

Communication Access Accommodations for Deaf and Hard of Hearing People

Who Will Need Communication Access Accommodation?

Approximately 32 million Americans, or about 8.6% of the population, have some degree of hearing loss. In Colorado, it is estimated that close to 375,000 people are hard of hearing and more than 43,000 are deaf. The term **deaf** generally refers to individuals with profound hearing loss (90 dB and more), who are unable to hear or understand speech and must rely on vision for communication. Such individuals often prefer to use American Sign Language to communicate; they may also depend on interpreters, reading, writing, or other visual means to communicate. **Hard of Hearing** people may have varying degrees of hearing loss—mild, moderate, severe, or profound (25dB to 90 dB). These individuals communicate using a combination of strategies that rely more on residual auditory ability aided by such devices as hearing aids, cochlear implants, assistive listening devices; they often supplement their hearing with speech-reading (formerly called “lip-reading”) and other visual means. Other individuals who need communication access accommodations may be **late deafened** (individuals who lost their hearing after acquiring speech), or **deaf-blind** (people with any combination of hearing loss and vision loss).

To comply with the Americans with Disabilities Act of 1990 (ADA) and other laws, organizations or agencies must provide “communication access accommodations” to a variety of individuals: members of the public (including clients and customers), employees, and others with whom your agency interacts. These individuals will require a variety of accommodations to ensure effective communication with your organization—there is no “one size fits all” accommodation for hearing loss and deafness. The Colorado Commission for the Deaf and Hard of Hearing (CCDHH) can help you address the communication-access needs of Colorado’s deaf and hard of hearing citizens in a variety of ways, by providing information, referrals, support, and training to your staff members.

What is “Effective Communication Access”?

The ADA mandates equal opportunity for individuals with disabilities to participate in or benefit from the goods and services offered by a place of public accommodation. The ADA law, and similar laws and regulations, do not specify *which* accommodations must be used to guarantee equal access to services and information for deaf and hard of hearing people. Instead, the focus is on achieving “effective communication,” recognizing the fact that different approaches will work in different situations, and that personal circumstances of the individuals who contact your organization will play a large role in determining the appropriate accommodation(s). The ADA states: “a public entity shall take appropriate steps to ensure that communication with applicants, participants, and members of the public with disabilities are as effective as communications with others.” For deaf and hard of hearing individuals, your agency is required to provide auxiliary aids and services that will make this possible.

Auxiliary aids and services include any device or service that is needed to make spoken or audio information accessible for a person who has a hearing loss. These include: qualified sign language interpreters, live captioning, assistive listening systems (loop, FM, and infrared systems), television and video captioning, TTYs, video-text displays, and transcriptions. New types of auxiliary aids will be required under ADA standards as new technology becomes available.

Your agency must allow the person to request the auxiliary aid or accommodation of choice, and you then are required to give primary consideration to that preference. The ultimate choice of accommodation is up to the agency or organization. If you do not honor the requestor’s choice, however, you must prove that an equally effective alternative means of communication exists, that providing the requested choice would fundamentally alter your program or service, or that it represents an undue burden for your agency. Sometimes a note pad and pen will suffice to communicate with a deaf or hard of hearing person, and sometimes an interpreter will be needed, depending on the complexity or length of the interaction. Sometimes all that is needed is to have the patience to allow someone who is deaf or hard of hearing the time needed to communicate with you.

TELEPHONE COMMUNICATION

Amplified Telephone

A telephone with an adjustable volume control is an auxiliary device that assists many hard of hearing people to communicate by telephone. Some amplified telephones have controls to adjust the quality of sound or tone (similar to bass/treble controls on a home stereo system). These phones can be used by those with normal hearing as well as hard of hearing people, but are not effective accommodations people who are deaf or late deafened if they have little or no residual hearing. Some phone systems can accept portable volume-control devices that attach to the handset of a standard phone.

TTY: Equipment for Written Communication over Telephone Lines

A TTY (teletypewriter) is a text telephone that enables a person with a hearing or speech impairment to communicate via telephone line. It is also called a TDD, or Telecommunications Device for the Deaf, although people who are not deaf also use this device, such as people with speech impairments. The TTY has a keyboard and a scrolling display screen and is used to transmit text over telephone lines by reading and writing, rather than using speech and hearing. Some units have a cradle or coupler to hold a standard telephone handset, while others connect directly with a telephone cord. Some TTYs have built-in answering machines (to record incoming voice or typed messages), and some have built-in printers to allow users to keep a paper copy of a conversation. A TTY may serve as a reasonable accommodation under the ADA. If parties on both ends are using TTYs, they simply type their conversation back and forth with each other. If you have a TTY in your office and receive a call from a deaf or hard of hearing person, staff conducts the conversation by typing text into the TTY and reading the words of the caller.

Telecommunications Relay Service

A variety of Telecommunications Relay Services (TRS) now provide full alternative telephone accessibility to people who are deaf, hard of hearing, deaf-blind, and speech disabled. Calls can be made anywhere in the world, 24 hours a day, 7 days a week, 365 days a year, and there is no charge for any relay service. In Colorado, Relay Colorado is the TRS used for Voice-to-TTY or TTY-to-Voice communication with individuals who are deaf or hard of hearing. To use a standard telephone to contact a deaf, hard of hearing, or speech-disabled person, you would dial the relay service (by dialing 711) and give the relay operator (called a Communications Assistant or CA) the number you wish to call. The CA contacts the person by means of a TTY, and types to them the words you say. When the deaf/HH/speech-disabled person responds in writing, the CA reads their words aloud to you.

When a person using TRS makes a call to a person with a standard telephone, the CA might introduce the call by saying, "Hello. A person is calling you through Relay Colorado. Have you received a relay call before?" If the answer is no, the CA will explain how the process works. To make a relay call to a person who uses a TTY, call 711 to reach Relay Colorado, and give the CA the number you wish to call. The call then continues, with the CA voicing everything the TTY user types, and typing everything you say for the TTY user to read.

For a TRS phone call, speak directly to the person you are calling, not to the CA. For example, say "Will you meet me at 10?" instead of "Ask her if she will meet me at 10." On a relay or TTY call, only one party can speak at a time; when you are ready for the other person to respond, you say "Go Ahead" or "GA". To end the call, say "Go Ahead or SK" (stop keying), to give the person on the other end the option of continuing or ending the conversation.

Captioned Telephone

The CapTel Captioned Telephone is another communication access option for deaf and hard of hearing people who can use their voices to communicate by telephone. This service was approved in Colorado March 12, 2004, as an Enhanced Relay Service, and the service is provided through Sprint Communications, using Ultratec, Inc., CapTel telephones. The CapTel telephone has an amplified handset, a regular telephone keypad, and a small display screen. The deaf or hard of hearing user talks into the phone the same as in a regular conversation. On the other end, the hearing person's words are transcribed into text by a remote operator, using computerized speech-recognition technology. This text is then sent to the CapTel telephone, where it appears on the display screen shortly after the words are spoken. The deaf or hard of hearing person can read the text as well as hear the words, if possible. To use this communication access option, the CapTel user must have a good telephone speaking voice. People who communicate with a CapTel user may not even be aware that this system is in use or that the CapTel user has a hearing loss, in contrast to a relay-service conversation, in which the relay operator (or CA) is a more noticeable participant in the communication process.

Telephone Accessories

If your agency provides a great deal of information over the phone, or deals regularly with members of the public who may have hearing losses (for example, veterans or senior citizens), you could consider telephone accessories that amplify the speaker's voice. These devices work with a standard telephone, and can be used selectively as needed to boost the speech perception of the hard of hearing people your office may contact. Other telephone accessories that may help members of your staff who have hearing losses include amplified telephones, lights that flash to signal incoming calls, and answering machine systems with volume controls and/or tone or playback-speed controls.

Tips for Effective Telephone Communication

See the CCDHH InfoSheet entitled *Telephone Tips for Communicating with Hard of Hearing Individuals* for more information and tips for better telephone communication.

COMMUNICATION IN PERSON

Face-to-Face Communication

Most deaf and hard of hearing people lip-read to some extent, but individual abilities can vary considerably. It is important to understand that only 30-40% of speech is visible on the lips, so good lip-readers must pick up other cues to figure out spoken language. In fact, this skill is now referred to as “speech-reading,” which relies on interpreting what is seen on the lips, as well as facial expression, body language, knowledge of speech patterns—and guesswork.

Speech-reading is physically and mentally demanding, requiring close concentration. Speech-reading skill can decline when a person is fatigued, ill, or distracted. It is unrealistic to expect a person to be able to speech-read for hours on end, or to completely understand a lengthy conversation by speech-reading alone. Group conversations are particularly challenging to speech-readers, as it is difficult to keep up with changes of speakers, and often words are lost when there is a change of speakers. Even when communicating with one person, words can be missed when a speaker turns his or her head, such as to get something out of a drawer or file. It is better for speakers to face the speech-reader as much as possible, and to stop speaking when turning away.

When you encounter a deaf or hard of hearing person, it is appropriate to ask if they speech-read. The person may tell you, “Yes, but please speak slowly” or “Yes, but not very well” or “No, I’m not good at that.” Many late-deafened people and individuals who have age-related hearing loss struggle more with speech-reading than those who have been deaf or hard of hearing all their lives. People who are hard of hearing use their “residual hearing” to supplement speech-reading, and both deaf and hard of hearing people may wear hearing aids to assist in this. If the environment is a noisy one, however, it is much harder to use residual hearing, so moving to a quieter place can help significantly.

When speaking to a person who speech-reads, use normal speech—do not exaggerate your lip movements, as this is harder to understand. Do not raise your voice or shout unless the person has asked you to, because many hard of hearing and deaf people may be sensitive to increased noise levels because of hearing aids or other factors. Also, using a louder voice distorts the sound, so it is actually harder to understand. PLEASE DO speak **slower**, though, pausing briefly at the end of a phrase or sentence before starting the next one. Speech-reading can take additional “processing time,” so rapid-fire speech can be very hard to understand. It is better to break down long, complex sentences into several shorter ones. If you find that the person is not understanding a phrase or sentence, try rewording it, phrasing it in a different way. If you are standing in front of a window or bright light source, the glare behind you can make speech-reading difficult—try to position yourself so the best light is on your face. And remember to face the person directly—if you turn away while speaking, your words may be lost.

Because so many deaf and hard of hearing people are visually oriented, it may help to supplement your spoken communication with written notes. For example, when setting up an appointment, you could say, “You can meet with Wanda Smith, who works Wednesday and Friday at the Alameda office. We can set up an appointment at 10:00 next Friday, and you can send her an e-mail to confirm the meeting.” Write down: “Wanda Smith, works Wednesday and Friday, 9999 Alameda. Appointment 10:00 Friday, March 12. E-mail: wanda.smith@state.co.us”. Be aware, though, that reading and writing ability can vary greatly, so choose your words carefully. It is good practice to ask the person to repeat back to you important information, to verify that they have understood you correctly: “So, let’s review the three things you need to bring to the appointment, and when and where you will go.” Above all, be sure to treat deaf and hard of hearing people with respect and consideration—the same way you would want to be treated!

For simple tasks such as setting up appointments or giving referrals to other offices or programs, written and basic spoken or speech-read communication may be sufficient. For matters that are more complex, however, other approaches may be needed. For example, to communicate with a deaf or hard of hearing person who uses American Sign Language (ASL) as his or her first language, you may need to set an appointment for a later time when an **ASL interpreter** can be present. A hard of hearing individual may need an **Assistive Listening Device**. Some deaf or hard of hearing people may request an **Oral Interpreter**, or **Computer Assisted Real-Time Transcription (CART)** captioning services.

All of these communication access services, considered “reasonable accommodations” under the ADA law, must be provided by government agencies and private businesses unless doing so would create “undue hardship.” Please note that undue hardship should not be interpreted to mean “we have not budgeted funds for this”; the expenses involved must be considered in relation to the total resources available to the organization or business. Under the ADA, these services must be provided at no charge to the consumer. ***Deaf and hard of hearing consumers must not be denied access to programs or services because of costs involved for communication access***, any more that consumers who are wheelchair users can be denied access to buildings with architectural barriers.

Many deaf and hard of hearing people are computer-literate, use e-mail to communicate more than telephone communication, and rely on Internet sources of information. Other deaf and hard of hearing people do not have computer access or abilities. Some people for whom English is a second language (with ASL or Spanish as a first language, for example) may prefer not to use written English. Some deaf and hard of hearing persons use Instant Messaging (IM; especially useful for

group communication or “conference calls”), but not all offices allow this type of communication. Some people prefer TTY Relay Services, some prefer computer-based Online Relay, and others prefer Video Relay (see **Telephone Communication** section). Again, always be sure to **ask** the person about his or her preferred mode of communication.

Sign Language Interpreters

Most deaf, many late deafened, and some hard of hearing people use sign language to communicate. The most common form of sign language is American Sign Language (ASL), used in the United States and Canada. There are other forms in use as well, including Signed English (sometimes called Contact Sign or Pidgin Signed English, or PSE), Conceptually Accurate Signed English (CASE), Signed Exact English (SEE or SEE II), and others. Interpreters who use English-based sign languages are often called “transliterators” instead of than “interpreters” because they are using alternate forms of one language (English) rather than interpreting from one language system to another. Most requests for sign language interpreters are for ASL or Signed English. ASL is not a universal language of deaf people—other countries have their own sign languages, such as British Sign Language. ASL itself is based on both French Sign Language and on sign languages native to the United States. As with spoken and written languages, communication ability in ASL can vary from one individual to another. A person who is late deafened will sign differently from a deaf person born to deaf parents, for whom ASL is his or her first language.

ASL is NOT a visual form of English. It has a distinct vocabulary and grammar, uses a word order that is different from English, and also makes use of specific elements of facial expression and body movements to convey meaning. ASL is more **conceptually based** than English, and people who translate from English to ASL and vice versa do not give word-for-word translations—they are called “interpreters” and not “translators” because they interpret information from one cultural and language system to another.

ASL interpreters can vary in ability and experience, and there are specialties within the interpreting field. For example, **certified interpreters** have passed one or more qualifying tests designed by the national Registry of Interpreters for the Deaf (see the RID website at www.rid.org). The ADA requires that interpreters be “qualified,” but note that a “qualified” interpreter and a “certified” interpreter are not the same thing. An interpreter who has been *certified* for general interpreting and holds a CI Certificate (see below) may not be *qualified* to interpret in legal settings, whereas an interpreter who has SC:L (Specialist Certificate: Legal) certification is qualified to interpret in court or legal proceedings. In most cases, especially those involving medical or legal issues, it is NOT appropriate to have a friend or family member of the deaf person do the interpreting, for reasons of confidentiality, accuracy, and potential conflict of interest.

The two most common sign language certifications are the Certificate of Interpretation (CI) and the Certificate of Transliteration (CT). According to the RID, holders of the CI certificate “are recognized as fully certified in Interpretation and have demonstrated the ability to interpret between American Sign Language (ASL) and spoken English in both sign-to-voice and voice-to-sign. The interpreter’s ability to transliterate is not considered in this certification. Holders of the CI are recommended for a broad range of interpretation assignments.” Holders of CT certificate “are recognized as fully certified in Transliteration and have demonstrated the ability to transliterate between English-based sign language and spoken English in both sign-to-voice and voice-to-sign. The transliterator’s ability to interpret is not considered in this certification. Holders of the CT are recommended for a broad range of transliteration assignments.”

To locate qualified interpreters, consult the CCDHH publication **Sign Language Interpreting and Real-Time Captioning**. Other online resources include interpreter listings at the ColoradoDeaf.com website, www.coloradodeaf.com. Be sure to ask the consumer what his or her preference is for an interpreter. For example, ASL users may want an ASL interpreter; late deafened individuals may prefer an ASL interpreter **or** a Signed English interpreter **or** CART captioning (see next section); a hard of hearing person may prefer CART captioning **or** an Oral Interpreter (one who mouths words to help with speech-reading and who may use simplified signs) **or** an Assistive Listening Device (FM, Infrared, or Audio-Loop systems).

A very useful resource in Colorado is the series of **Sign Language Posters** available free from the Rocky Mountain Disability and Business Technical Assistance Center (visit their website at www.adainformation.org for a wealth of useful information from this organization). These full-color posters cover many useful basic signs, the manual alphabet used to spell out words (“finger-spelling”) in ASL, numbers, a list of communication tips, and specialized vocabulary for medical or emergency uses. Post them in your office so people can become familiar with some basic signs. To get copies of these posters, contact the RMDBTAC at 3630 Sinton Road, Suite 103, Colorado Springs, Colorado 80907; call (719) 444-0268 (Voice/TTY) or (800) 949-4232 (Voice/TTY); or send a fax to (719) 444-0269.

It may be helpful to have staff members take introductory sign language classes (see www.asltac.org for a list of class sources), which usually include information about deaf culture and communication styles. Like any new language, though, communication competency improves with use, and signs can be forgotten if used infrequently.

ASSISTIVE COMMUNICATION TECHNOLOGY

Computer Assisted Real-Time Transcription (CART) Captioning Services

Under the Americans with Disabilities Act, Computer Assisted Real-Time Transcription (or CART; also called Communication Access Real-Time Transcription) is recognized as an assistive technology that affords “effective communication access.” Real-time captions are created as an event takes place. A CART transcriptionist or captioner (often originally trained as a court reporter or stenographer) uses a stenotype machine with a phonetic keyboard. A computer translates the phonetic symbol code into English captions almost instantaneously. The slight delay is based on the captioner’s need to hear the word and on the computer processing time. Real-time captioning can be used for meetings, presentations, conferences, live events that have no script, and other programs. CART captions can be viewed by one or two persons by reading text from the computer screen used by the captioner. For larger groups, the computer is connected to a projector and the text appears on a wall screen, often placed behind or near to the speaker or presenter, and viewers position themselves so they can read the captions. Real-time captions also can be produced at a different location from where the event takes place and transmitted by phone lines; this is called “remote captioning.”

Although most real-time captioning is more than 98 percent accurate, the audience will see occasional errors. The captioner may mis-hear a word, hear an unfamiliar word, or have an error in the software dictionary. Thus, organizers should provide the CART captioner with relevant materials before the event begins, such as a list of participants’ names, an agenda or program for the event, and a list of any specific words that may be used, so the captioner can add these items to the software dictionary. People may also correct misspelled terms during the event by telling the captioner the correct spelling, to ensure that subsequent captions are accurate. Speakers can also spell out names or unusual words the on first use, to assist the captioner in creating an accurate transcript.

The costs for CART are generally similar to the cost of using sign language interpreters. One advantage to CART is that the transcript is often available from the CART provider, thus providing a written record of a meeting or event. This can be very useful to deaf and hard of hearing people, because note-taking in meetings can be compromised by the need to use one’s eyes to watch the interpreter or CART captions. A disadvantage is that CART transcriptions can contain extraneous material, since the entire event is transcribed. Also, the CART transcriptionist is dependent on spoken communication; if sign language users are present at a meeting that is using CART transcription, someone (preferably a qualified sign language interpreter) must voice the sign language portions for the CART captioner to record.

Amplification Systems

An **Assistive Listening Device** (ALD) can be used with a hard of hearing or deaf person’s hearing aid or used alone without a hearing aid. These devices transmit sound directly to the individual, and help people with hearing loss improve the use of their residual hearing by bypassing or minimizing background noise, minimizing the loss of information when sound travels through air, and reducing the effects of poor room acoustics. An ALD may be a separate piece of equipment or it may attach in some way directly to the individual’s own hearing aids, or to headphones or ear buds. There are two primary types of ALDs in use, those for **personal** use and those for use in **group** settings.

A personal ALD is intended to facilitate conversation between a person with hearing loss and a normally hearing person. A “wired” personal device consists of a processor about the size of a small transistor radio, a microphone that connects to the processor, and an output device that also connects to the processor to bring the sound to the user. A “wireless” personal device may be an FM system or an infrared system that is similar to a wired device but allows greater mobility. The hearing person speaks into the microphone, and the person with hearing loss uses the output device to improve their speech comprehension by way of amplification. The output device may be a pair of headphones that the user wears, or it may be a wire with a jack that plugs directly into a hearing aid, or a neckloop that transmits to a hearing aid. Some wireless FM systems transmit to a “telecoil” setting on the user’s hearing aid, while others transmit to headphones. Most systems have a user-adjusted volume control. Some of these devices may be configured for multiple speakers, but they are primarily intended for one-on-one situations.

For group settings, there are three kinds of systems in common use. **Infrared systems** (IR) work by transmitting sound via infrared light waves to receivers worn by users. IR is commonly used in courtrooms, movies, live-performance theaters, conventions, and with TVs. Infrared systems are often used in situations requiring confidentiality. Some infrared systems may be susceptible to interference from bright sunlight or certain fluorescent lights. Although often described as requiring a line-of-sight between the IR transmitter and the receiver, IR waves can effectively reflect off some surfaces, depending upon the power of the transmitter. **FM** (radio frequency) **systems** work by transmitting radio waves to receivers. They are commonly used in classrooms and where movement of speakers is required. They are not affected by light, may be able to cover 100+ feet, and are portable. Some systems can be set to different frequencies to allow several uses in same place (such as movie theater or convention settings). FM systems can be susceptible to radio interference depending on the presence of nearby transmissions. Multiple users of both IR and FM systems can be accommodated with additional

receivers. In meetings, speakers can share one or more microphones, either passing them around when the speaker changes, or by using centrally placed microphones. Some FM transmitters have built-in microphones and some have the ability to switch between omnidirectional, directional, and/or super-directional settings.

Induction or Audio Loop systems transmit using a magnetic field. No receivers are necessary for hearing aid wearers with a telecoil (the telecoil itself is the receiver). Loop receivers (such as headphones) can be provided for people who do not have telecoils. The audio loop itself can be permanently installed in meeting rooms, offices, public auditoriums, churches, and other rooms. Alternatively, portable loop systems can be set up for specific meetings or events. Prior to installation, the location should be checked for significant electromagnetic interference (EMI) from sources such as nearby power transformers or heavy equipment; too much interference will create too much noise for telecoil users to hear well through a loop system.

Alerting Systems

Visual or vibrating alert systems provide signals to alert deaf or hard of hearing people for messages, knocks on doors or doorbells, phone calls, fire alarms, wake-up alarms, and other uses. For example, a deaf or hard of hearing person may connect a flashing light device to a telephone or TTY to alert them when a call comes in. A flashing **strobe fire alarm** should be used to warn deaf and hard of hearing people of emergencies in the workplace and in public places such as restaurants, hotels, and theaters. Some notification systems use vibrating, **wireless pagers** to alert people to emergencies, or messages from others (such as meeting reminders), or to supplement public address systems such as intercoms. **Wireless text pagers** can send and receive e-mail messages, and can alert deaf and hard of hearing people to incoming messages and alerts by vibrating; some pagers also offer Internet features. These Assistive Technology (AT) devices can help businesses and governments comply with ADA requirements for accommodation in the workplace and places of public accommodation.

CCDHH RESOURCES

The Colorado Commission for the Deaf and Hard of Hearing is a state government agency created to assist Colorado government, businesses, and individuals to work together more efficiently. The CCDHH office can provide a variety of educational, training, and consultation services. The Commission also does Information and Referral work. Government entities can request training in **Effective Communication Access, Communicating with of Deaf and Hard of Hearing Individuals, Workplace Accommodations for Deaf/Hard of Hearing Employees, Cultural Sensitivity and Appropriate Communication, the Use of Assistive Technology**, and other areas. The CCDHH office has a variety of information resources on the Americans with Disabilities Act and other disability and rehabilitation laws, and can consult with organizations, businesses, and individuals on these issues, although it cannot offer legal advice.

The CCDHH Internet website, at www.ColoradoDeafCommission.com, contains useful information for Colorado residents, businesses, and organizations. Web pages have information about the Commission mission and structure, the Commissioners and office staff, minutes of Commission meetings, the CCDHH Board Manual, and current programs. In addition, the CCDHH publishes a quarterly electronic newsletter, **The CCDHH Bulletin**, which is available free of charge (electronic or mailed version). Contact Deaf.Commission@state.co.us by email to request a current copy or to be placed on the mailing list.

COLORADO COMMISSION FOR THE DEAF AND HARD OF HEARING

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