



# Common Types of Assistive Technology

The purpose of this document is to outline common types of assistive technology that survivors of gender-based violence may use to communicate with a women's shelter or transition house. Common methods for mobility that impact how survivors may travel to/from women's shelters and transition houses have also been included.

## What is Assistive Technology?

Assistive technology (AT) is any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities.

Assistive technology helps survivors who have difficulty speaking, typing, writing, remembering, pointing, seeing, hearing, learning, walking, and many other things. Individuals with different disabilities may require different assistive technologies. Any device that increases access can be considered assistive technology. Survivors may use a combination of many different types of assistive technology.

## Assistive Technology Used for Communication

Assistive technology is required for many survivors to access and interact with computers, tablets, and phones. Assistive technology can also be used to communicate if someone is unable to speak.

Many people rely on the following devices:

### Augmentative and Alternative Communication Device (AAC)

- **AAC:** This is a device that can be anything from a tablet, app, or board that helps someone with a speech or language impairment to communicate by means other than speaking. An AAC device provides pre-customized phrases or words that someone can use to communicate. These devices can result in a slower and more simplified communication method and the user will need extra time to communicate. The user may only be able to respond to clarifying questions

phrased “yes/no.” Eye Gaze and/or Switch Access may be typically paired with AAC devices to allow users to independently select the information.



## Braille



- **Braille:** This is a type-written language used by people who are blind. Letters are formed in raised dot patterns. Not all people who are blind read braille; this is a specific skill that needs to be taught.

## Video Magnifiers

- **Video Magnifiers** – These are tools to help people with visual impairments access printed materials through magnification and contrast adjustment. Models range from large standalone desktop devices, often connected to a television to enlarge materials, to handheld devices or simple apps (such as [Seeing AI](#) or [Google Lookout](#), or [Envision AI](#) on a tablet or smartphone device. Some models have text-to-speech features.



## Hearing Aids

- **Hearing Aids** – These are sound-amplifying devices that allow individuals with a hearing impairment to hear other people and their surroundings. Some hearing aids can connect to other devices such as a phone or computer using Bluetooth technology. There are hearing aid peripherals and other devices that can further help the user with communication.



## Communication for People who are Deaf or Hard of Hearing

There are services that provide alternative means of communication to enable survivors who are Deaf or hard of hearing to communicate with others to access information.

- **Video Relay Service (VRS)** – This is a telecommunication service that enables users who are Deaf or hard of hearing and use sign language to communicate with others on the phone. The sign language user connects to a VRS operator through a video call who calls the other party and relays the conversation from sign language to voice and vice-versa. Video calls can require a high bandwidth connection.

- **Teletypewriter (TTY)** – This is a device or mode designed to allow users who are Deaf or hard of hearing to communicate on the phone by sending typed text messages. Modern cell phones have an integrated TTY mode that allows text communication over a voice call. Both individuals must have TTY mode turned on to communicate this way.
- **Interpreters** – There are American Sign Language (ASL) and langue des signes québécoise (LSQ) interpreting services available for meetings done in person or virtually via videoconferencing or telephone. Prices and availability might differ across Canada.
- **IP Relay** – IP Relay is available through some phone providers and is available for Deaf and hard of hearing individuals to place and receive text-based relay calls from their personal computer (PC) or mobile phone. IP Relay users connect to operators through chat sessions. The operators place phone calls on their behalf and facilitate conversations. The individual must have an account with a participating phone provider to access IP Relay.
- **Phone Call Captioning Apps** – Phone call captioning apps, such as [Nagish](#) or [NAL Scribe](#), can be used to provide live transcription through an Android or iPhone. The app will transcribe what the speaker is saying and allow the person who is Deaf or hard of hearing to respond via text.
- **Instant Messaging** – Instant messaging through social media platforms like [Messenger](#), [WhatsApp](#), or [Signal](#), or meeting platforms such as [Zoom](#), [Teams](#), [Google Meet](#), or [Skype](#) may be another method for communicating with users who are Deaf or hard of hearing. These services provide an instant chat room that allows the individual and another person to communicate through a computer or mobile device with no delays. This will require Internet access.
- **Live Transcription** – Live transcription apps are accessed by many users on smartphones. Examples include [Windows 11 Live Captioning](#), [Google Live Transcribe](#), and [iOS Live Captions](#). A lot of platforms offer captioning and transcription services for pre-recorded or live-time meetings. A few options include [Google Live Transcribe](#), [Otter AI](#), [iOS Live Captions](#), [Zoom](#), and [Teams](#).

- **Visual Alerting Devices** – There are alerting devices designed to assist people who are Deaf or hard of hearing to provide alternative forms of receiving an alert to ensure safety in emergency situations. Examples include fire alarms with flashing lights and a vibrating alarm clock.

## **Assistive Technology for Computer Access, Website Access, and Email Communication**

Assistive technology used for computer access and phone access have some similarities, but it is important to note that software and hardware options may be different depending on the device used. The following devices and software may be used to write emails and access websites from a computer, tablet, or smartphone.

### **Alternative Mice/Pointing Devices**

- Ergonomic mouse



- Trackpad



- Joystick



- Trackball mouse

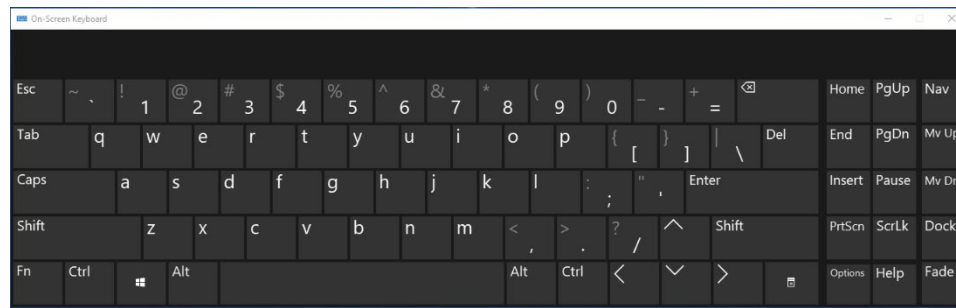


## Alternative Keyboards

- Ergonomic keyboard



- On-screen keyboard



- Compact keyboard



- Keyboard with key guard



- Split keyboard



## Hands-Free Hardware

- Sip and Puff Joystick device (mouth-operated)



- Eye gaze/pupil tracking device



- Head tracking (wearable or camera based)



## Switch Access

- Switch access is a method, used mostly by people with physical challenges, to scan through items and options linearly and then make a selection using a switch device or button, or paired with sip and puff, eye gaze, or head-tracking devices. These items are sometimes mounted to a wheelchair.





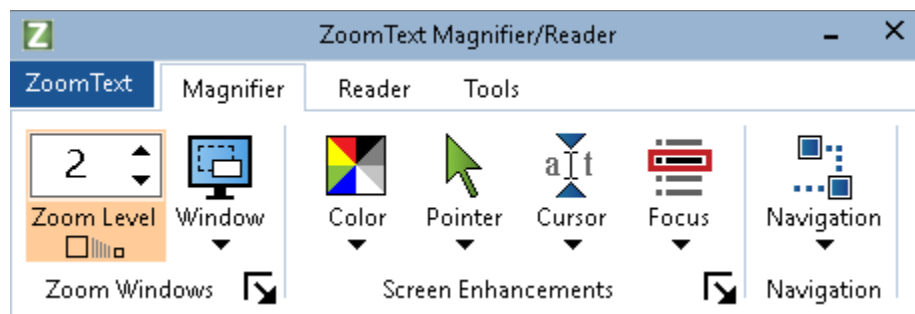
## Speech Recognition

- Speech recognition software enables the user to type by talking through a microphone into their computer, including dictating and editing documents, sending emails, or filling out forms. It is well suited to any word processing activities. It can also be used for mouse control and mouse clicking. Speech recognition or dictation may be achieved through Windows ([Voice Typing](#) or [Windows Speech](#)), Apple OS ([VoiceControl](#), [Siri](#), [Dictation](#)), Android OS ([Google Voice Typing](#), [Bixby](#)), or through third-party software such as [Dragon Speech Recognition Software](#).

## Low Vision Software or Adjustments to Display Settings

- Low vision software or adjustments to display settings may be achieved through Windows or Apple macOS display settings, or through third-party software such as [ZoomText Magnifier/Reader](#). The following settings are important for many users:

- **Magnification** – Some individuals require magnification to read digital or printed text. Magnification software is built-in to computers and smartphones. Magnification needs can vary widely.
- **High Contrast** – Contrast is very important for many individuals with low vision. A high contrast mode (i.e. Dark Mode or custom high-contrast settings) can be integral for someone to read.
- **Pointer Adjustments** – Adjusting the pointer size improves a user’s ability to see the pointer on the screen.



## Screen Reading Software

- This is integral for users who are blind. These users may solely rely on a screen reader or text-to-speech. This type of software enables content and text on a computer to be read aloud.
- Screen Reading can be achieved through Windows ([Narrator](#)), Apple OS ([VoiceOver](#)), Android ([TalkBack](#)), or through third-party software such as [JAWS](#).

When using this type of software, it is important to note:

- Users rely on keyboard commands to navigate through a computer.
- Digital accessibility of the content is integral for the person to access the information. If the information provided to them is not accessible, the screen reader will not be able to read it.
- Screen readers can also be used with refreshable braille displays, where the content on a computer screen is delivered using braille. These devices are only used by individuals who read braille.
- When using a screen reader on a smartphone, it might be difficult or impossible to use phone menus or to hang up the call.

## Literacy Support

- There are several programs designed to support individuals with literacy challenges, including difficulty with reading, writing, word finding, brainstorming, and notetaking. [Grammarly](#), [Microsoft Immersive Reader](#), or even the use of Artificial Intelligence services such as [Chat GPT](#) are used by many to support written output.

## Assistive Technology Used for Mobility

- Some survivors may rely on the following mobility devices, which are all considered to be assistive technologies. Mobility devices are required for many individuals to get around their homes and communities. Without mobility devices, independence is significantly limited. Types of mobility devices include:
  - **Manual wheelchair:** Manual wheelchairs are operated by the user. They sometimes have handles on the backrest to be pushed by another person.
  - **Power wheelchair:** Power wheelchairs are operated by control boxes, which often include a joystick with buttons. The control box may also be set up with a sip and puff device so the wheelchair can be driven by a user's mouth, or with head control switches. Power wheelchairs sometimes have an attendant control on the back of the wheelchair that can be operated by another person. Wheelchair controls are also sometimes used to access a phone or computer, and devices can be mounted to them to be more accessible.
  - **Walker**
  - **Crutches**
  - **Canes**
  - **Mobility scooters**
  - **White cane:** A white cane is used by someone who is blind to help navigate indoor and outdoor spaces. GPS apps often used in conjunction with a white cane and are relied on by many people to get to where they are going. A person who is blind may have a specialty GPS app that

provides detailed descriptions of their surroundings, such as [BlindSquare](#). Some individuals also may use an app called [Be My Eyes](#), where they are able to video call a sighted volunteer to help them read signage in the community.

Technology-Facilitated Gender-Based Violence (TFGBV) is part of a continuum of violence that can be both online and in-person. If you or someone you know is experiencing TFGBV, you are not alone. You can use [www.sheltersafe.ca](http://www.sheltersafe.ca) to find a shelter/transition house near you to discuss options and create a safety plan. You don't need to stay in a shelter to access free, confidential services and support.

We gratefully acknowledge the [Neil Squire Society](#) for the creation of this information sheet.



For more information about using tech safety visit

[www.techsafety.ca](http://www.techsafety.ca)

