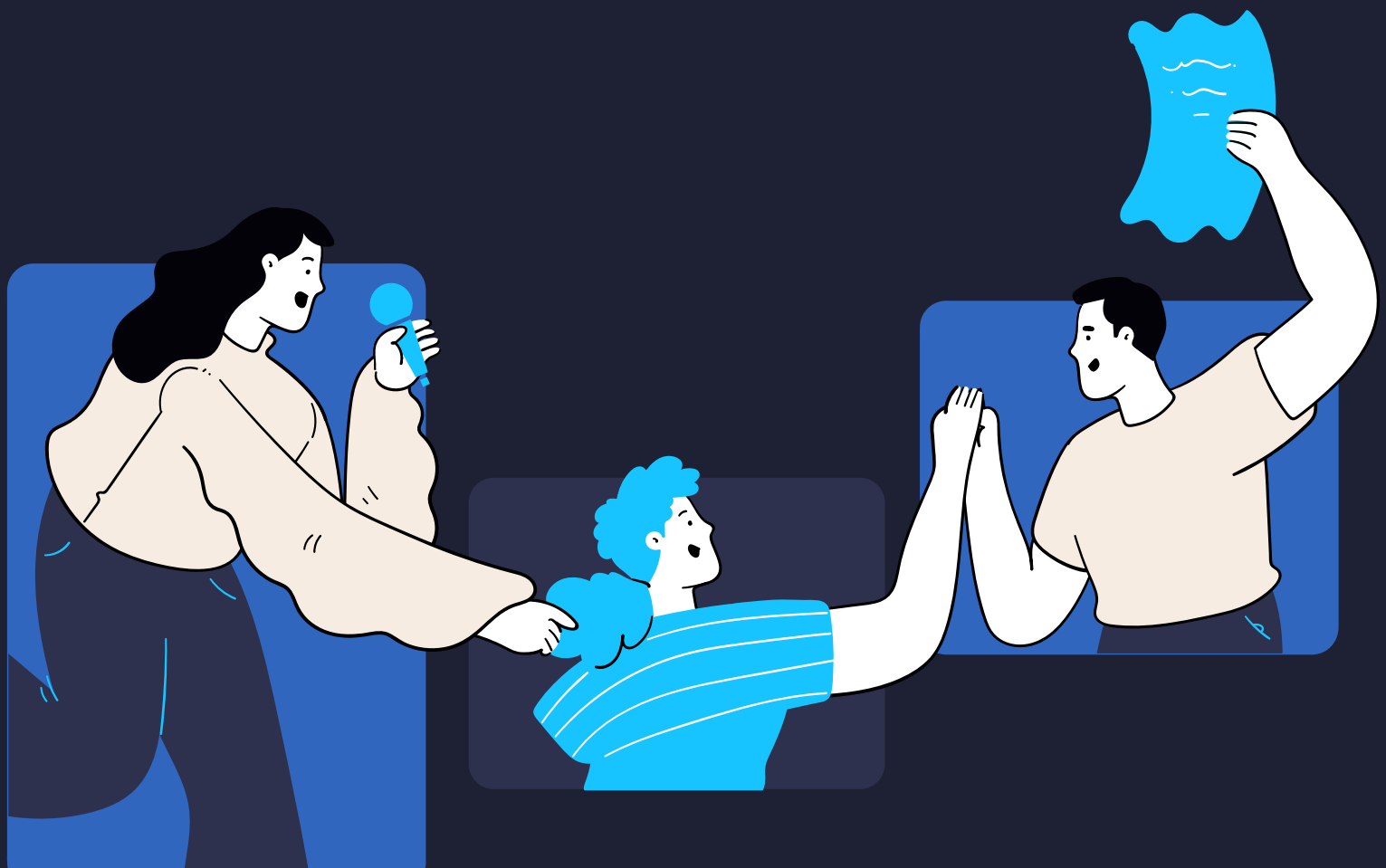
Canadian Academy of Audiology
Academie Canadienne d'audiologie

STAY CONNECTED

Reducing Barriers for People Living with Hearing Loss During In-Person Meetings



Introduction

Accessibility is about respect and engagement for all participants. This includes people who live with hearing loss. Communication is a two-way street, so it is important everyone does their part to understand the barriers people face and ways to help overcome them.

Hearing loss is common in people of all ages, not just seniors. **Did you know more than one in five adult Canadians live with hearing loss?** Chances are someone at your next meeting might be hard of hearing.

If your meeting is not accessible to people with hearing loss you are creating barriers. This could lead to a misunderstanding of your message, restriction of opportunities, and a reluctance to participate during the meeting. As a result, people may experience feelings of indignity, stress, fatigue, segregation, isolation, and exclusion. It is up to each organizer and participant to understand their role in creating a fully inclusive meeting.

Signs and Symptoms of Hearing Loss During Meetings in Yourself and Others

- Wishing the presenter or meeting participants would repeat themselves, speak more clearly, or speak louder to be understood
- Misunderstanding what people are saying
- Needing to sit up close to the presenter to hear what they are saying
- Having difficulty following a conservation when there is more than one person talking at the same time
- Having difficulty hearing in meetings when there is background noise (e.g., fans are running, outdoor traffic noise, coughing, participants talking to each other)
- Having difficulty hearing from a speakerphone during a meeting
- Having difficulty hearing video audio during a meeting
- Having difficulty locating which participant is talking
- Other people in the meeting pointing out you may not be hearing or following the conversation clearly
- Relying on speech/lip reading to try to follow what people are saying
- Becoming more frustrated trying to hear in meetings
- Saying ‘what/pardon me’ a lot during meetings

If you personally said yes to any of the signs above, you should consult an audiologist.

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Overview

This booklet is designed to make in-person meetings more accessible for people living with hearing loss. It is not an official accessibility code or law, but merely a guideline to be used by anyone interested in reducing barriers for people who are hard of hearing. Improving accessibility can make a difference for you, your meeting participants, and your organization. Accessibility is about creating communities, workplaces, and services that enable everyone to participate fully in society without barriers. With the adoption of the Accessible Canada Act and increasing provincial accessibility legislation, there is now greater demand to reduce barriers during in-person meetings for people who are hard of hearing in Canada (https://laws-lois.justice.gc.ca/PDF/A-0.6.pdf).

Overview

Hearing Loss Statistics

The incidence of hearing loss is high in our society. You may be unaware of how common it is because it is an invisible disability. Audiometry results from the 2012 to 2015 Canadian Health Measures Survey (CHMS) indicate that 40% of adults aged 20 to 79 had at least slight hearing loss in one or both ears. Hearing loss was significantly present across age groups; adults aged 60 to 79 (78%), aged 40 to 59 (40%), and aged 20 to 39 (15%) The chances are very high you will have speakers or participants that would benefit from an accessible in-person meeting (https://www150.statcan.gc.ca/n1/pub/82-003-x/2015007/article/14206-eng.htm).

Hearing loss can range from mild to profound. Communication barriers depend on a variety of factors, such as the degree of hearing loss, whether a hearing aid or cochlear implant is used, the age at which the person lost their hearing, the level of auditory training received, the listening situation (e.g., one-on-one, small group, large group, large venue), the listening environment (e.g., background noise, acoustics, reverberation, bright windows, distance), and the communication styles of those speaking (e.g., rate of speech, loudness, eye contact, facial expressions, ability to correct communication breakdowns).

The are many ways, and accompanying terms, that those with hearing loss use to describe themselves. It is important to understand that each person may experience different barriers and require a unique set of communication solutions. For more information, see “Terms and Definitions” from Appendix A.

Barriers and Universal Design

The social model of disability suggests disability arises, not because of impairment, but from barriers within “an oppressive and discriminating society.” A “barrier” is anything that prevents a person with a disability from fully participating because of their disability, including a physical barrier, an architectural barrier, an informational or communications barrier, an attitudinal barrier, a technological barrier, a policy, or a practice.

The social model shifts the onus away from an individual who requires a cure (medical model) to the community itself for creating barriers that constructs the disability. With regards to hearing, these barriers could affect people who have any degree of hearing loss or auditory processing difficulty. Examples of these barriers as they pertain to people living with hearing loss include:

Physical Barriers

- Poor acoustics
- Reverberation
- Background noise
- Distance from speakers
- Room set up
- Visual obstructions
- Low lighting

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Communication Barriers

- Lack of access to assistive technologies (e.g., amplification, hearing loop, DM, FM, IR systems, sound field systems, alerting systems)
- Lack of text interpretation including CART (real-time captioning), written transcripts or note takers
- Inaccessible media (e.g., no closed captioning on videos)
- Lack of written documents such as agendas

Policy Barriers: lack of awareness or enforcement of existing laws and regulations. These often require that programs and activities be accessible to people with disabilities

- Denying access to programs, services, benefits, or opportunities to participate because of physical barriers to hearing
- Denying reasonable accommodations so staff with hearing loss can perform the essential functions of their job for which they have applied or have been hired to perform, including meetings

Programmatic Barriers: limit the effective delivery of a public health or healthcare program for people with diverse types of disabilities

- Lack of accessible equipment (e.g., speech transfer systems with counter hearing loops at registration desks)
- Provider's attitudes, knowledge, and understanding of the needs of people living with hearing loss
- Lack of training of staff on communication skills (e.g., meetings, leaving phone messages)
- Lack of communication to express accommodation needs prior to appointments, meetings, workshops

Social Barriers: Related to the conditions in which people are born, grow, live, learn, work and age – or social determinants of health

- Lack of access to education and job opportunities
- Lack of accessibility in your community (e.g., banks, hospitals, government service centres)

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Barriers in Educational and Workplace Environments

Hearing loss can negatively affect interpersonal communication, psychosocial well-being, and quality of life. The Statistics Canada Participation and Activity Limitation Survey (2006) found that 39.8 % of respondents with a hearing loss reported it influenced their choice of courses or careers and 20.3% discontinued their formal education because of it. Regarding the workplace, 33.2% of employed respondents reported hearing loss limited the amount or type of work they could perform and 32.3 % made it difficult to advance or change jobs. Of the 23.4% not participating in the labour force, 62.5% reported they were completely prevented from working, while 29.0% stated it affected their ability to look for work. Of those respondents who were retired, 39.7% reported their retirement had not been voluntary and 51.3% were completely prevented from working because of their hearing loss. These outcomes demonstrate the need to reduce barriers for people living with hearing loss in educational and workplace settings, which includes in-person meetings.

Why Be Inclusive

1. **The Law**

Understanding accessibility laws is essential for all educational, workplace, and community settings. It is the foundation of why providing accessible meetings for people living with hearing loss is important – because they are a part of basic human rights.

In 1948, the United Nations created the Universal Declaration of Human Rights which recognized the inherent dignity and equal and inalienable rights of all members of the human family as the foundation of freedom, justice, and peace in the world. The Canadian Charter of Rights and Freedoms (1982) states it is unconstitutional for any government or law to discriminate based on a physical or mental disability. It states it is a discriminatory practice in the provision of goods, services, facilities, or accommodation customarily available to the general public to “deny, or to deny access to, any such good, service, facility or accommodation to any individual.”

It is important for everyone to understand and promote these laws as a fundamental right to improve accessibility for in-person meetings for people living with hearing loss. It is also within the right of Canadians to request an educational or workplace accommodation to reduce barriers during in-person meetings. By working together, we can make Canada a more accessible place for everyone, including people who experience barriers due to their hearing.

2. **Improved and Expanded Recruitment:** Eliminating communication barriers shows that your organization is interested in all qualified people.
3. **Increased Retention:** Reduces the cost to hire new employees if you ensure existing employees or students with disabilities have the tools they need to succeed.
4. **Increased Productivity:** Reduces burden of customer assistance, minimize absenteeism, facilitate customer service, reduce errors.
5. **Employee and Student Success:** Providing what people need to be successful makes common sense.

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6. **Diversity:** A diverse educational and workplace, inclusive of people with many backgrounds and experiences, leads to more innovative solutions for confronting challenges and achieving success.
7. **Corporate Image:** People with disabilities represent an important and expanding customer base.
8. **Increased Attendance and Participation:** If you reduce barriers, more people will be able to participate.
9. **A Healthy Economy:** According to the Conference Board of Canada, reasonable investments in workplace access would allow over 550,000 Canadians with disabilities to participate more fully in the workforce, increasing GDP by $16.8 billion by 2030.
10. **Communication and Health Benefits:** In-person meetings and conferences are important parts of life for people at work and in the community, including people who are Deaf, deaf, late-deafened, and hard of hearing. Eliminating barriers can reduce misunderstandings, increase opportunities, and allow full participation. As a result, people may experience less feelings of indignity, stress, mental fatigue, segregation, and exclusion.
11. **Comply with Accessibility Laws:** Make sure to consult with your Provincial, Territorial, Federal, and Building Code Accessibility Laws for supports and to ensure you are complying to avoid any penalties.

Step One:
Planning the Meeting or Conference

Step One: Planning the Meeting or Conference

Choosing a Venue

- Visit the site of a potential meeting to accurately assess its accessibility.
- Consultants contracted to organize or facilitate your meeting event must be familiar with accessibility features for people who have hearing loss.
- Ensure your registration desk is accessible (e.g., speech transfer system with installed counter hearing loop, text-to-text communication technology).
- If the meeting or conference is off site and people are staying overnight, wherever possible, choose a site with accessible hotel rooms for people living with hearing loss including:
    - Multifunction alerting system for telephone, door knock, alarm clock, sound monitor
    - Smoke detector that connects to a vibrating pillow alarm
    - Access to internet (e.g., Wi-Fi)
    - Television capable of accessing closed captioning
    - Ensure that all TV signals carrying captioning are not stripped of captioning by pay movie or pay TV equipment
    - Ensure that TV remote controls contain a button for turning the captions on and off
    - Emergency policies and procedures include reducing barriers for people who are hard of hearing
- Inquire if the venue and front desk staff are trained in providing accessible customer service for people who have hearing loss. If not, provide them with information in advance.
- No renovation or construction work is scheduled during the event date(s) that might affect accessibility (e.g., excessive noise).
- Ensure microphones are working.
- Use an accessible sound field system that can connect directly with hearing aids and cochlear implants.
- Understand the lead time the venue staff require for requesting assistive listening devices.
- Make sure enough assistive listening devices are available for the number of people with hearing loss attending the meeting.
- Make sure there is enough space available so small groups can work in different rooms to avoid background noise from other groups.
- Provide enough seating to allow for human support (e.g., notetakers, speech to text operators, sign language interpreters).

Step One: Planning the Meeting or Conference

Plan Ahead for Accommodation

- Know your audience and have accessibility supports in place in advance, in keeping with the lead time required by the venue.
- Use an accommodation request form prior to the meeting date (see Appendix B for a sample template). Remember, not everyone living with hearing loss has the same needs or experiences the same barriers, so do not assume to know their needs.
- Communicate a date by which requests are due.
- Ensure the availability of an accessibility point person whom people can contact if they have questions.
- Follow up with people who request accommodations in a timely manner.
- Ensure that promotion and advertising occur far enough in advance to allow available requested accommodations to be implemented.
- Factor accessibility costs into your budget.

Volunteer Training

- Have an accessibility point person who can assist with troubleshooting or access issues during the meeting or conference.
- Schedule an adequate number of staff to be available during registration and meetings in case any participants need additional assistance.
- Offer volunteers written information prior to the event on how to provide accessible meetings for people who are hard of hearing.
- Provide volunteers with accessibility training from an outside organization that supports people who are hard of hearing.
- Have trained volunteers advocate for barrier-free communication across your organization. Education is at the heart of creating positive change.

Step One: Planning the Meeting or Conference

Physical Environment

- Keep all forms of background noise as low as possible (e.g., equipment noise, traffic noise, chair scraping, music, people talking in hallway). Background noise can be distracting and make hearing and communication more challenging.
- Display signage that says, “Quiet…meeting in progress” on your door.
- Tell participants to mute their phones to reduce distractions and unwanted noise.
- Place soft tips on the bottom of your chair and table/desk to reduce scraping noise.
- Be prepared to ask that other people reduce their noise levels in adjacent rooms.
- Improve rooms with poor acoustics and high reverberation. These create additional listening challenges (e.g., use soft furnishings such as carpet, install acoustic panels, fit rubber caps on chairs and table legs, use curtains or blinds in the windows and hang soft materials on the walls).
- Optimize lighting in the room (e.g., bright, without glare, and allows for adjustment).
- If dimming lights, ensure there is enough light for people to see speakers and interpreters. Dim only behind the screen or check with participants on what works best.
- Make sure the speaker’s (and other meeting participants’) faces are well lit and visible. People with hearing loss may be depending on facial cues and speech reading.
- Avoid sitting in front of a bright window to avoid appearing back lit.
- Make sure the projector screen and the captions are easily visible.

Step One: Planning the Meeting or Conference

Agenda, Invitations, and Registration

- Your promotional and registration materials should include multiple forms of contact to address accessibility needs.
- When creating your meeting agenda, allow adequate time at the beginning of the meeting to identify available support services for participants and for presenters to familiarize themselves with accessibility equipment and microphones.
- If possible, plan to record live meetings so people attending have a chance to review it later, if needed.
- Allow participants to send questions and comments in advance.
- Give notice about questions or topics that participants might be asked to respond to or comment on in advance.
- Provide a glossary of terms that will be used during the meeting.
- If your meeting is long, include breaks to help with cognitive overload and listening fatigue for participants.
- Make sure the event website about the meeting is accessible (e.g., videos have captioning, ASL/LSQ video additionally provided).
- All communications should use plain language (writing designed to ensure the reader understands as quickly, easily, and completely as possible).
- If you are providing video during the meeting, ensure that it is captioned.
- Presenters and participants need to be aware of what communication access is available in advance of people attending the meeting (e.g., how to use and access assistive listener devices).

Emergency Plans and Procedures

- Ensure the appropriate systems are in place so that participants with hearing loss will be alerted to any danger (e.g., fire or bomb threat), within the premises at the same time as all others. This also includes any drill or system test in the building.
- Fire and Emergency alarms should have both visual and auditory alarms.
- Exits are clearly identified and accessible.
- Identify areas of refuge for individuals who may require rescue assistance.

Step Two: Communication Access & Universal Design

Step Two: Communication Access & Universal Design

Three topics that are essential to communication access include public assistive listening systems, sign language interpreters, and text communication such as captioning. Knowing why these solutions are important and how to access them are key to reducing barriers during meetings for people living with hearing loss.

Public Assistive Listening Systems

Accessible public assistive listening systems allow people who wear hearing aid(s) or a cochlear implant to connect their devices directly and wirelessly to a speaker's microphone. This greatly reduces the barriers caused by background noise, distance, and poor room acoustics. Having the signal go directly into someone's hearing aid(s) or cochlear implant is advantageous because the signal would be going into devices that are uniquely set for someone's exact degree and configuration of hearing loss. Public assistive listening systems can also decrease distractibility, increase on-task behavior, improve understanding, decrease the number of requests for repetition, improve ease of chairing a meeting, and reduce vocal strain and fatigue for presenters. Examples of assistive listening devices (ALDs) include digital modulation (DM), frequency modulation (FM), infrared, and hearing (Induction) loop systems.

According to MarkeTrak 2022, a consumer survey that collects data on hearing loss trends, the uptake of any hearing aid or implant for people that could benefit from amplification was about 39.1%. It is important to remember not everyone attending a meeting with hearing loss has access to or wears hearing aids, so accessibility needs for this population must also be considered.

Accessible assistive listening systems can also be used by those who do not wear hearing aids. The various types of systems can all utilize amplified, personal assistive listeners with headphones for those without hearing aids.

Ronald Mace coined the term universal design to describe the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life. There are seven general principles of universal design outlined in table one. In 2007, Fok et. al., modified these principles and adapted them to create a process to examine the barriers and facilitators within the immediate environment, the community and social contexts, the degree and quality of participation, and opportunities for change for people with hearing loss. It assesses the communication environment from the perspective of how well the environment can meet the communication needs of the users through a 'universal hearing accessibility' lens (see Table One).

It is important to consider accessible assistive listening technologies will change over time. These six principles are what should be the focus when cross comparing assistive listening systems for hearing access, now, and in the future. When using accessible assistive listening technologies in meeting rooms, it is important for individual users to consult with their audiologist to ensure they are using their own devices appropriately and are integrating their amplification correctly with these systems. In an educational classroom setting for children, care should be taken to communicate with an educational audiologist and the child's personal pediatric audiologist to determine if the child's listening needs are being adequately met.

Step Two: Communication Access & Universal Design

Table One. Universal Design Principles

Seven Principles of Universal Design Ronald Mace (1997)	**Six Principles of Universal Design for Hearing Jennings & Shaw (2013)**
1. Equitable Use: The design is useful and marketable to people with diverse abilities.	**1.** Optimize the hearing environment for all.
2. Flexibility in Use: The design accommodates a wide range of individual preferences and abilities.	**2.** Optimize interactions between persons and objects to promote better hearing in an environment.
3. Simple and Intuitive Use: Use of the design is easy to understand, regardless of the user's experience	**3.** Optimize opportunities for people to have multiple choices of interactions with one another.
4. Perceptible Information: The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.	**4.** Optimize opportunities for people to perform different activities in and across environments.
5. Tolerance for Error: The design minimizes hazards and the adverse consequences of accidental or unintended actions.	**5.** Optimize opportunities for people to use the environment without extra steps for hearing access during preparatory, use, and/or after use phases.
6. Low Physical Effort: The design can be used efficiently and comfortably and with a minimum of fatigue.	**6.** Optimize the opportunity for people to have safe, private, and secure use of the environment while minimizing distraction/ interference or cognitive loading.
7. Size and Space for Approach and Use: Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.	

Step Two: Communication Access & Universal Design

Connection of Hearing Aids to Group Assistive Listening Systems

There is no single way to universally connect to all public assistive listening systems. These choices are important to consider so that people can more fully address the barriers they are experiencing in different listening environments (e.g., distance, background noise, poor acoustics) and listening situations (e.g., small group; large group meetings). If you are an audiologist, make sure to talk to your clients about public assistive listening systems and the different ways to connect to them. It is a way for everyone to support accessible communities and workplaces for all ages.

Two main ways to connect to different group assistive listening systems are:

Telecoils

Hearing aids and cochlear implants with telecoils can receive magnetic sound signals wirelessly from public assistive listening systems. An installed hearing loop system in a room can connect to a hearing aid when the hearing aid is switched to it's telecoil program. It does not require any other assistive device. With DM, FM, or infrared systems, a telecoil program in a hearing aid will connect to the system if an assistive device is also provided that has a personal neck loop attached to it. Not all hearing aids come with telecoils. Talk to your audiologist about including one in your hearing aid when you purchase them to have access to public assistive listening systems. It is possible you may already have a telecoil in your hearing aid, but it might not be programmed.

Direct Audio Input

Some people use their own personal remote microphone technology to provide a wireless direct audio input to their hearing aids or cochlear implants. This involves requesting the speaker use their personal microphone or setting up a personal tabletop microphone ahead of the meeting.

Currently on the market, there is only one manufacturer who sells a miniature universal receiver called Phonak Roger X (02) that is compatible with almost every hearing aid and cochlear implant speech processor on the market. It allows direct connection to a Phonak Roger Sound Field system (DM) without the need for a separate assistive listening device or the use of a tele-coil. Roger X (02) functions when connected to an audio shoe or streamer.

Step Two: Communication Access & Universal Design

Advantages and Disadvantages of Different Group Assistive Listening Systems

Not all group assistive listening systems are the same and some provide greater access and options than others. Part of the decision of which system to choose depends on the listening environment, the number of participants, the number of speakers, whether speakers are fixed or moving, the listening tasks, the building material structures the room is made from, confidentiality, electromagnetic background noise measurements, metal testing, electromagnetic interference testing, and if there is an existing sound system.

Digital Modulation (DM) Systems: these systems offer the greatest improvement in hearing in noise and can connect to the greatest number of users compared to all the other systems in meeting room, classroom, or theatre situations. It uses a radio signal like an FM system, but it is digital so can automatically change the volume depending on the level of the background noise in the room.

Distance, background noise and reverberation can be challenging for students in the classroom or people in a meeting room. The Phonak 'Roger for Education' portfolio, including DigiMaster 5000/7000 speakers, offers various intuitive and easy-to-use solutions. It follows a universal design approach in that it improves the sound clarity for all listeners in the room with the use of a sound field system and directly connects to assistive listeners (Roger Neckloop), hearing aids, and cochlear implants for those that require a direct connection. It also has other accessories like pass-around microphones, a media hub, and a wall pilot that people can use to automatically connect to the system without an assistive device if they have Roger direct, an integrated receiver or a miniature universal receiver.

This system also allows for complete privacy because it creates its own network with each system with automatic frequency hopping. There is no need to program this system to a specific FM channel. This system can connect to a pre-existing AV system or has all the components you need to create your own accessible sound field system which can be permanently installed or portable. DM systems can also be connected to laptops with an assistive listener (e.g., Roger Neckloop) and a speech-to-text app (e.g., Otter ai) to provide captioning during meetings. The system can also accommodate up to thirty-five microphones for a large panel or group discussion.

Frequency Modulation (FM) Systems: Is an older technology compared to DM systems for public assistive listening systems. FM (frequency modulation) radio signals transmit sound from one person to another over distance. An FM assistive listening system consists of a transmitter, which broadcasts the speaker's voice and sends it (via radio waves,) wirelessly, directly to a user's FM receiver. The receiver may be connected to personal headphones. It might also connect to hearing aids and cochlear implants through a neck loop device if these instruments have telecoils built in. This technology is fixed so does not change volume when the background noise changes which affects the signal-to-noise level and overall understanding. The FM radio signal must have its own set channel in each meeting room to avoid interference with other FM radio signals. There are sometimes limits to the number of microphones that can be used (e.g., only two at a time). The advantage of FM systems is they are sometimes less expensive than other group assistive listening systems (https://www.hearinglink.org/technology/fm-systems/).

Step Two: Communication Access & Universal Design

Infrared Systems: use light to transmit signals. The advantage is that installation is much easier compared to hearing loop systems. The disadvantages are that the signal requires a line of sight to the user, has a limited range, can be blocked by objects (e.g., pillars), the transmission data rate is low, and can be affected by sunlight coming from windows. Also, the only way to connect to the system is with the use of an assistive listener either with headphones or with a telecoil/neck loop. Direct connection to hearing aids/cochlear implants always requires an intermediary device.

Loop Systems: also known as an Induction or Audio Loop, provide a magnetic, wireless signal that is picked up by the hearing aid's telecoil. A loop system takes the signals from a site's audio system and transmits them into the environment via induction energy. If a hearing aid or cochlear implant has a telecoil built in, the devices can pick up the induction signal. The loop acts as a magnetic induction transmitter and the hearing aid coil is the receiver. Personal "loop listener" devices are also available for those to use when they do not have hearing aids.

It is important to note there are many different loop designs and the selection process is a very important part of ensuring the correct loop system is chosen. How the room is used, room area, and the construction of the building are all factors which need to be considered in ensuring the correct hearing loop design is chosen. Hearing loop solutions for meeting rooms can include a basic perimeter loop to a low-spilled phased array system that substantially reduces the amount of magnetic field that can 'spill over' into the space served by other loops.

Advantages of Hearing Loops

- It is universal so any telecoil equipped hearing aid or cochlear implant (regardless of the make or model) can use the system worldwide.
- There is no limit to the number of users of the system.
- Optimizes opportunities for people to receive assistance without extra steps or asking for assistance.
- All installations should meet the requirements of IEC 60118-4. Compliance must be considered during specification, design, installation, and maintenance of the system. Installers should be trained to install loop systems and should provide documentation to ensure measurements fulfill all standards and compliance requirements.
- Can be permanently installed or portable.

Disadvantages of Hearing Loops

- Requires an audio system with microphones and speakers.
- Not all hearing aids are telecoil-equipped to connect to a hearing loop system and hearing aid users may not be aware of how to use their telecoil.
- Installation can be extensive and expensive depending on the space.
- Timing of installation might be better timed with a new build or when carpet is being changed.

Other Public Assistive Listening Systems: With the creation of LE Audio (Bluetooth 5.2), it is expected that other assistive listening systems will be on the market to augment what is available to improve access in the future. Public Bluetooth broadcasts may be able to connect to your smartphone in public venues. Future assistive listening systems may use Bluetooth technology to connect directly to hearing aids and cochlear implants as well. It is important, again, to refer to Table one on the Universal Design for Hearing principles when exploring which accessibility devices are best. Expecting others to bring their own devices might cause a barrier to accessibility by neglecting certain participants such as those who do not have smart phones, access to WIFI, or have cognitive difficulties with more advanced telecommunication devices.

It is recommended an area of continued focus for scientific research be on public assistive listening system technologies, best practice, and outcome measures based on universal design for hearing principles to better reduce barriers for people living with hearing loss.

Sign Language and Booking Sign Language Interpreters

Not everyone with hearing loss uses sign language but for those that do, having a sign language interpreter present at meetings is essential to reducing barriers.

The Canadian Association of the Deaf's position paper on language states, "the Sign languages of the Deaf are the only true Sign languages and must be given the same status and respect as any other legitimate language."

The natural language of Deaf people is sign language. In Canada, there are a number of sign languages used, the two most common ones are: American Sign Language (ASL) and la langue des signes quebecoise (LSQ).

Sign languages have been recognized internationally as languages with their own grammar, syntax, and vocabulary. In the United States, ASL is the third most widely used language after English and Spanish. Several Canadian provinces have formally recognized sign language as the language of people who are Deaf and/or as a language of instruction in Schools for the Deaf. The United Nations Convention on the Rights of Persons with Disabilities also formally recognized sign languages and confirmed these languages' rights and protections and equal status to spoken/written languages in the signatory countries, which include Canada."

http://cad.ca/issues-positions/language/

When providing sign language interpreting, it is important to consider the following tips for organizing a successful meeting:

Booking

- Find out if you need ASL or LSQ interpreting, or both during your meeting.
- Contact ASL and/or LSQ Interpreter service providers well in advance to book their services.

- Depending on how long the meeting will be, the service provider, will inform you how many interpreters will be assigned to your meeting. In general, interpreters need a break every 15 to 20 minutes, so if your meeting is longer than 20 minutes, they will be teamed with two or more individuals for the assignment.
- Include in your request the following information:
    - When the meeting will take place and the time/duration
    - What type of meeting/event (e.g., presentation only or will there be small group break out sessions, content of meeting)
    - Where the location of the meeting will be
    - Who the point of contact will be for booking and for day of the meeting
- If possible, provide the following information to the interpreters in advance:
    - Agenda
    - PowerPoint slides
    - Speakers notes
    - Handouts
    - Technical language, persons' titles, or any other unique information

During the Meeting

- Please wait until interpreters are in place before starting the presentation.
- Address the person, not the interpreter.
- Interpreters may require hands-free earphones to process the information in their language of work when simultaneous interpretation services are provided.
- Make sure that the interpreters are identified to the audience.
- Do not draw attention to those they will be interpreting for.
- Reserve seats that have a clear view of the interpreters for those who will be using the service.
- Interpreters should be as close to the speaker as possible (this allows individuals to view the speaker and the interpreter simultaneously).

Step Two: Communication Access & Universal Design

Resources

Association of Visual Language Interpreters of Canada (AVLIC)

www.avlic.ca
Voice/TTY: 780-430-9442
Fax: 780-988-2660

Canadian Association of the Deaf (CAD)

www.cad.ca/index_en.php
Phone: 613-565-2882
TTY: 613-565-8882
Fax: 613-565-1207
E-mail: info@cad.ca

Step Two: Communication Access & Universal Design

Captioning

Captioning is an essential tool to reduce barriers during meetings for people with hearing loss who use spoken language and text interpretation to communicate. It is important to note that not everyone uses hearing aids or is adept at speechreading. Research shows captioning is very beneficial for all meeting participants including those with hearing loss, learning disabilities, ADHD, seniors, and those who use English as a second language. Captioning has been shown to help people maintain focus, retain information, overcome poor audio/noisy environments, assist with difficult vocabulary, and to help understand people with accents. It also provides a written transcript of the meeting proceedings to review later.

Definitions

Captions: are words displayed on a television, computer, mobile device, or movie screen, providing the speech or sound portion of a program or video via text. Captions allow viewers to follow the dialogue and the action of a program simultaneously.

Closed Captions: are hidden from the viewer until the captioning is activated whereas open captioning is permanently encoded into the film and integrated with the image.

Open Captions: are part of the media and cannot be turned on or off.

Subtitles: transcribe the dialogue only. It does not provide a text description of other sounds.

https://en.wikipedia.org/wiki/Closed_captioning

Communication Access Realtime Translation (CART): is a word-for-word, near-verbatim, speech-to-text interpreting service used primarily for live events, such as meetings and lectures, and virtual events such as Zoom meetings. Depending on the situation, a CART captioner may be present on site or may be in a different location, using the Internet to deliver the text to the meeting via the room's telephone/audio system, and streams text over the internet to an overhead screen or monitor. When the CART captioner is off-site, the service is referred to as remote CART. A CART captioner has met the accuracy guideline if, after review, it is determined that the text meets a minimum accuracy level of 98%. Here are some tips to consider:

- For CART, you will need a microphone, strong internet connection, a communication method (e.g., oral, sign language interpreter), and a display (e.g., projector screen(s), large TV, cellphone, tablets) with available link for personal devices.
- Establish an audio connection with the vendor either through Skype, landline, mobile phone, conference call, or another VoIP system that is supported by the vendor.
- Make sure all speakers have access to a high-quality microphone. A built-in microphone on a laptop or tablet is not ideal.

Step Two: Communication Access & Universal Design

- If you have a single screen that is split to receive two inputs (captions and PowerPoint images or a live output from a camera which provides a close-up of the presenter and/or interpreter), have the captions appear at the top of the screen.
- Consider using a whole-screen capture program (e.g., Screencastify or Loom) to provide simultaneous recording of your screen, closed captions, and a video of the presenter's face.
- In some instances, it may also be helpful to split the screen vertically, displaying captions on one side of the screen and the PowerPoint on the other side of the screen.
- If you have a screen for each of the separate inputs, ensuring that the captions screen and the screen receiving the PowerPoint images are placed next to each other to reduce eye strain.
- Ensure that the captioner will be allowed to continue captioning the session when the session is running over its allotted time.
- Event organizers should consult with the supplier in the early planning stages for best delivery of captioning at the event.
- Having only two lines of text on screen, as is the case with television captions, does not generally work very well in a conference or meeting setting.
- Video materials should be captioned prior to the event. This is the responsibility of the presenter. Event organizers should remind presenters of this early in the planning process.
- Choose a video platform that has imbedded captioning/transcript capability.
- Video quality and performance must be sufficient to support sign language if you use it.
- An advantage of captioning is transcripts can be accessed afterwards and may be searchable. Ask about this from captioning vendor.
- Some organizations are considering using automated speech recognition or speech-to-text apps (e.g., Otter ai), but these must be accurate as real time captioning to be useful.
- If you are uploading a video to YouTube, use automated captions and then edit those captions to fix any errors before publishing.
- Consider using platforms (e.g., Zoom, Skype, Microsoft Teams) and Learning Management Systems (e.g., Brightspace, Blackboard) that are accessible for people with hearing loss.
- When arranging remote CART services through a vendor, requests should be made at least 1-2 weeks in advance of your meeting.
- Provide information about the speaker, names, topics, and any documentation prior to the meeting.
- Schedule enough time to ensure all equipment and the audio streaming is working before the meeting starts.
- If captioner is present in the room during the meeting, make sure there is a designated spot for them.

Step Three: Conducting the Meeting

Step Three: Conducting the Meeting

Meeting Room Set-Up

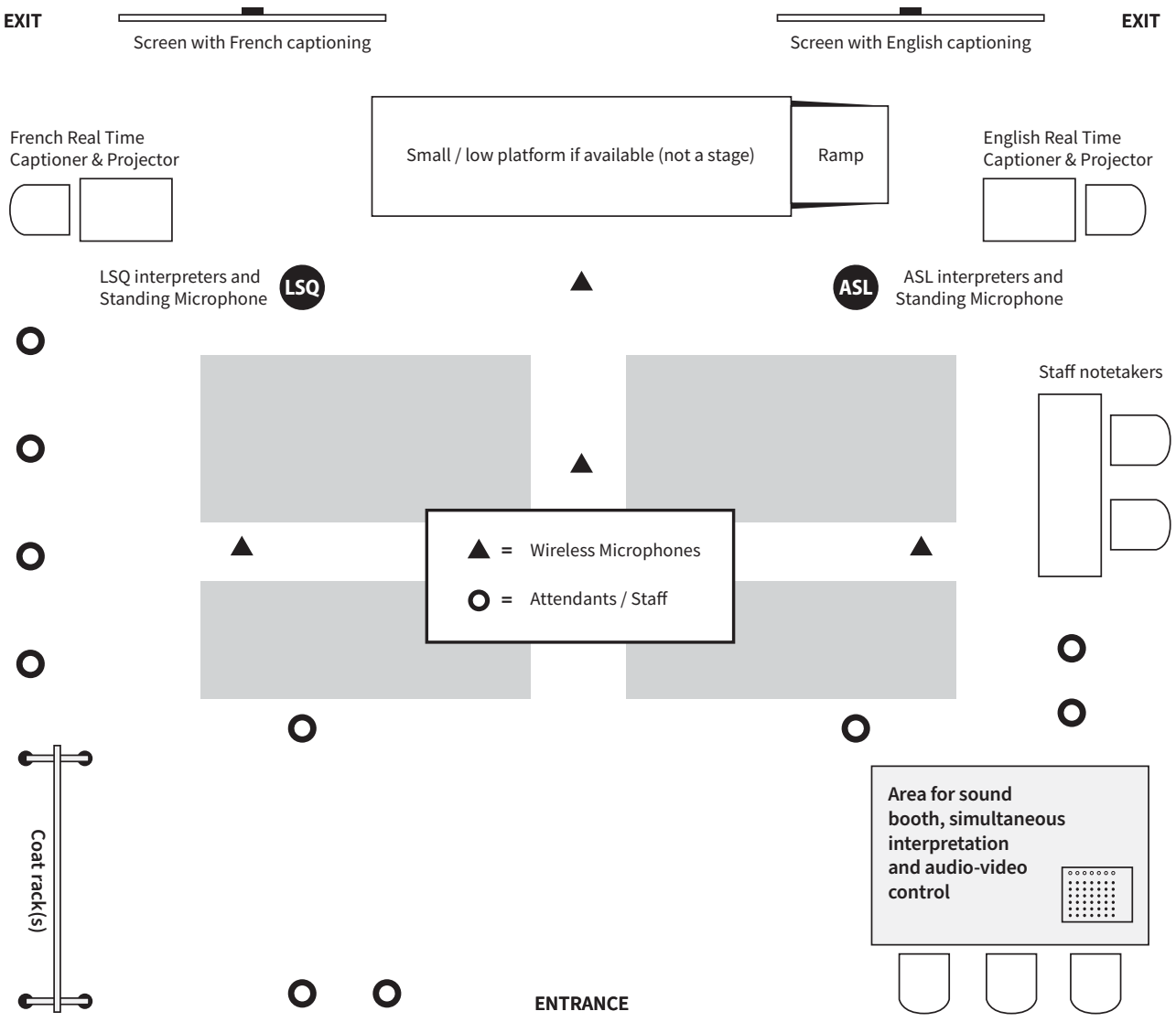
Factors to consider how a meeting room will be set up are the number of participants, the size/shape of the room, the type of meeting/meeting activities that will take place (e.g., do you want participants to be able to interact and network with others at their table, is the style of presentation more conducive to having all participants face the presenter), the number of speakers, the use of note takers, captioners, and ASL/LSQ sign language interpreters. When creating accessible and inclusive events, there are additional factors to consider. For example, for people who are hard of hearing, they may need the option to sit close to the front or on a particular side of the room.

For larger meeting spaces, an elevated platform (or stage) should be made available and should optimally be placed against a solid wall. The stage should have sufficient space for an interpreter to perform their role, ideally, next to the lectern (see Diagrams A-D). It is critical to use microphones, as well, so that participants, interpreters, and captioners can hear the presenter and questions or comments from other attendees. Microphones may also be necessary in smaller breakout rooms.

Once determined, your preferred set-up and access considerations should be reflected in the contract, if you are holding your meeting offsite. Include set-up instructions and access considerations in your audiovisual and room set-up list. if you are meeting off site.

Step Three: Conducting the Meeting

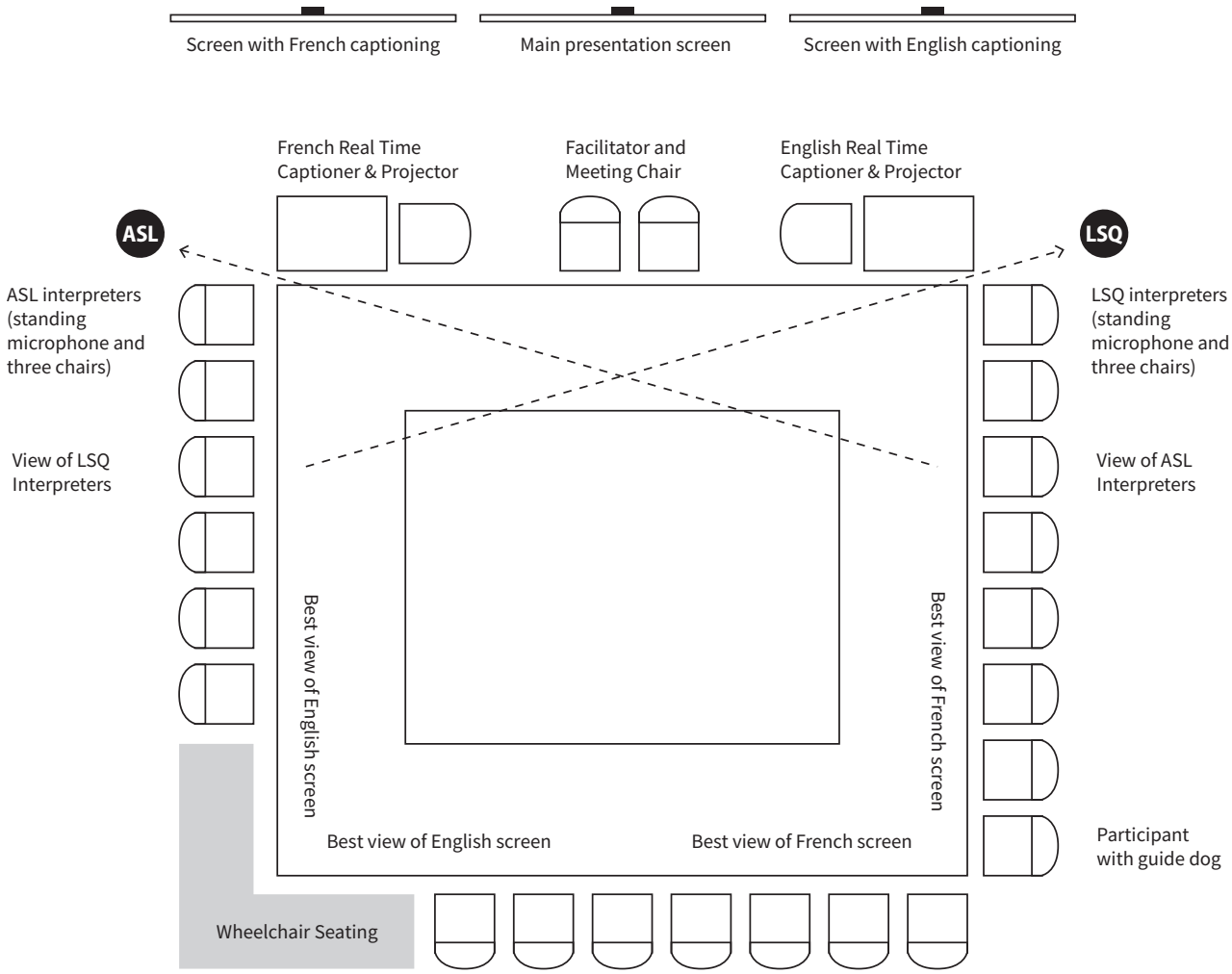
Diagram A: Room Layout



From: https://www.omssa.com/docs/OMSSA_Guide_to_Conducting_Accessible_Meetings_-_EN.pdf

Step Three: Conducting the Meeting

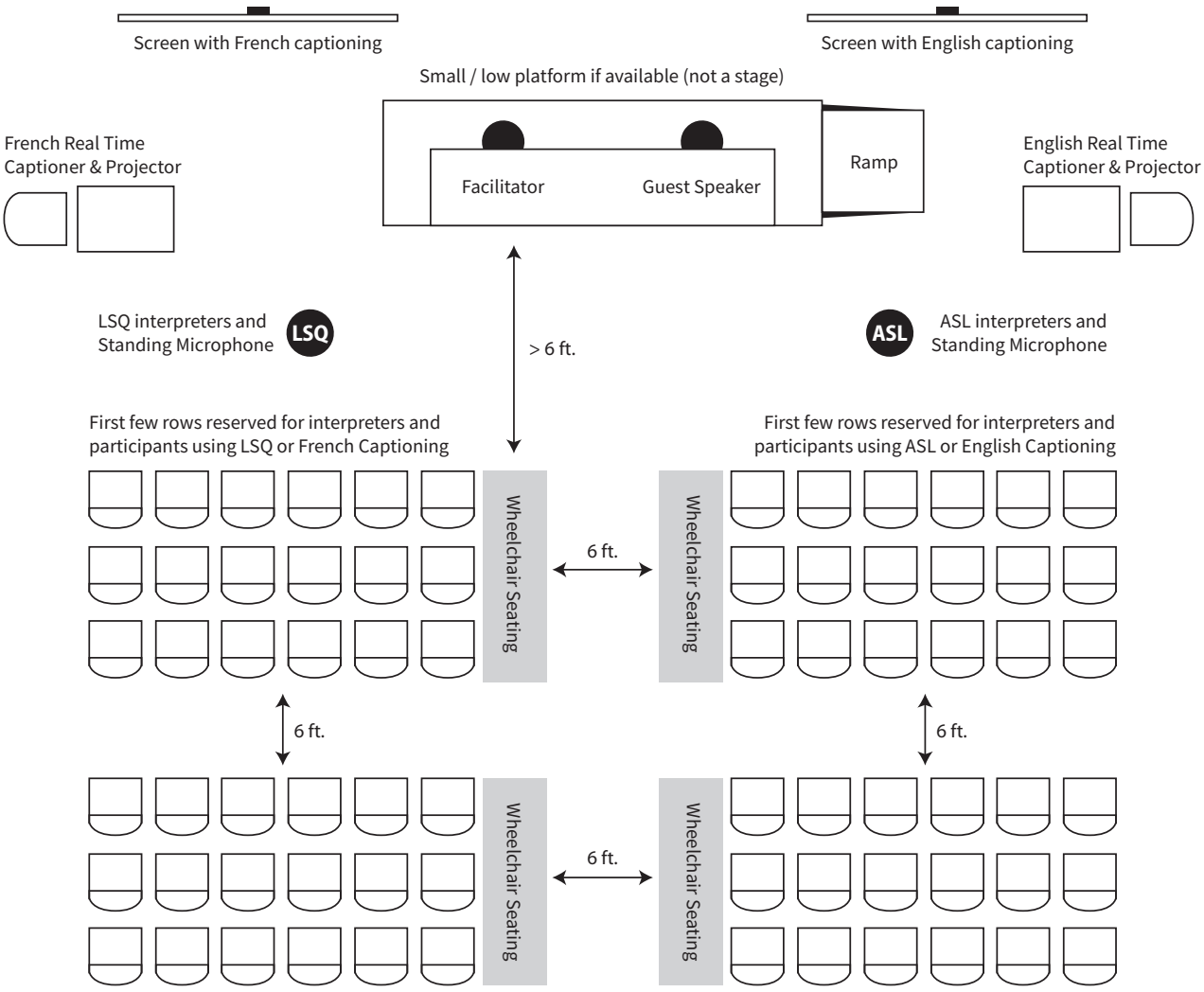
Diagram B: Roundtable Seating



From: https://www.omssa.com/docs/OMSSA_Guide_to_Conducting_Accessible_Meetings_-_EN.pdf

Step Three: Conducting the Meeting

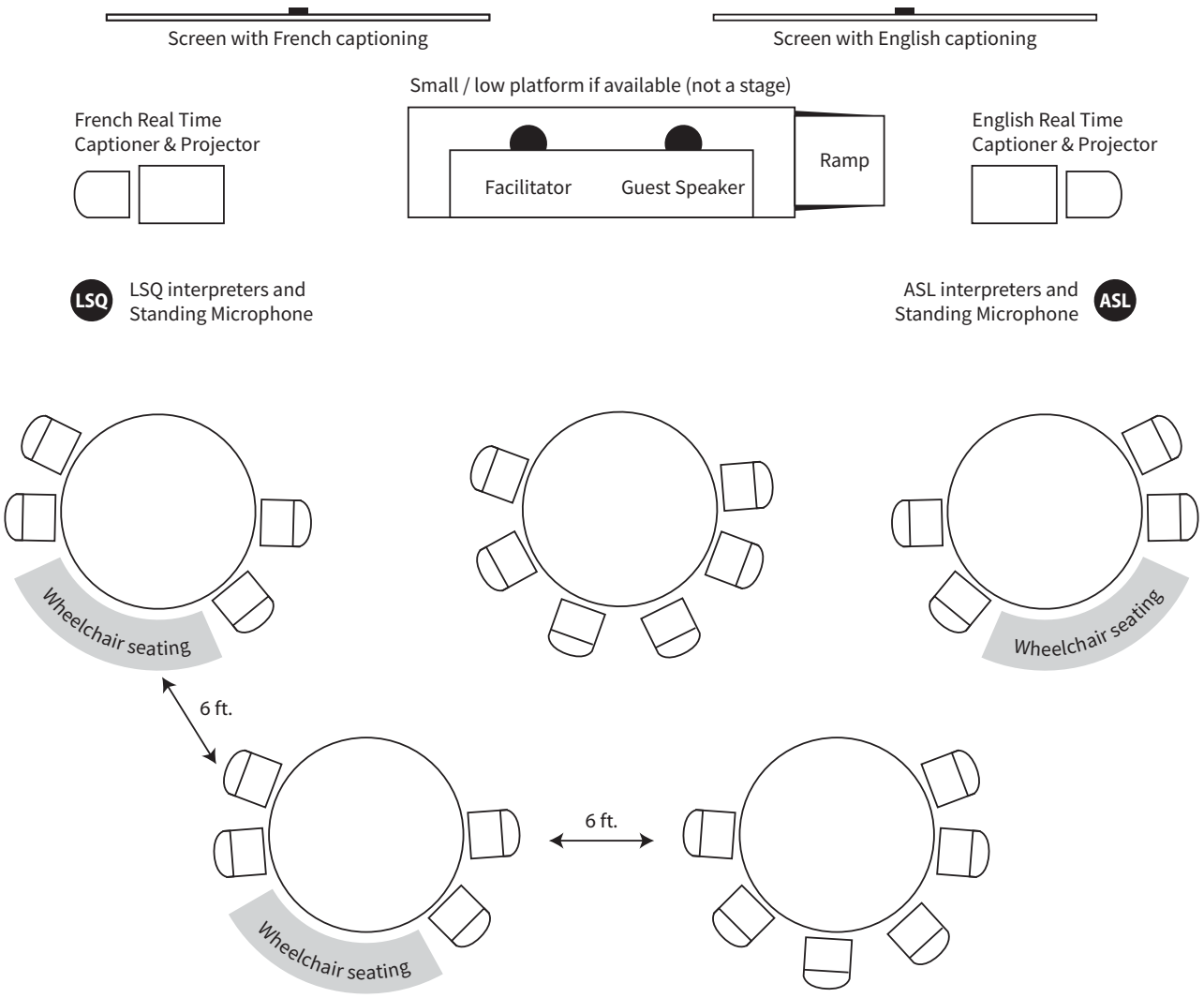
Diagram C: Theatre Seating



From: https://www.omssa.com/docs/OMSSA_Guide_to_Conducting_Accessible_Meetings_-_EN.pdf

Step Three: Conducting the Meeting

Diagram D: Banquet Table Seating



From: https://www.omssa.com/docs/OMSSA_Guide_to_Conducting_Accessible_Meetings_-_EN.pdf

Step Three: Conducting the Meeting

Registration Table

When people register for your meeting, they may need to use a counter or reception area that is accessible. This area creates barriers for people living with hearing loss due to plexiglass, masks, and background noise for both front desk staff and the public or employees using this area. One solution is a speech transfer system with a built-in or portable countertop loop system. The speech transfer system consists of microphones and speakers on both sides of the plexiglass improving communication for auditory listeners, especially those who are hard of hearing but do not wear hearing aids.

For customers or staff who wear hearing aids or cochlear implants with an enabled telecoil, an installed counter loop system can reduce barriers by directly connecting their amplification with the use of their telecoil, with the hearing loop system to help in background noise and reverberant rooms.

Another option just for people with hearing aids, cochlear implants, or assistive devices with a telecoil (e.g., PockeTalker) is using a portable counter loop system that has a built-in microphone. Users switch their hearing aid to the telecoil position or program and stand within one metres of the system.

Another form of technology to consider is using a wireless text to text communication device between people who are hard of hearing and hearing people. Examples include texting by phone or a device that does not require data or Wi-Fi such as a the “UBI-DUO.” For more information: https://scomm.com/

Other tips at the registration table include:

- If participants who are Deaf have registered for the event, have interpreters available during registration.
- The process you use to check people into the event should indicate any accommodation requests, and staff should know how to meet those requests. For example, a staff member should know if an attendee has requested an assistive listening device with a neck loop, it should be already available when that person arrives fully charged and operational.
- Let registration desk know about any pre-arranged seating placement (e.g., preferential seating, seating near interpreter).

Step Three: Conducting the Meeting

Signage

When an assistive listening system is available, there should be proper signage (international symbols of accessibility) to let staff/public be aware of their accessibility options (see Diagram E). This information should also be available on the website for the meeting event.

Some people may not be aware of what the universal symbols mean or if they have a t-coil or compatible receivers for the available system. This should be mentioned in workplace policy and procedures. It should also be mentioned on your website what the symbol means, what devices are available, and how to connect to them. People also need to know if assistive listeners are available, if people can use their own headphones with them or not, and how to access the listeners prior to the meeting.

Diagram E: Universal Symbol for Hearing Accessibility Personal Systems

From: www.hearinglink.org

From: https://commons.wikimedia.org/wiki/File:Assistive_Listening_Devices_2.JPG

Other Signage Tips:

- Providing robust signage and wayfinding throughout your meeting enables participants to take the most direct route to the event spaces and have visual cues to confirm they are going the right way.
- Signage is intended to offer a quick reference, so it should be simple, short, and easy to understand. Avoid decorative fonts, use contrasting colors, and supplement text with images.
- Provide signage with important meeting information, such as session locations and start and end times.
- Place signage in the entryway to serve as a visual indicator that people have arrived at the correct location, and to indicate where to find registration and meeting rooms. Place additional signage at all decision points, such as near elevators and at corners to confirm for people that they are moving in the right direction.
- Have a sign that says ‘Quiet: Meeting in Progress’ on the door to reduce unnecessary background noise.

Step Three: Conducting the Meeting

Microphones

Sometimes the idea of using a microphone can be nerve wracking.
Here are some tips to make it easier to use:

- Hold a hand-held microphone close to your mouth – the clarity will be affected the farther away it is from your mouth. Do not cover your mouth, however, as people will be unable to speech-read.
- Practice with a quick sound-check before presenting to get used to the microphone.
- Talk through several sentences so you are used to the acoustics of the room and the sound of your voice within it.
- Check where the speakers are located to avoid any feedback noise if you get too close.
- Practice turning it on and off and muting it.
- Encourage audience members to participate and contribute – either repeat what they say or have an additional roving microphone that has also been tested, along with a willing volunteer to take it around.
- Wear an outfit with a belt or pocket to house a power pack.
- If a meeting participant asks you to use their personal remote microphone, ask them the best way to use it. Typically, they are sensitive to direction (should hold upright close to mouth and not rest flat on podium) and work best closest to your mouth. Before starting your presentation, practice with their remote microphone to make sure it is working optimally. Let them know to tell you if it stops working for any reason.
- If wearing a microphone that transmits to participants hearing aids, cochlear implants, or assistive listeners, remember to take off or mute during private conversations or when going to the bathroom.
- Please use the CAA poster (Diagram F) to promote the use of microphones. It can be taped up in a meeting room or placed on a podium to remind others to use the microphone. You can also print it off and bring it with you to give to presenters before the meeting to help spread the word.

Diagram F: CAA Love the Mic!

Step Three: Conducting the Meeting

Types of Microphones

Table-top microphone: Some feature omnidirectional sound, picking up sounds in all directions. Others might have a pointing option where the accelerometer in the microphone allows it to change directionality and pick up sound in the direction that it is pointing, but then return to omnidirectional mode when it is flat on a table. Might need more than one depending on size of table.

Clip-on/lapel/boom microphones: These hang around a person's neck on a lanyard, are clipped to the speaker's shirt, or hang off the ear. Make sure they are close to the speaker's mouth for the strongest possible speech signal.

Handheld: This type of microphone can be passed around.

Role of Facilitators

- Inform participants of the nearest accessible emergency exits and accessible washrooms.
- Describe the content of the agenda and handout materials.
- Remind participants to use microphones and ensure only one speaker at a time.
- Remind participants to say their name before speaking.
- Ensure PowerPoint presentations are read verbatim by the presenter.
- Ask participants periodically throughout the event if their needs are being met.
- Check in with interpreters, intervenors, caption providers and note-takers to ensure the pace is appropriate.
- Participant nameplates and ID tags should be easy to read.
- Speak clearly and at a moderate pace.
- Face your audience during the presentation to allow people who are hard of hearing to process on-screen messages, and for the interpreters to communicate the spoken word through sign language.
- During question-and-answer periods, remind people to speak slowly and clearly.
- Consider participants' ability to actively take part in quick moving discussions (e.g., it may not always be clear who is saying what; fast or excited speech may be more difficult to understand).
- Some exercises may not be suitable for everyone – consider what role hearing might play in activities.
- Good facilitation should include frequent summaries of the discussion as it develops. This includes both content and people's positions, whether it has been said or communicated in other ways (e.g., through non-verbal cues such as body language, facial expressions or with an agreed set of hand signals). Summaries are a good way for the group to be more aware of what stage agreement has reached.

Step Three: Conducting the Meeting

- For group discussions, establish group turn-taking rules. Ask for only one person to speak at a time. If working in small groups during the meeting, try to find an area with limited background noise and have participants pass the microphone.
- Request all videos have captioning in them.
- Let them know to come early before their meeting so the accessibility person can review how to use the assistive listening equipment and/or personal remote microphones requested to use.

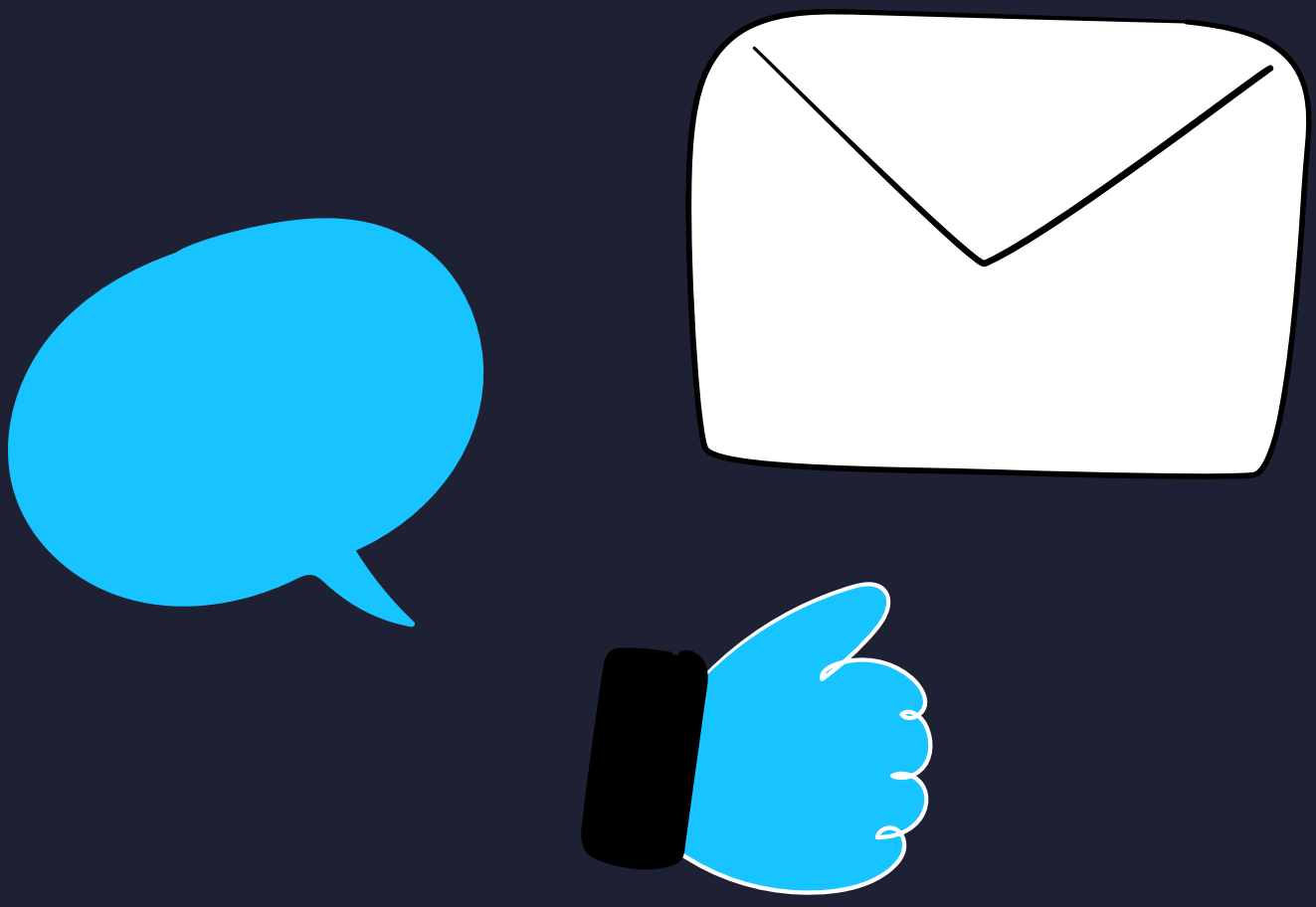
Communication Tips

- Ask participants to speak one at a time and identify themselves, so everyone knows who is speaking.
- Make eye contact with the audience.
- Speak at a normal pace and avoid using words that are not understandable to everyone.
- Explain the meaning of any acronym, abbreviations, or jargon used in the presentation or discussion.
- Assure the key points from the presentation are written on a whiteboard or chart paper to help everyone follow the discussion.
- Always ask the person if they need assistance and how you can assist; do not assume they need help.
- Address the person directly rather than the sign language interpreter.
- Be ready to repeat yourself or rephrase a sentence if necessary. Some words are more difficult to interpret and so it may be useful to try different words.
- Hearing loss is invisible so it may be difficult to recognize if someone has a hearing loss or not. A person may have trouble following a conversation, may not respond when you call or wave, may make a request that seems strange to you, or may say or do something that seems inappropriate. If this happens, do not take it personally. Consider the possibility the person may be living with a hearing loss and that you might need to change your approach or communication style to optimize understanding.
- Some people who are non-verbal or non-vocal prefer to write their communications down on paper, use sign-language and/or use other types of communication devices. Remember, these methods can be slower or different than what you are used to and require patience.
- Some people have hearing loss and are not aware of it, while others may not want to disclose that they need an accommodation.
- Do not wait until someone tells you they are in a crisis before you optimize your communication skills.

Step Three: Conducting the Meeting

- Ask people to state their name every time they speak so captioners and attendees know who is talking.
- At virtual meetings, assign an 'accessibility advocate' to monitor and read the chat aloud, to monitor live transcriptions for errors to correct, and to make sure everyone is included and heard.
- If problems arise, stop the meeting, and fix the communication barrier before moving on.
- Provide transcripts/notes promptly following the meeting. Always have the face of speaker visible to allow for speech reading.
- Avoid covering your mouth so that your lip shape and facial expression helps people follow what is being said.
- Make sure that only one person talks at a time during the meeting. Multiple talkers can create confusion and background noise.
- Implement a hand-raising technique to help to ensure participants do not speak over one another.
- If an attendee has difficulty with their microphone or being heard, the facilitator should repeat their questions and comments.
- Speak with clarity at a normal pace and volume.
- Speak directly to the meeting participant, not their sign language interpreter.
- Check that the interpreter is comfortable with your pace. It is possible you may need to pause periodically for the interpreter to catch up if you are talking too fast.
- Establish a feedback process with meeting participants to ensure accommodations were met and barriers were addressed.

Step Four: Evaluating the Meeting



Step Four: Evaluating the Meeting

Feedback from Participants (attendees and presenters) Form

- Have a feedback form, including an accessible online version, ready for participants to fill out after every meeting to ensure communication and accessibility were optimal; make modifications as issues arise.
- Distribute evaluation form to attendees.
- Debrief staff and volunteers on what went well and discuss any issues.
- Follow up with people who requested accommodations to discuss any issues.
- Document any lessons learned in accessibility policies and procedures.
- Have continuing education on a regular basis to update accessibility policies and procedures.

Appendix

Appendix A: Terminology

Definitions adapted from Canadian Association of the Deaf
http://cad.ca/issues-positions/terminology/

deaf: A medical term referring to those people who have little or no functional hearing. May also be used as a collective noun (“the deaf”) to refer to people who are medically deaf but who do not necessarily identify with the Deaf community.

Deaf (with capital D): A sociological term referring to those individuals who are deaf or hard of hearing who identify with and participate in the culture, society, and language of the Deaf community. Their preferred mode of communication is a sign language.

deafened (Also known as late-deafened): This is both a medical and a sociological term referring to individuals who have become deaf after learning to speak, usually later in life and who may not be able to identify with either the Deaf or the hard of hearing communities.

oral deaf: A deaf person whose preferred mode of communication is verbal communication.

Deaf-plus: People who have disabilities in addition to their deafness.

Person with hearing loss/hard of hearing: A person whose hearing loss ranges from mild to profound and whose usual means of communication is speech.

Appendix B: Accommodation Request Form for Meetings — Sample Template

To facilitate your communication during meetings within our organization, we are happy to provide you with necessary services and supports. Please check which accommodation(s) you require, including:

☐ Written documents prior to meeting/copy of meeting notes following meeting.

☐ ASL/LSQ interpretation.

☐ CART (real-time captioning).

☐ Captioning on videos.

☐ I need a notetaker.

☐ All speakers to use a microphone.

☐ Assistive listening device with headphones (I do not wear hearing aids).

☐ A classroom audio distribution system.

☐ I have my own remote microphone for the presenter to use. Please describe: _____

_____

☐ Assistive listening device that can connect to my hearing aids/cochlear implant with a telecoil.

☐ Assistive listening device that can connect to my hearing aids/cochlear implant with a Phonak Roger X (02) universal or integrated receiver.

☐ Preferential seating. Please describe (e.g., up front, on right or left side): _____

_____

☐ I need access to the WIFI password (e.g., to use a speech-to-text app on my laptop).

☐ Other: _____

Please provide any additional details you think may be important for us to know regarding the accommodation needs indicated above:

_____

_____

Please arrive 15 minutes early to ensure needs are met prior to the start of the meeting. For more detailed information, questions, or concerns please contact: (Name of contact) at (e-mail address and phone number).

Appendix C

Common Barriers During In-Person Meetings for People who are Hard of Hearing

Distance: The softer, high pitched sounds of speech (such as s, sh, f) carry a lot of the clarity of speech but they do not travel as far as the robust, low-pitched sounds. This results in a degraded message for the people sitting in the back of the room.

Background Noise: Noise often "masks" the desired signal (e.g., machine noise, traffic noise, chair scraping, coughing, multiple talkers).

Room acoustics: Poor acoustics and reverberation can distort the quality of sound or masks the wanted signal.

Visual Barriers: The face of the speaker being obstructed from view, beards, masks, seating position, and poor lighting (e.g., dark rooms or having a conversation in front of a bright window) may make getting information from speech reading more challenging.

Lack of Interpreting: No ASL or LSQ interpreters for participants who communicate using sign language.

Lack of Captioning: No captioning on videos, automatic captioning (automatic speech recognition), or real-time captioning (CART).

Lack of Microphone Use: No microphone use of presenters or meeting participants.

Lack of Assistive Devices: No sound field systems that can connect the microphone directly with participant's hearing aids or cochlear implants or assistive listening devices for those who need help but do not wear hearing aids (e.g., temporary hearing loss, unilateral hearing loss, ADHD, learning disabilities, English as a secondary language).

Poor Communication Skills: Talking while obscuring face, poor repair strategies, not talking at a reasonable speed, talking with back facing audience, not repeating questions from audience, and more than one talker at a time.

Lack of Signage: No accessibility signage so participants know what assistive devices are available.

Appendix D

Resources

Canadian Academy of Audiology
http://www.canadianaudiology.ca

Canadian Association of the Deaf
https://www.cad.ca

Canadian Charter of Rights and Freedoms
https://www.justice.gc.ca/eng/csj-sjc/rfc-dlc/ccrf-ccdl/

Canadian Civil Liberties Association
https://ccla.org/get-informed/talk-rights/workplace-accessibility-in-canada/

Canadian Council on Rehabilitation and Work (CCRW)
https://www.ccrw.org

Canadian Deaf-Blind Council (CDBC)
www.cdbc-csac.ca
https://webmaster@cdbc-csac.ca

Canadian Hard of Hearing Association (CHHA)
https://www.chha.ca

Canadian Human Rights Commission – Duty to Accommodate
https://www.chrc-ccdp.ca/eng/content/duty-accommodate

https://www.chrc-ccdp.gc.ca/sites/default/files/accommodation_works_application_manual_format.pdf

Canadian Standards Association: A Canadian Road Map for Accessibility Standards
https://www.csagroup.org/wp-content/uploads/CSA-Group-Research-Canadian-Roadmap-for-Accessibility-Standards.pdf

Council of Canadians with Disabilities (CCD)
https://www.ccdonline.ca

Employment Equity Act
https://laws-lois.justice.gc.ca/PDF/E-5.401.pdf

Employment Equity Policy
https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12543

Federal Accessibility Legislation: Potential Implication for First Nations and First Nations
https://www.afn.ca/uploads/files/federal_access._legis.pdf

Government of Canada: Summary of the Accessible Canada Act
https://www.canada.ca/en/employment-social-development/programs/accessible-people-disabilities/act-summary.html

Appendix D

National Building Code of Canada: 2020
https://nrc-publications.canada.ca/eng/view/object/?id=515340b5-f4e0-4798-be69-692e4ec423e8

Office for Disability Issues, Human Resources and Skills Development Canada (ODI)
https://www.hrsdc.gc.ca/eng/disability/index.shtml

Persons with Disabilities
https://www.afn.ca/uploads/files/federal_access._legis.pdf

Provincial and Territorial Human Rights Agencies
https://www.chrc-ccdp.gc.ca/en/complaints/provincial-territorial-human-rights-agencies

Rick Hansen Foundation
https://www.rickhansen.com

Service Canada – Persons with Disabilities Online
https://www.servicecanada.gc.ca/eng/audiences/disabilities/index.shtml

Speech-Language and Audiology Canada
https://www.sac-oac.ca/

The Canadian Human Rights Act
https://laws-lois.justice.gc.ca/eng/acts/h-6/

Translation Bureau
https://www.translationbureau.gc.ca/

United Nations: Universal Declaration of Human Rights
https://www.un.org/en/about-us/universal-declaration-of-human-rights

Thank You